Noise Assessment For:
HOAG HOSPITAL MASTER PLAN
CITY OF NEWPORT BEACH

Prepared For:

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1.0 EXISTING SETTING

1.1 Project Description

Hoag Hospital is an existing facility located at One Hoag Drive in the City of Newport Beach. The facility is a 409-bed acute care, not for profit hospital. Exhibit 1 presents a vicinity map showing the location of the facility. The site is bounded by Hospital Road to the north, West Coast Highway to the south, and Newport Boulevard to the east. Residential development abuts the western edge of the Upper Campus and open space is to the west of the Lower Campus. Superior Avenue is the closest major street to the west. The approximately 38-acre site is split into two planning areas, the 17.57 acre Upper Campus and the 20.41 acre Lower Campus. The Lower Campus is the portion of the site located along the north side of Pacific Coast Highway. The Upper Campus is the portion of the site south of Hospital Road.

The Project proposes to allow greater flexibility in the placement of development on the project site, specifically to allow square footage currently allocated for the Lower Campus to be constructed on the Upper Campus. The Project would transfer up to 225,000 square feet of medical uses from the Lower Campus to the Upper Campus. A Project Alternative is assessed that would allow the transfer of up to 150,000 square feet from the Lower Campus to the Upper Campus.

Table 1 presents a summary of the development at Hoag Hospital under existing conditions and future conditions with and without the Project. The campus is currently developed with 886,270 square feet of medical uses and 409 hospital beds. The Upper Campus consists of 698,121 square feet of development and the Lower Campus consists of 188,149 square feet of development.

Table 1
Hoag Hospital Campus Development Summary

		Without Project		With Project		With Alternative	
	Existing	Increase	Total	Increase	Total	Increase	Total
Hospital Beds	409	0	409	76	485	76	485
Upper Campus TSF	698.1	67.2	765.3	292.2	990.3	217.2	915.3
Lower Campus TSF	188.1	389.7	577.9	164.7	352.9	239.7	427.9
Total TSF	**886.3**	**457.0**	**1,343.2**	**457.0**	**1,343.2**	**457.0**	**1,343.2**

TSF-Thousand Square Feet

† The increase and total development for the upper and lower campus shown is the maximum increase for either campus. However, the total increase and total development cannot exceed the amount shown in the last row of the columns.

Exhibit 1
Vicinity Map

Mestre Greve Associates

Under the current City of Newport Beach General Plan, development at the hospital can be increased by 456,968 square feet to 1,343,238 square feet. The Project does not propose to change this. Without the Project, an additional 67,228 square feet would be added to the Upper Campus and an additional 389,740 square feet would be added the Lower Campus (assuming no transfer of the maximum of 225,000 square feet). With the Project, 292,228 square feet of development would be added to the Upper Campus and 164,740 square feet of development would be added to the Lower Campus. With the Project Alternative, 217,228 square feet of development would be added to the Upper Campus and 239,740 square feet of development would be added to the Lower Campus (assuming transfer of the maximum of 150,000 square feet).

The number of beds in the hospital is not restricted as long as the addition of beds does not create any new unanticipated traffic impacts. For purposes of the traffic study assumptions were made about future conditions with and without the proposed Project for trip generation. The bed counts presented in Table 1 reflect the assumptions used in the traffic study. Without the Project, the bed count at the hospital would be expected to remain unchanged. With the Project, or the Project Alternative, the bed count of the hospital is projected to increase by 76 beds from 409 to 485. Utilization of a 76-bed increase for the Project Alternative is considered conservative given the proposed Project would reallocate more square footage than the Alternative.

Note that the Project only proposes modifying the allowable development on the Hoag Hospital Campus and does not propose any specific projects.

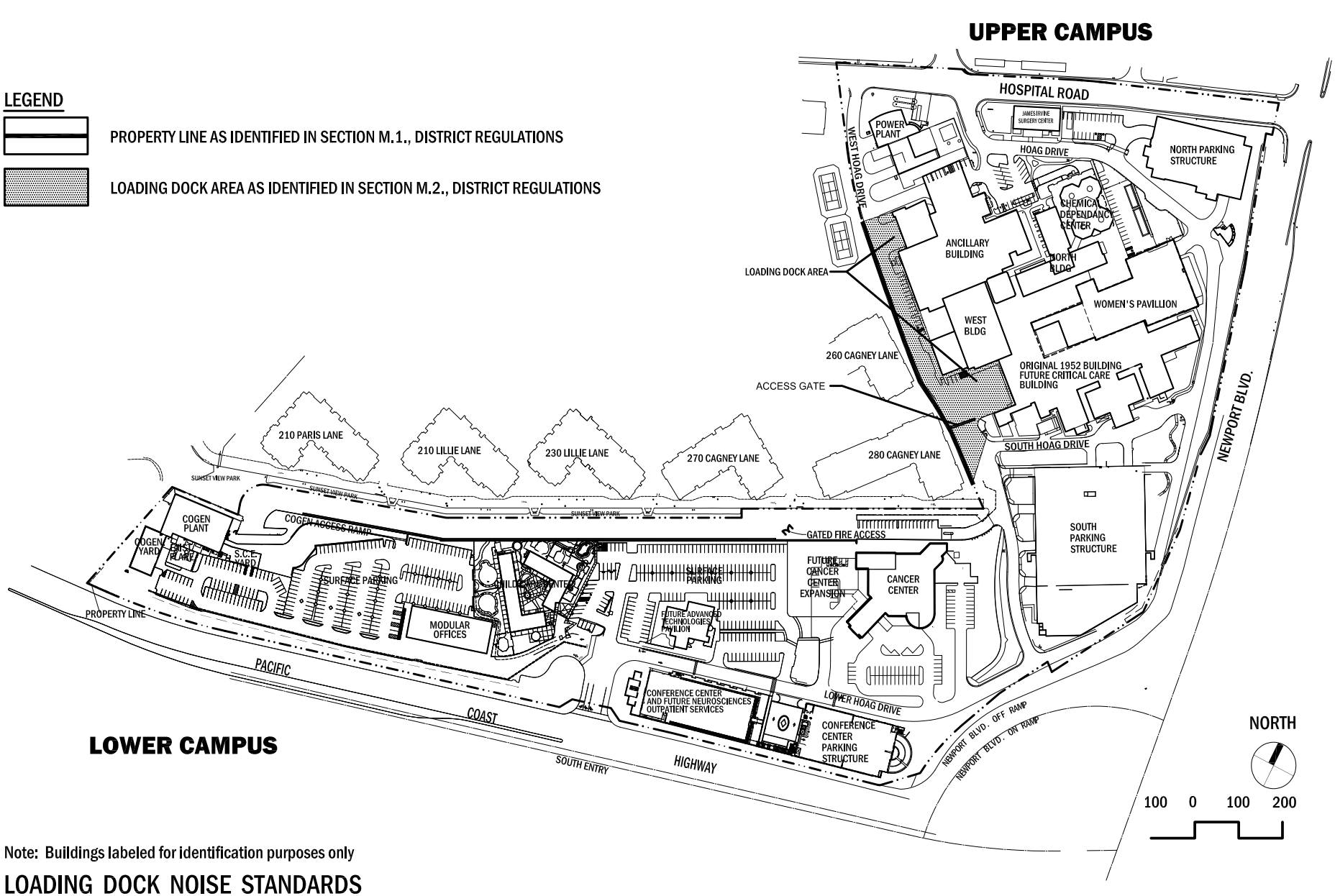
Additionally, the Applicant is requesting an amendment of the Development Agreement to eliminate the 55 dBA noise level restriction at the Hoag Hospital property line that is currently contained in the "Hoag Memorial Hospital Presbyterian Planned Community Development Criteria and District Regulations" (PC Text). The noise generated from Hoag Hospital would be governed by the City Noise Ordinance except as otherwise noted below and with reference to an exhibit reproduced here as Exhibit 2.

1. The applicable noise standard at the Hoag Hospital property line adjacent to the loading dock shall be as follows:

	7 AM – 10 PM Daytime	10 PM – 7 AM Nighttime
Leq (15 min)	70 dBA	58 dBA

2. Within the loading dock area, delivery vehicles and the loading and unloading of delivery vehicles, shall be exempt from any applicable noise standards.

This report analyses the potential noise impacts from the proposed Project including the proposed changes to the Development Agreement. Background information on noise and community noise assessment criteria is presented first. This is intended to give the reader a greater understanding of noise and the criteria used to assess potential impacts from noise. Existing noise levels are presented to describe the existing noise environment. Potential noise impacts during construction and operation are examined, and measures to mitigate impacts are described where significant impacts are identified.



Note: Buildings labeled for identification purposes only

LOADING DOCK NOISE STANDARDS
HOAG MEMORIAL HOSPITAL PRESBYTERIAN

08.10.07

Exhibit 2
Loading Dock Area

Mestre Greve Associates

1.2 Background Information on Noise

1.2.1 Noise Criteria Background

Sound is technically described in terms of the loudness (amplitude) of the sound and frequency (pitch) of the sound. The standard unit of measurement of the loudness of sound is the decibel (dB). Decibels are based on the logarithmic scale. The logarithmic scale compresses the wide range in sound pressure levels to a more usable range of numbers in a manner similar to the Richter scale used to measure earthquakes. In terms of human response to noise, a sound 10 dB higher than another is judged to be twice as loud; a sound 20 dB higher is perceived to be four times as loud; and so forth. Everyday sounds normally range from 30 dB (very quiet) to 100 dB (very loud).

Since the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear. Community noise levels are measured in terms of the "A-weighted decibel," abbreviated dBA. Exhibit 3 provides examples of various noises and their typical A-weighted noise level. Sound levels decrease as a function of distance from the source as a result of wave divergence, atmospheric absorption and ground attenuation. As the sound wave form travels away from the source, the sound energy is dispersed over a greater area, thereby dispersing the sound power of the wave. Atmospheric absorption also influences the levels that are received by the observer. The greater the distance traveled, the greater the influence and the resultant fluctuations. The degree of absorption is a function of the frequency of the sound as well as the humidity and temperature of the air. Turbulence and gradients of wind, temperature, and humidity also play a significant role in determining the degree of attenuation. Intervening topography can also have a substantial effect on the effective perceived noise levels.

Noise has been defined as unwanted sound and it is known to have several adverse effects on people. From these known effects of noise, criteria have been established to help protect the public health and safety and prevent disruption of certain human activities. This criteria is based on known impacts of noise on people, such as hearing loss, speech interference, sleep interference, physiological responses and annoyance. Each of these potential noise impacts on people are briefly discussed in the following narratives:

SOUND LEVELS AND LOUDNESS OF ILLUSTRATIVE NOISES IN INDOOR AND OUTDOOR ENVIRONMENTS

Numbers in Parentheses are the A-Scale Weighted Sound Levels† for that Noise Event

dB(A) †	OVER-ALL LEVEL CHARACTERIZATION	COMMUNITY (Outdoor)	HOME OR INDUSTRY	LOUDNESS Human Judgement of Different Sound Levels
130		Military Jet Aircraft Take-Off With After-Burner From Aircraft Carrier @ 50 Ft. (130)	Oxygen Torch (121)	120 dB(A) 32 Times as Loud
120 110	UNCOMFORTABLY LOUD	Ambulance Siren (120) Concord Takeoff (113)* Leaf Blower (110)	Riveting Machine (110) Baby Crying on Shoulder (110) Rock-N-Roll Band (108-114)	110 dB(A) 16 Times as Loud
100		Boeing 747-200 Takeoff (101)*		100 dB(A) 8 Times as Loud
90	VERY LOUD	Power Mower (96) DC-10-30 Takeoff (96)* Motorcycle @25 Ft. (90)	Newspaper Press (97) Shouted Conversation (90)	90 dB(A) 4 Times as Loud
80		Car Wash @ 20 Ft. (89) Boeing 727 w/ Hushkit Takeoff (96)* Diesel Truck, 40 MPH @ 50 Ft. (84) Diesel Train, 45 MPH @ 100 Ft. (83)	Food Blender (88) Milling Machine (85) Garbage Disposal (80)	80 dB(A) 2 Times as Loud
70	MODERATELY LOUD	Passenger Car, 65 MPH @ 25 Ft. (77) Freeway @ 50 Ft. From Edge (70-82) Boeing 757 Takeoff (76)*	Living Room Music or TV (70-75) Vacuum Cleaner (65-85)	70 dB(A)
60		Propeller Airplane Takeoff (67)* Air Conditioning Unit @ 100 Ft. (60)	Sewing Machine (60) Dishwasher (55-70) Normal Conversation (60-65)	60 dB(A) 1/2 as Loud
50	QUIET	Large Transformers @ 100 Ft. (50)	Refridgerator (50)	50 dB(A) 1/4 as Loud
40		Bird Calls (44) Quiet Residential Area (40)		40 dB(A) 1/8 as Loud
30				
20	JUST AUDIBLE	Desert at Night Rustling of Leaves (20)	Whispering at 5 feet (20)	
10	THRESHOLD OF HEARING			

† Sound Pressure Level Reference: 0.0002 Microbars

*Aircraft takeoff noise measured 6,500 meters from beginning of takeoff roll

SOURCES: League for the Hard of Hearing, www. lhh.org
Handbook of Noise Control, Edited by Cyril Harris, 1979
Noise And Vibration Control, Leo L. Beranek, 1971
Aircraft Levels From FAA Advisory Circular AC-36-3G
Measurements by Mestre Greve Associates

EXHIBIT 3

TYPICAL A-WEIGHTED NOISE LEVELS

HEARING LOSS is not a concern in community noise situations of this type. The potential for noise induced hearing loss is more commonly associated with occupational noise exposures in heavy industry or very noisy work environments. Noise levels in neighborhoods, even in very noisy airport environs, are not sufficiently loud as to cause hearing loss.

SPEECH INTERFERENCE is one of the primary concerns in environmental noise problems. Normal conversational speech is in the range of 60 to 65 dBA and any noise in this range or louder may interfere with speech. There are specific methods of describing speech interference as a function of distance between speaker and listener and voice level.

SLEEP INTERFERENCE is a major noise concern for traffic noise. Sleep disturbance studies have identified interior noise levels that have the potential to cause sleep disturbance. Note that sleep disturbance does not necessarily mean awakening from sleep, but can refer to altering the pattern and stages of sleep.

PHYSIOLOGICAL RESPONSES are those measurable effects of noise on people that are realized as changes in pulse rate, blood pressure, etc. While such effects can be induced and observed, the extent is to which these physiological responses cause harm or are signs of harm is presently unknown.

ANNOYANCE is the most difficult of all noise responses to describe. Annoyance is a very individual characteristic and can vary widely from person to person. What one person considers tolerable can be quite unbearable to another of equal hearing capability.

1.2.2 Noise Assessment Metrics

The description, analysis and reporting of community noise levels around communities is made difficult by the complexity of human response to noise and the myriad of noise metrics that have been developed for describing noise impacts. Each of these metrics attempts to quantify noise levels with respect to community response. Most of the metrics use the A-Weighted noise level to quantify noise impacts on humans. A-Weighting is a frequency weighting that accounts for human sensitivity to different frequencies.

Noise metrics can be divided into two categories: single event and cumulative. Single-event metrics describe the noise levels from an individual event such as an aircraft fly over or perhaps a heavy equipment pass-by. Cumulative metrics average the total noise over a specific time period, which is typically 1 or 24-hours for community noise problems. For this type of analysis, cumulative noise metrics is typically used.

Several rating scales have been developed for measurement of community noise. These account for: (1) the parameters of noise that have been shown to contribute to the effects of noise on man, (2) the variety of noises found in the environment, (3) the variations in noise levels that occur as a person moves through the environment, and (4) the variations associated with the time of day. They are designed to account for the known health effects of noise on people described previously. Based on these effects, the observation has been made that the potential for a noise to impact people is dependent on the total acoustical energy content of the noise. A number of

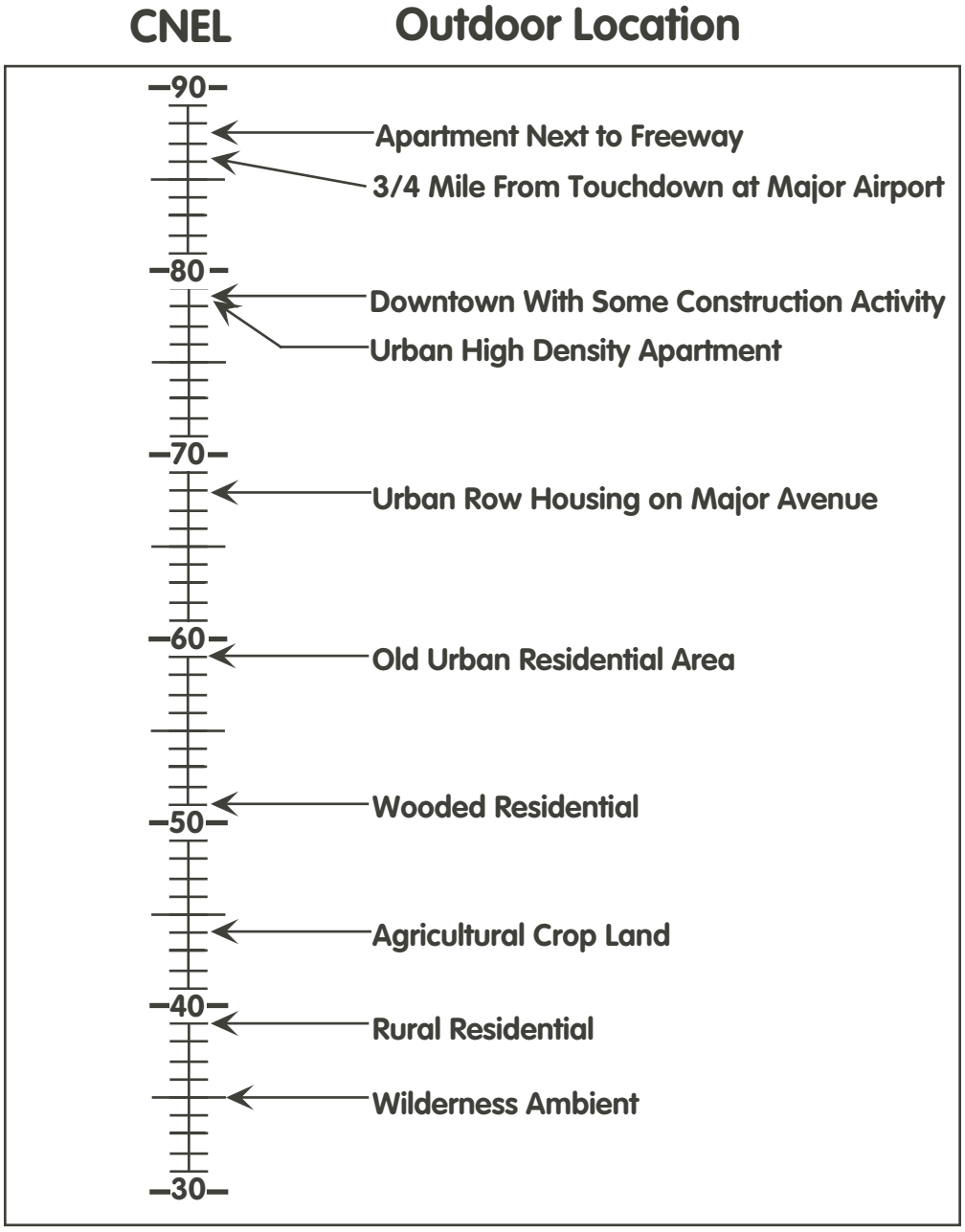
noise scales have been developed to account for this observation. The two most predominate noise scales are the: Equivalent Noise Level (LEQ) and the Community Noise Equivalent Level (CNEL). These scales are described in the following paragraphs along with the LDN and L(%) scales that are also used for community noise assessment.

LEQ is the sound level corresponding to a steady-state sound level containing the same total energy as a time-varying signal over a given sample period. LEQ is the "energy" average noise level during the time period of the sample. LEQ can be measured for any time period, but is typically measured for 1 hour. This 1-hour noise level can also be referred to as the Hourly Noise Level (HNL), which is the energy average of all the events and background noise levels that occur during that time period.

CNEL, Community Noise Equivalent Level, is the predominant rating scale now in use in California for land use compatibility assessment. The CNEL scale represents a time weighted 24-hour average noise level based on the A-weighted decibel. Time weighted refers to the fact that noise which occurs during certain sensitive time periods is penalized. The evening time period (7 p.m. to 10 p.m.) penalizes noises by 5 dBA, while nighttime (10 p.m. to 7 a.m.) noises are penalized by 10 dBA. These time periods and penalties were selected to reflect people's increased sensitivity to noise during these time periods. A CNEL noise level may be reported as a "CNEL of 60 dBA," "60 dBA CNEL," or simply "60 CNEL." Typical noise levels in terms of the CNEL scale for different types of communities are presented in Exhibit 4.

Ldn, the day-night scale is similar to the CNEL scale except that evening noises are not penalized. It is a measure of the overall noise experienced during an entire day. The time-weighted refers to the fact that noise that occurs during certain sensitive time periods is penalized. In the Ldn scale, those noise levels that occur during the night (10 pm to 7 am) are penalized by 10 dB. This penalty was selected to attempt to account for increased human sensitivity to noise during the quieter period of a day, where resting at home and sleep are the most probable activities.

L(%) is a statistical method of describing noise which accounts for variance in noise levels throughout a given measurement period. L(%) is a way of expressing the noise level exceeded for a percentage of time in a given measurement period. For example since 5 minutes is 25% of 20 minutes, L25 is the noise level that is equal to or exceeded for five minutes in a twenty-minute measurement period. The L50 noise level is the median noise level. For half of the measurement period the noise level exceeds the L50 and for half the noise level is less than the L50. The L90 is considered the background noise level and is the level exceeded 90% of the time.



Source: U.S. Environmental Protection Agency, "Impact Characterization of Noise Including Implications of Identifying and Achieving Levels of Cumulative Noise Exposure," EPA Report NTID 73.4, 1973.

EXHIBIT 4
TYPICAL OUTDOOR NOISE LEVELS

1.3 Noise Criteria

The Noise Ordinance and Noise Element of the General Plan contain the City's policies on noise. The Noise Ordinance applies to noise on one property impacting a neighboring property. Typically, it sets limits on noise levels that can be experienced at the neighboring property. The Noise Ordinance is part of the City's Municipal Code and is enforceable throughout the City. The Noise Element of the General Plan presents limits on noise levels from transportation noise sources, vehicles on public roadways, railroads and aircraft. These limits are imposed on new developments. The new developments must incorporate the measures to ensure that the limits are not exceeded. The City of Newport Beach Noise Ordinance and Noise Element policies are presented below in Sections 1.3.1 and 1.3.2. The Hospital's Development Agreement with the City affects the noise standards that are applicable to the Hospital operations. The provisions of the agreement that apply to noise limits are discussed in Section 1.3.3.

1.3.1 City of Newport Beach Noise Element

The City of Newport Beach specifies outdoor and indoor noise limits for various land uses impacted by transportation noise sources. The noise limits specified in the City's Noise Element are in terms of the Community Noise Equivalent Level (CNEL). The standard states that for residential and hospital land uses, the exterior noise exposure level shall not exceed 65 CNEL and the interior noise exposure level shall not exceed 45 CNEL. Exhibit 5 presents the complete Interior and exterior noise standards contained in the City of Newport Beach Noise Element.

1.3.2 City of Newport Beach Noise Ordinance

The City of Newport Beach's Noise Ordinance is presented in three sections of the municipal code, Sections 10.26, 10.28, and 10.32. Section 10.28 "Loud and Unreasonable Noise" is what is often referred to as a "Nuisance Ordinance" in that it does not contain any specific noise level limits. It prohibits "the making, allowing, creation or maintenance of loud and unreasonable, unnecessary, or unusual noises which are prolonged, unusual, annoying, disturbing and/or unreasonable in their time, place and use are a detriment to public health, comfort, convenience, safety, general welfare and the peace and quiet of the City and its inhabitants." The specific provisions of Section 10.28 were substantially revised by the City in 2001 but the concept of the section was unchanged. Sections 10.28.040 and 10.28.045 are relevant to the Project in that they regulate construction noise and property maintenance noise. Effectively, these sections limit the hours of these activities to daytime hours. Section 10.32 "Sound Amplifying Equipment" regulates the use of sound amplification equipment and provides for permitting of sound amplification equipment.

Section 10.26 is the most relevant to the Project as it presents specific standards for noise generated on one property so that it does not significantly impact adjacent properties. This section is summarized and the specific noise standards from the ordinance are presented below. This section was adopted in 1995. Prior to that, the City had not established any specific sound level limits.

LAND USE CATEGORIES		ENERGY AVERAGE CNEL	
CATEGORIES	USES	INTERIOR[1]	EXTERIOR[2]
RESIDENTIAL	Single Family, Two Family, Multiple Family	45[3] 55[4]	65
	Mobile Home	65	65
COMMERCIAL INDUSTRIAL INSTITUTIONAL	Hotel, Motel, Transient Lodging	45	65[6]
	Commercial Retail, Bank, Restaurant	55	-----
	Office Building, Research and Development, Professional Offices, City Office Building	50	-----
	Amphitheater, Concert Hall Auditorium, Meeting Hall	45	-----
	Gymnasium (Multipurpose)	50	-----
	Sports Club	55	-----
	Manufacturing, Warehousing, Wholesale, Utilities	65	-----
	Movie Theaters	45	-----
INSTITUTIONAL	Hospital, Schools' Classroom	45	65
	Church, Library	45	-----
OPEN SPACE	Parks	-----	65

INTERPRETATION

1. Indoor environment excluding: Bathrooms, toilets, closets, corridors
2. Outdoor environment limited to: Private yard of single family
   Multi-family private patio or balcony which is served by a means of an exit from inside.
   Mobile home park
   Hospital patio
   Park's picnic area
   School's playground
   Hotel and motel recreation area
3. Noise level requirement with closed windows. Mechanical ventilating system or other means of natural ventilation shall be provided as part of Chapter 12, Section 1205 of UBC.
4. Noise level requirement with open windows, if they are used to meet natural ventilation requirement.
5. Exterior noise level should be such that the interior noise level will not exceed 45 CNEL.
6. Except those areas around the airport within the 65 CNEL contour.

SOURCE: City of Newport Beach Noise Element

EXHIBIT 5
CITY OF NEWPORT BEACH NOISE STANDARDS

Table 2 presents the Noise Ordinance standards presented in Section 10.26 of the City's Municipal Code. The Noise Ordinance is applicable to noise generated from sources such as parking lots, loading docks, and mechanical equipment. The Noise Ordinance requirements cannot be applied to mobile noise sources such as heavy trucks when traveling on public roadways. Federal and State laws preempt control of the mobile noise sources on public roads. However, the requirements can be applied to vehicles traveling on private property.

The City of Newport Beach exterior and interior noise criteria are given in terms of 15 minute Leq and Lmax noise levels. The noise levels specified are those that are not to be exceeded at a property from noise generated at a neighbor property. Noise levels are to be measured with A-weighting and a slow time response. Greater noise levels are permitted during the day (7 a.m. to 10 p.m.) as compared to the nighttime period (10 p.m. to 7 a.m.).

Table 2
City Of Newport Beach Noise Ordinance Standards

Zone	Noise Metric	Noise Level Not To Be Exceeded 7 a.m. to 10 p.m. (daytime)	10 p.m. to 7 a.m. (nighttime)
EXTERIOR NOISE STANDARDS			
I Residential	Leq (15 min)	55 dBA	50 dBA
	Lmax	75 dBA	70 dBA
II Commercial	Leq (15 min)	65 dBA	60 dBA
	Lmax	85 dBA	80 dBA
III Mixed Use Residential*	Leq (15 min)	60 dBA	50 dBA
	Lmax	80 dBA	70 dBA
IV Industrial/Manufacturing	Leq (15 min)	70 dBA	70 dBA
	Lmax	90 dBA	90 dBA
INTERIOR NOISE STANDARDS			
I Residential	Leq (15 min)	45 dBA	40 dBA
	Lmax	65 dBA	60 dBA
III Mixed Use Residential*	Leq (15 min)	45 dBA	45 dBA
	Lmax	65 dBA	65 dBA

* Residential within 100' of a commercial property where noise is from said commercial property

Section 10.26.055 "Noise Level Measurement" defines the locations where measurements can be made to determine compliance with the noise standards. It effectively defines where the Noise Ordinance standards are applicable. For residential areas, the exterior standard is applicable to any part of a private yard, patio, deck or balcony normally used for human activity. The standards are not applicable to non-human activity areas such as trash container storage areas, planter beds, above or contacting a property line fence, or other areas not normally used as part of the yard, patio, deck, or balcony. Interior noise standards are applicable anywhere inside the room at least 4 feet from the walls, or within the frame of an open window.

Section 10.26.045 sets different noise standards for HVAC equipment. HVAC equipment "in or adjacent to residential areas" cannot generate a noise level in excess of 50 dBA unless it includes a timing device that will deactivate the equipment between 10:00 p.m. and 7:00 a.m. in which the

standard is raised to 55 dBA since the HVAC will only operate during daytime hours.

Section 10.26.35 "Exemptions" presents noise sources that are exempt from the provisions of the City's Noise Ordinance. Item L directly relates to the Hoag Hospital operations. Item L reads, "Any noise sources specifically identified and mitigated under the provisions of a use permit, modification permit, Development Agreement or planned community district development plan adopted prior to the date of adoption of this chapter." The Hospital's Development Agreement, which was adopted prior to the Noise Ordinance, as it affects allowable noise generation, is discussed below.

Item G of Section 10.26.035 exempts noise sources associated with the maintenance of real property and instead requires that they be subject to Chapter 10.28 of the Municipal Code. Section 10.28.45 sets limits on the times of day that any "tool, equipment or machine" can be operated "in a manner which produces loud noise that disturbs, or could disturb, a person of normal sensitivity who works or resides in the vicinity." Specifically, the section restricts these activities to between 7:00 a.m. and 6:30 p.m. Monday through Friday, and between 8:00 a.m. and 6:00 p.m. on Saturday. These activities are prohibited on Sundays and federal Holidays.

1.3.3 Hoag Hospital Development Agreement

Item 3.5 of the Development Agreement between the City of Newport Beach and Hoag Memorial Hospital Presbyterian (Approved February 14, 1994, Ordinance No. 94-8.) reads as follows:

> Compliance with General Regulations. Hoag is required to comply with the Existing General Regulations. As to those Existing General Regulations which require the payment of fees, costs, and expenses, Hoag shall pay the fee, cost, or expense required as of the data on which Hoag submits the application for Project Specific Approval. Hoag shall also comply with any Future General Regulations that do not impair Hoag's ability to develop the Property in accordance with the density, intensity, height and location of development specified in the Master Plan. Hoag shall also comply with all provisions of the Uniform Building Code, whether adopted before or after the Project Specific Approvals are submitted. Hoag shall also comply with the Coastal Act and the City's certified Local Coast l Program.

Items 2.17, 2.18, and 2.19 define "Existing General Regulations," "Future General Regulations," and "General Regulations" as follows:

> 2.17 "Existing General Regulations" means those General Regulations approved by the City on or before the Approval Date (irrespective of their effective date) and not rescinded or superseded by City Action taken on or before the Approval Date
>
> 2.18 "Future General Regulations" means those General Regulations (see Section 2.19 below) adopted by the City after the Approval date.
>
> 2.19 "General Regulations" means those ordinances, rules, regulations, policies,

> and guidelines of the City, which are generally applicable to the use of land and/or construction within the City and include, the Fair Share Traffic Contribution Ordinance, Uniform Building Codes and water and sewer connection and fee ordinances.

Item 3.5 of the Development Agreement exempts the Hospital from the Noise Ordinance, Section 10.26 of the Municipal Code, a Future General Regulation, where the application of the Noise Ordinance would "impair Hoag's ability to develop the Property in accordance with the density, intensity, height and location of development specified in the Master Plan." In most cases, noise generated by activities at the Hospital should be able to be mitigated to below the Noise Ordinance limits without impairing the development of the property and the Noise Ordinance would apply to these cases. There could be some cases where enforcement of the Noise Ordinance would impair the development of the property. The Noise Ordinance would not be applicable in these cases.

Section II "General Notes" item 7 of the "Hoag Memorial Hospital Presbyterian Planned Community Development Criteria and District Regulations" (referred to as the PC Text, and adopted by the City Council, City of Newport Beach, Ordinance No 92-3 May 26, 1992) reads:

> New mechanical appurtenances on building rooftops and utility vaults, excluding communications devices, on the upper campus shall be screened from view in a manner compatible with building materials. Rooftop mechanical appurtenances or utility vaults shall be screened on the lower campus. Noise shall not exceed 55 dBA at all property lines. No new mechanical appurtenances may exceed the building height limitations as defined in these district regulations.

This item preempts the HVAC regulations presented in Section 10.26.045 of the Noise Ordinance. Mechanical equipment at the hospital cannot exceed 55 dBA at the property line under the current PC Text.

1.4 Existing Noise Measurements

In comments on the Notice of Preparation, residents of the condominiums along the western border of the Upper Campus indicated that activities at the hospital's loading dock were generating excessive noise levels. Sources of noise at the loading dock include a box crusher, a trash compactor, a sterilizer, and the noise generated by trucks and delivery activities at the dock. In addition, the commenters discussed the pumping of materials from an underground tank. The hospital indicated that this was a monthly cleaning of a grease pit, which separates grease from other materials to prevent it from entering the sewer system. The grease pit is cleaned once a month on the second Saturday between 8:00 a.m. and 11:00 a.m. The loading dock operates between 7:00 a.m. and 7:00 p.m. Further, noise generated by the cogeneration facility near the corner of West Pacific Coast Highway and Superior Avenue was identified as a potential issue. Measurements were performed to assess the noise levels generated by these activities. During these measurements, it was also determined that mechanical equipment was also generating considerable noise levels at the residences.

The results of these measurements are discussed in Sections 1.4.1, 1.4.2, 1.4.3, and 1.4.4 for each of these four sources. The results of the grease pit cleaning noise measurements are presented in

Section 1.4.1. Noise levels measured near the loading dock are presented in Section 1.4.2. Noise levels generated by mechanical equipment are presented in Section 1.4.3. Noise levels near the cogeneration facility are presented in Section 1.4.4. General ambient noise measurements were also performed to provide a general description of the existing noise environment around the Project site. The results of these measurements are presented in Section 1.4.5.

The measurement survey utilized Brüel & Kjær 2236 and 2238 automated digital noise data acquisition systems. These instruments automatically calculate both the Equivalent Noise Level (LEQ) and Percent Noise Level (L%) for any specific time period. The noise monitors were equipped with Brüel & Kjær 1/2-inch electret microphones and was calibrated with a Brüel & Kjær calibrator with calibration traceable to the National Bureau of Standards before and after each measurement. Calibration for the instrument is performed annually and is certified through the duration of the measurements. This measurement system satisfies the ANSI (American National Standards Institute) Standards 1.4 for Type 1 precision noise measurement.

Noise measurements were performed on Saturday August 13, 2005, between 8:00 a.m. and 12:00 p.m. to measure the levels generated by the grease pit cleaning and again on Wednesday August 17, 2005 between 8:30 a.m. and 1:30 p.m. to measure the noise levels generated by general loading dock activities. Exhibit 6 shows the location of the loading dock, grease pit cleaning area and the locations where noise measurements of activities were preformed. Noise levels were measured at Sites 1 and 2 on the Saturday for the grease pit cleaning and at Sites 1 and 3 on the Wednesday for the general loading dock activities. These sites were selected based on their proximity between the Hospital noise-generating uses and the residential uses.

Site 1 was located on the balcony of the residence at Unit 304 of 260 Cagney Lane. The residence is located on the top (third) floor of the building. Site 2 was located at the northeast corner of the 260 Cagney Lane building and is representative of noise levels experienced at the first floor balconies of the building. Site 3 was located at the northeast corner of the 280 Cagney Lane Building. Two monitors were located at Site 3, one at 5 feet above ground level to represent noise levels experienced at first floor units and one at 15 feet above ground level to represent noise levels at second floor units.

The times and locations of the noise measurements made for the cogeneration facility are presented in Section 1.4.4. The times and locations of the general ambient noise measurements are presented in Section 1.4.5.

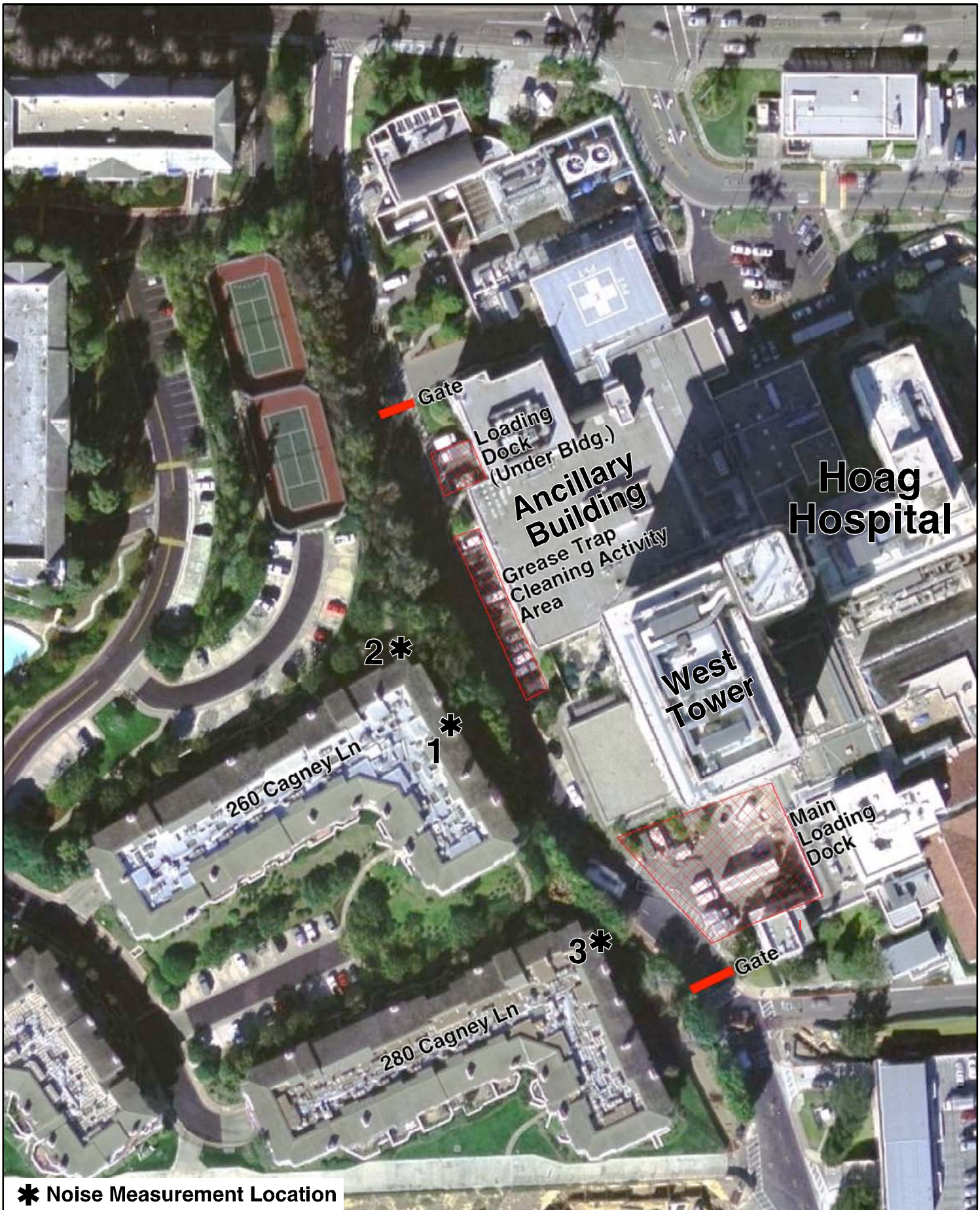


Exhibit 6 - Existing Noise Source Measurement Locations

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1.4.1 Grease Pit Cleaning

The grease pit cleaning crew arrived at the site at approximately 9:20 a.m. on Saturday, August 13, 2005. The crew consisted of a van with a small trailer of equipment and a large diesel semi-trailer tanker truck. The tanker truck engine was left idling as the crew set up. The tanker truck engine generated a Leq noise level of approximately 65 to 66 dBA at Site 1 and 59 dBA at Site 2. The tanker truck engine was left idling for approximately 25 minutes as preparations were made for cleaning the grease pits. During this time, a manhole cover was removed and a small tent placed over it. The van was parked so that the trailer backed up to the tent. A fan with a water misting system was mounted on the back of the trailer and pointed towards the tent. We understand that the tent and the fan are used for odor control. There were no unusual odors observed during the cleaning.

At about 9:45 a.m. the fan was turned on and run for about 15 minutes as preparations continued. During this period the combined, idling diesel tanker truck engine and fan generated a Leq noise level of approximately 66 dBA at Site 1 and 61 dBA at Site 2.

At approximately 10:02 a.m., cleaning of the grease pit began. Essentially the grease trap is cleaned by placing a hose down a manhole and a pump, powered by the diesel engine of the tanker truck pumps material from the grease pit into the tanker truck. The diesel engine of the tanker truck is run, well above idling levels, to power the pump. This generated Leq noise levels between 76 and 78 dBA at Site 1 and between 70 and 73 dBA at Site 2. The pumping lasted for approximately 70 minutes with short breaks as the hose was moved between three manholes located approximately 5 to 10 feet apart which required relocation of the van and the tanker truck. Typically, this relocation took between two and four minutes. For a continuous 70-minute period, with three breaks of two to four minutes, the noise level at Site 1 was approximately 77 dBA at Site 1, 17 dB above the 60 dBA Noise Ordinance Limit, and the noise level at Site 2 was approximately 72 dBA, 12 dBA above the Noise Ordinance limit. For reference, a 10 dB difference is perceived as a doubling or halving of the noise level. Therefore, perceptually, the noise level at Site 1 during the pumping operations is almost four times greater than the Noise Ordinance limit and the noise level at Site 2 was more than double the Noise Ordinance limit.

During the grease pit cleaning activity, the 80 dBA Lmax limit was exceeded three times at each site. In all cases, these were instantaneous exceedances due to an impact noise such as dropping a tool or other large object or the release of air pressure in the diesel truck brake system

The City of Newport Beach has determined that grease trap cleaning should be considered a property maintenance activity. As discussed in Section 1.3.2, property maintenance occurring between the hours of 7:00 a.m. and 6:30 p.m. Monday through Friday, or between the hours of 8:00 a.m. and 6:00 p.m. on Saturday is exempted from the Noise Ordinance criteria. Therefore, the grease trap cleaning is exempted from the Noise Ordinance limits as long as it occurs during these hours. Property maintenance activities are prohibited on Sundays or federal holidays.

1.4.2 Loading Dock Activities

The primary source of noise at the loading dock is the arrival and departure of trucks. There is a box crusher, a trash compactor, and a sterilizer that also potentially generate noise. However, during the measurements noise generated by these pieces of equipment were not audible. The box crusher was observed to be in operation without generating a distinctly audible noise. We understand from the residents that the sterilizer does not typically generate noise. However, under certain operating conditions a pressure relief valve will vent pressurized air to the atmosphere and generate considerable noise levels. However, this activity was not observed. According to the Hospital the sterilizer is run once every two hours, the trash compactor is operated twice an hour and the box crusher is operated twice an hour.

On average three trucks arrived and then departed the loading dock in an hour with six occurring during the busiest hour (8:30 a.m. to 9:30 a.m.). In addition to trucks arriving and departing the loading dock, general activity in the loading dock area also generates noise. This includes handling of materials being delivered, backup beepers, and speech communication. General traffic (i.e., non-delivery traffic) traveling on the service road also contributes substantially to the noise environment. The most significant noise event was trash removal. A truck arrived at the loading dock, backed up to the trash compactor, and then pulled the entire compactor unit onto the back of the truck (similar to the removal of a large trash dumpster), and drove away. The empty trash compactor was returned to the site some time later. The Hospital has indicated that this occurs every Monday, Wednesday, and Friday.

60 dBA Leq was exceeded for six 15-minute periods at the second floor monitor of Site 3 and for three 15-minute periods at the first floor monitor during the five hours of monitoring. The highest 15-minute Leq was 68 dBA at the second floor monitor and 64 dBA at the first floor monitor. These levels occurred during the period where the trash compactor was removed from the loading dock area.

The 80 dBA Lmax threshold was not exceeded at the first floor monitor at Site 3 and was exceeded four instances at the second floor monitor. These exceedances were instantaneous exceedances during an air pressure release on a truck air break system or during an engine start. The highest Lmax at the second floor monitor was 86 dBA.

At Site 1, 60 dBA Leq was exceeded every 15-minute period from 7:00 a.m. to 4:00 p.m. A strip chart of the noise level shows little or no activity before 7:00 a.m. but as soon as the gates are opened noise levels increase instantly with the increased activity. The loudest 15-minute Leq was 64 dBA. Much of the time the 15-minute Leqs were less than 62 dBA. The 80 dBA Lmax criteria was exceeded five times between 7:00 a.m. and 4:00 p.m. Again, these were very short-term, in the one to two second range exceedances.

The mechanical equipment noise experienced at Site 1 discussed above considerably contributes to the Leq standard exceedances. If this equipment were shut off many of the exceedances of the Leq standard at Site 1 would be eliminated and be similar to the second floor monitor at Site 3. But because the mechanical equipment is generating a relatively high noise level there does not need to be much additional noise to exceed 60 dBA Leq.

Noise measurements were performed for the 1991 Hospital Expansion EIR near measurement Site 3. These measurements showed similar daytime noise levels to those measured for this analysis. This would indicate that loading dock activities and noise levels in the vicinity of the loading dock have not substantially increased since 1991.

1.4.3 Mechanical Equipment

For both of the measurements, the monitor at Site 1 was set up the previous evening and set to record noise levels overnight. The dominant source of noise on the balcony observed during the set up and tear down of the monitor was mechanical equipment at the hospital. The noise level from the mechanical equipment was measured to be approximately 58 dBA with small fluctuations. During both measurements, the noise level during the night was never below 57 dBA with the 15-minute Leq noise levels of 58 dBA for almost the entire night. Occasionally some noise events resulted in slightly higher Leq levels. However, it is obvious that the operation of the mechanical equipment at the hospital results in a noise level of 58 dBA at Site 1. This is 3 dB higher than the 55 dBA District Regulations applicable to the Project and 8 dB higher than the current Noise Ordinance would allow.

On both nights, the noise level at Site 1 was effectively constant until 7:00 am when noise events, vehicles passing on the service road and loading dock activity, began. This is when the gates to the service road are opened. During the Saturday measurements, the 15-minute Leq noise levels generally remained below 60 dBA when the grease trap cleaning was not being performed. However, the noise levels were just below the 60 dBA Leq level. On the Wednesday measurements the 15 minute Leq noise levels immediately jumped above 60 dBA at 7:00 a.m. and remained above 60 dBA until the monitoring was stopped at 4:00 p.m. The 15-minute Leq levels were generally between 60 and 62 dBA with the highest being 65 dBA.

It appears that the mechanical equipment causing this noise is the same exhaust fan examined in the 1991 EIR. It is not apparent that noise levels from the exhaust fan have been reduced substantially from that time.

1.4.4 Cogeneration Plant

Hoag Hospital is in the process of completing construction of a cogeneration plant near the northeast corner of Pacific Coast Highway and Superior Avenue. This facility will generate electricity for the hospital from natural gas extracted from the ground that used to be burned off. The waste heat from the generators is then used to generate hot and chilled water for the hospital heating and cooling. The site was visited on October 3, 2006 to measure the noise levels from the chiller vents on top of the cogeneration facility building. The generator engines were not yet in operation at the time of the measurements. Noise measurement results were repeated on November 20, 2006 and July 2, 2007. For the July 2 measurements, it was our understanding that the facility was in full operation including the generator engines that are enclosed in the building.

Measurements were performed at the edge of the park just north of the cogeneration facility, and just outside the balconies at the south edge of the condominium building nearest to the cogeneration facility building as shown in Exhibit 7. Near the balconies, measurements were performed at 5 feet above the ground, the approximate ear level for a ground level observer, and at 20 feet above ground, the approximate ear level for a third floor observer. For the July 2, 2007 measurements, two additional sites were measured. These sites were measured at the request of the residents with concurrence from City staff. The measurements were made along the west edge of the property very near the property line. (The measurements may actually be slightly inside the property line.) Each time the measurements were made after 11:00 p.m. Noise measurements could not be made earlier because traffic noise from Pacific Coast Highway was the dominant noise source. Therefore, measurements were scheduled after 11:00 p.m. so that noise levels of the cogeneration facility could be determined between groups of cars.

The noise levels from the cogeneration facility were steady. Traffic noise was still a significant noise source, and the noise measurements of the cogeneration facility were made during lulls in the traffic. The noise levels listed below in Table 3 represent the steady noise levels of the cooling fans and exhaust vents of the cogeneration facility.

Table 3
Noise Measurement Results For Cogeneration Facility (dBA)

Location	October 3, 2006	November 20, 2006	July 2, 2007
1. Edge of Park	49.8	52.2	56.3
2. Nearest balcony (first floor level)	43.0	47.8	46.5
3. Nearest balcony (elevated 20')	46.1	49.8	49.2
4. NW Corner of Cogen	--	--	61.9
5. West of Cogen	--	--	69.8

Exhibit 7

CoGen Facility Measurement Locations

The Noise Ordinance regulations apply to the cogeneration plant since this facility is not being considered a mechanical equipment operation that would be regulated by the current PC Text. The particular paragraph in the PC Text refers to "new mechanical appurtenances on building rooftops and utility vaults" and the cogeneration facility does not seem consistent with this description. Additionally, the residential areas (Sites 2 and 3) are within 100 feet from the Hoag Hospital property line and therefore, would be protected by the Zone 3 – Mixed Use Residential criteria. The noise criteria for Zone 3 is 50 dBA (Leq) during the night and 60 dBA during the day. The noise levels for the cogeneration facility are below the nighttime criteria of 50 dBA contained in the Noise Ordinance. With the current equipment in operation, the noise levels generated by the cogeneration facility are in compliance with the Noise Ordinance at Sites 2 and 3.

Sites 1, 4, and 5 are probably best characterized as an undeveloped park use. As such, they would not be subject to any noise ordinance limits. The cogeneration noise levels at Sites 4 and 5 were measured at 61.9 and 69.8 dBA, respectively. Clearly the cogeneration plant is loudest in this area. If the PC Text was the applicable noise controlling standard at these sites, the noise level would be in excess of the 55 dBA requirement by almost 15 dBA. However, for reasons stated in the previous paragraph it does not appear that the PC Text is the controlling document for this noise. It should also be pointed out that the traffic noise and other noise sources were higher than the cogeneration plant at these sites, although at Site 5 the cogeneration plant was the dominant noise source most of the time.

According to Hoag staff, within the next year, an additional cooling tower with its associated pumps will be added in the exterior cooling tower yard along Pacific Coast Highway. The plant also has space for the following future equipment; three (3) generators, one (1) absorption chiller, and one (1) electric chiller, all of which will (if added) be placed inside the building. At this time since the current cogeneration operation complies with the Noise Ordinance, the addition of equipment becomes a future compliance issue. Additional noise measurements will be warranted when the facility is in full operation to ensure that it remains in compliance. The cogeneration facility is completely permitted at this time. The City will have the right to require noise mitigation of the facility only if the cogeneration facility is shown to not be compliance with the Noise Ordinance.

1.4.5 General Ambient Measurements

To provide a general description of the existing noise environment in and around the Project site, ambient noise measurements were made on Monday November 21, 2005 between 4:00 p.m. and 6:00 p.m. at three locations shown in Exhibit 8. The purpose of the general ambient measurements is to document typical existing daytime noise levels in the area of the Project and determine if there are any additional unusual noise sources in the Project area that need to be addressed. The results of the noise measurements presented are not used in the determination of impacts. For traffic noise impacts, modeled traffic noise levels are utilized to determine impacts. For impacts from other noise sources, source specific data is used.

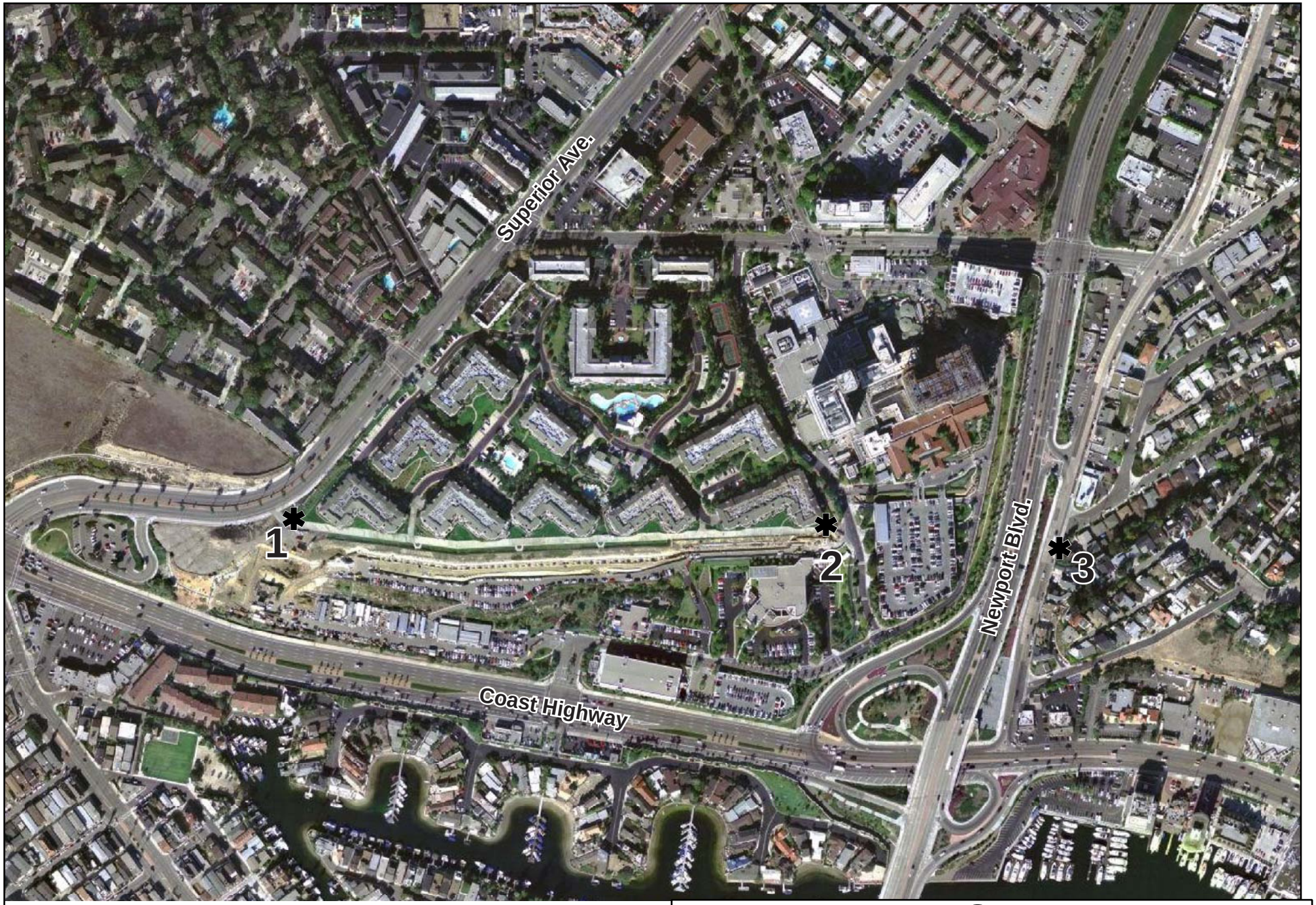

Exhibit 8 - General Ambient Noise Measurement Locations

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Table 4 presents the results of the measurements. The data presented in the table includes average noise level (Leq), maximum noise level (Lmax) and minimum noise level (Lmin) measured during each measurement period. The L10, L50 and L90 noise levels are presented as well. These are L% values; that is, the noise level that was exceeded for a percentage of the measurement period. The L50 is the median noise level. Half the time the noise level is above the L50 and half the time it is below. The L90 is the nose level exceeded 90 percent of the time and is considered the background noise level.

Table 4
General Ambient Noise Measurements

		Measured Noise Level (dBA)					
Site	**Start Time**	**Leq**	**Lmax**	**L10**	**L50**	**L90**	**Lmin**
1	4:16 PM	68.0	79.9	71.0	66.5	60.5	54.8
2	4:56 PM	62.9	76.0	65.0	61.0	57.5	55.2
3	5:44 PM	53.6	66.3	55.5	52.5	50.5	49.4

Noise levels at all three general noise measurement sites were dominated by traffic noise. Site 1 was located on the east side Superior Avenue in the condominium development just north of Sunset View Park. Traffic on Superior Avenue and to a lesser extent, Pacific Coast Highway were the dominant sources of noise. A large truck passing by on Superior Avenue resulted in the maximum noise level measured. Activities of persons in the park, generally walking and talking, also contributed to the noise environment along with insects.

Site 2 was located on the east side of Sunset View Park just west of Hoag Road. Distant traffic on Newport Boulevard and Pacific Coast Highway were the dominant source of noise at the site. Activities of persons in the park, generally walking and talking, also contributed to the noise environment. A person talking relatively close to the sound level meter caused the maximum measured noise level.

S Site 3 was located to the east of the Hospital across Newport Boulevard, along old Newport Boulevard near the corner of Catalina Drive. Traffic on Newport Boulevard was the dominant source of noise with intermittent traffic on old Newport Boulevard also generating considerable levels of noise. A bus passing on old Newport Boulevard generated the maximum measured noise level.

1.5 Existing Roadway Noise Levels

The highway noise levels projected in this report were computed using the Highway Noise Model published by the Federal Highway Administration ("FHWA Highway Traffic Noise Prediction Model," FHWA-RD-77-108, December, 1978). The FHWA Model uses traffic volume, vehicle mix, vehicle speed, and roadway geometry to compute the "equivalent noise level." A computer code has been written which computes equivalent noise levels for each of the time periods used in the calculation of CNEL. Weighting these equivalent noise levels and summing them gives the CNEL for the traffic projections used. CNEL contours are found by iterating over many distances until the distances to the 60, 65, and 70 CNEL contours are found.

The distances to the existing condition CNEL contours for the roadways affected by the Project site are given in Table 5. The noise levels presented in Table 5 were calculated using the

existing traffic volumes provided by the traffic engineer for the Project and posted speed limits. Only roadways where the Project or Alternative is projected to change noise levels by 0.5 dB or more are presented in Table 5. Existing traffic noise levels along all roadways analyzed for the Project are presented in Table A-5 of the Appendix. The contours presented in Table 5 represent the distance from the centerline of the roadway to the contour value shown. Note that the values given in Table 5 do not take into account the effect of any noise barriers or topography that may affect traffic noise levels.

Table 5
Existing Roadway Traffic Noise Levels

Roadway Segment	CNEL @ 100' †	Distance To CNEL Contour† (feet) 70 CNEL	65 CNEL	60 CNEL
17th Street				
west of Superior Ave.	60.8	RW	52	113
east of Superior Ave.	63.7	38	82	177
16th Street				
west of Superior Ave.	55.6	RW	RW	51
Industrial Way				
east of Superior Ave.	54.7	RW	RW	44
Hospital Road				
east of Superior Ave.	57.2	RW	30	65
west of Hoag Dr.	56.8	RW	RW	61
east of Hoag Dr.	60.0	RW	46	100
west of Newport Blvd.	60.1	RW	47	102
Pacific Coast Highway				
west of Orange St.	68.5	80	172	370
east of Orange St.	68.6	80	173	372
east of Hoag Dr.	63.9	39	84	181
west of Newport Blvd. SB Off Ramp	64.1	40	87	187
west of Riverside Ave.	66.7	60	129	278
east of Riverside Ave.	66.0	54	116	251
Via Lido				
east of Newport Blvd.	57.9	RW	34	72
Orange Street				
south of West Coast Hwy.	47.9	RW	RW	RW
Prospect Street				
north of West Coast Hwy.	50.4	RW	RW	RW
south of West Coast Hwy.	44.9	RW	RW	RW
Placentia Avenue				
north of Hospital Rd.	61.3	RW	57	122

RW – Noise contour falls within roadway right-of-way.
† – From roadway centerline.
Table Continued on Next Page

Table 5 (Continued)
Existing Roadway Traffic Noise Levels

Roadway Segment	CNEL @ 100' †	Distance To CNEL Contour† (feet) 70 CNEL	65 CNEL	60 CNEL
Superior Avenue				
north of 17th St.	58.2	RW	35	75
south of 17th St.	63.9	39	84	182
north of 16th St.\Industrial Way	63.2	35	75	163
south of 16th St.\Industrial Way	63.2	35	76	163
north of Placentia Ave.	62.4	31	67	145
north of West Coast Hwy.	64.5	43	92	198
Balboa Boulevard				
south of West Coast Hwy.	60.1	RW	47	101
Hoag Drive				
south of Hospital Rd.	53.0	RW	RW	34
north of West Coast Hwy.	51.8	RW	RW	RW
Newport Boulevard				
south of Hospital Rd.	68.9	84	181	390
north of Via Lido	65.6	51	109	235
south of Via Lido	64.4	42	91	196
Riverside Avenue				
north of West Coast Hwy.	58.3	RW	36	77
Tustin Avenue				
north of West Coast Hwy.	49.3	RW	RW	RW
Bay Shore Drive				
south of West Coast Hwy.	52.3	RW	RW	31
Bayside Drive				
north of East Coast Hwy.	48.6	RW	RW	RW

RW – Noise contour falls within roadway right-of-way.
† – From roadway centerline.

Table 5 shows that noise levels along 16th Street, Industrial Way, Orange Street, Prospect Street, Hoag Drive, Tustin Avenue, Bayshore Drive and Bayside Drive are minor. The 65 CNEL contour does not extend beyond the right-of-way along these roads. Traffic noise levels along 17th Street, Hospital Road, Via Lido, Placentia Avenue, Balboa Boulevard, and Riverside Avenue are moderate. Noise levels directly adjacent to these roadways exceed 65 CNEL but do not substantially exceed 70 CNEL. Noise Levels along Pacific Coast Highway, Superior Avenue and Newport Boulevard are substantial, exceeding 70 CNEL along the edge of the roadway.

2.0 POTENTIAL NOISE IMPACTS

Potential noise impacts are commonly divided into two groups; temporary and long term. Temporary impacts are usually associated with noise generated by construction activities. Long-term impacts are further divided into impacts on surrounding land uses generated by the proposed Project and those impacts that occur at the proposed Project site.

2.1 Noise Impact Criteria

Off-site impacts from on-site activities, short-term and long-term, are measured against the City of Newport Beach Noise Ordinance criteria. Noise generated during construction and operation will be required to comply with the City's Noise Ordinance. Noise generated by activities on the Project site associated with operation is also required to comply with the City's Noise Ordinance.

Long-term off-site impacts from traffic noise are measured against two criteria. Both criteria must be met for a significant impact to be identified. First, Project traffic must cause a substantial noise level increase on a roadway segment adjacent to a noise sensitive land use. Second, the resulting Future-With-Project noise level must exceed the criteria level for the noise sensitive land use.

In community noise assessment, changes in noise levels greater than 3 dB are often identified as substantial, while changes less than 1 dB will not be discernible to local residents. In the range of 1 to 3 dB, residents who are very sensitive to noise may perceive a slight change. In laboratory testing situations, humans are able to detect noise level changes of slightly less than 1 dB. In a community noise situation, however, noise exposures are over a long time period, and changes in noise levels occur over years, rather than the immediate comparison made in a laboratory situation. Therefore, the level at which changes in community noise levels become discernible is likely to be some value greater than 1 dB, and 3 dB appears to be appropriate for most people.

An increase of 3 dB is often used as a threshold for a substantial increase. In this case, many residential areas adjacent to roadways in the Project vicinity are projected to have future noise levels approaching the 65 CNEL standard. Therefore, for this Project, a more conservative 1 dB traffic noise level increase due to the Project is considered substantial. If the Project results in more than a 1 dB increase and the future with Project noise level is in excess of the City's criteria level for the noise sensitive land use the Project will result in a significant noise impact. In this case, the criteria level is 65 CNEL for residential land uses as identified in the Noise Element.

Long-term on-site impacts from traffic noise are measured against the noise standards established in the City's Noise Element. The applicable noise standards for this Project include the hospital 65 CNEL outdoor and 45 CNEL interior standards.

Long-term cumulative off-site impacts from traffic noise are also measured against two criteria. Both criteria must be met for a significant impact to be identified. First, future traffic noise levels must increase by more than 3 dB compared to existing conditions on a roadway segment adjacent to a noise sensitive land use. Second, the resulting future with Project noise level must exceed the criteria level for the noise sensitive land use. In this case, the criteria level is 65

CNEL for residential land uses.

2.2 Temporary Impacts

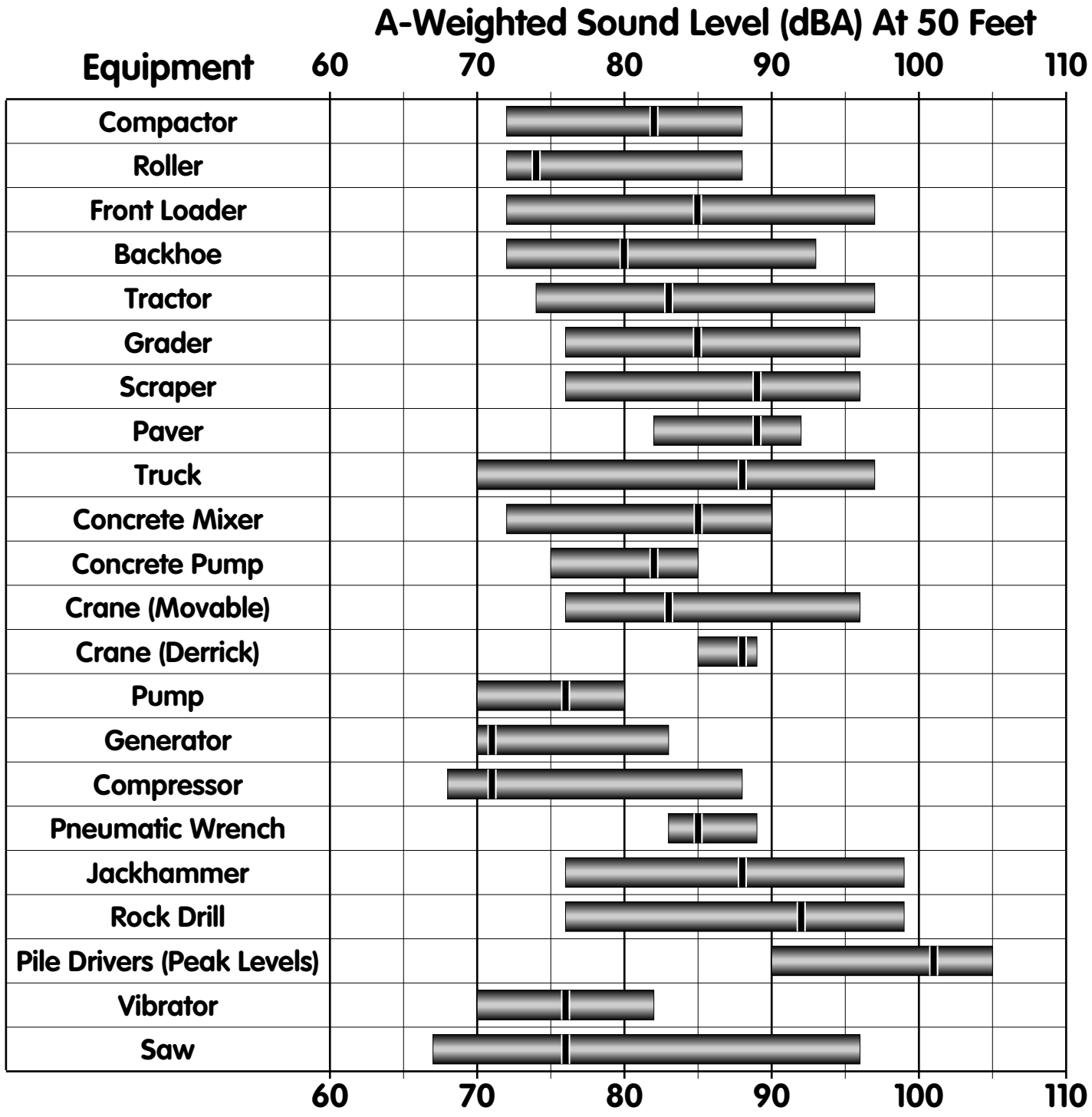
2.2.1 On-Site Construction Noise

Construction noise represents a short-term impact on ambient noise levels. Noise generated by construction equipment, including trucks, graders, bulldozers, concrete mixers and portable generators can reach high levels. The greatest construction noise levels are typically generated by heavy construction equipment.

Worst-case examples of construction equipment noise at 50 feet are presented in Exhibit 9. The peak noise level for most of the equipment that will be used during the construction is 70 to 95 dBA at a distance of 50 feet. At 200 feet, the peak construction noise levels range from 58 to 83 dBA. At 400 feet, the peak noise levels range from 52 to 77 dBA. Note that these noise levels are based upon worst-case conditions. Typically, noise levels near the site will be less. Noise measurements made by Mestre Greve Associates for other projects show that the noise levels generated by commonly used grading equipment (i.e. loaders, graders and trucks) generate noise levels that typically do not exceed the middle of the range shown in Exhibit 9.

The proposed Project just modifies the allowable development at the hospital and does not propose any specific construction project. Therefore, a specific analysis of noise levels generated by any construction that would be enabled by approval of this Project cannot be performed.

Construction occurring within 500 feet of residential areas has the potential to exceed the City of Newport Beach Noise Ordinance noise level limits. However, the Noise Ordinance exempts construction activities from the noise level limits during specific hours of the day. Noise generating construction activities are permitted during the hours between 7:00 a.m. and 6:30 p.m. Monday through Friday and between 8:00 a.m. to 6:00 p.m. on Saturday and at no time on Sundays or federal holidays. Construction activities are not proposed outside of these hours. Therefore, construction will not result in a significant short-term noise impact.



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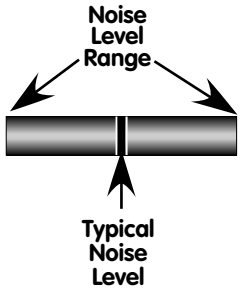


Sources: "Handbook of Noise Control," by Cyril Harris, 1979
"Transit Noise and Vibration Impact Assessment" by Federal Transit Administration, 1995

Exhibit 9
Construction Equipment Noise Levels

Mestre Greve Associates

2.3 Long Term Off-Site Impacts

This section examines noise impacts from the Project on the surrounding land uses. First, potential traffic noise impacts due to the Project are examined. Changes in traffic noise levels caused by changes in traffic volumes resulting from implementation of the Project are examined. The results of this analysis are presented in Section 2.3.1. Next, potential traffic noise impacts resulting from the Project Alternative are examined in the same manner. The results of this analysis are presented in Section 2.3.2. Section 2.3.3 compares traffic noise levels with the Project to conditions with the Project Alternative. Section 2.3.4 examines cumulative traffic noise impacts. Potential impacts from noise generated on the Project site affecting nearby uses is discussed in Section 2.3.5. Noise impacts resulting from the proposed changes in the Development Agreement and PC Text are discussed in Section 2.3.6.

2.3.1 Traffic Noise Impacts Due to Project

Impacts from increases in traffic noise levels due to the Project are estimated using the traffic projections presented in the traffic study prepared for the Project. By comparing the traffic volumes for different scenarios, the changes in noise levels along roadways in the vicinity of the Project can be estimated. To estimate noise level changes due to the Project, the With-Project traffic volume is compared to the Without-Project traffic volume. To estimate cumulative traffic noise level changes, the With-Project traffic volume is compared to the Existing traffic volume. Traffic volumes used to calculate the noise level changes were taken from the traffic study prepared for the Project by Linscott, Law & Greenspan engineers. The results of this analysis are presented below.

Traffic noise CNEL changes with the Project are presented in Table 6. Traffic noise level changes are assessed for two scenarios: 2015 With Project, and 2025 With Project. Projected changes in traffic noise levels over existing conditions are presented along with the changes resulting from the implementation of the Project for each of the two analysis years. The change over existing conditions is how much the traffic noise CNEL levels are projected to change over current conditions due to the Project as well as other factors that will affect traffic volumes. This change is used to assess cumulative impacts discussed in Section 2.3.4. The change due to the Project is how much the future traffic noise levels are projected to change with the Project compared to the future conditions without the Project. Note that future conditions without the Project assume build out of the approved 1,343,238 square feet of the Hoag Master Plan without any reallocation of the square footage proposed by the Project.

To focus on those roads that the Project affects, only those roadway segments with noise level changes due to the Project of 0.5 dB or greater (under any scenario analyzed) are presented in Table 6. Noise level increases along all roadways analyzed are presented in Table A-6 in the appendix. Traffic noise level increases due to the Project of 1 dB or more, and over existing conditions of 3 dB or more, are shown in bold-italics.

Table 6
Traffic Noise CNEL Changes With Project (dB)

Roadway Segment	Change in 2015 Over Existing	Change in 2015 Due to Project	Change in 2025 Over Existing	Change in 2025 Due to Project
17th Street				
west of Superior Ave.	0.7	0.7	1.1	0.0
east of Superior Ave.	0.7	0.6	0.6	0.0
16th Street				
west of Superior Ave.	0.7	0.6	0.2	0.0
Industrial Way				
east of Superior Ave.	0.6	0.6	0.7	0.0
Hospital Road				
east of Superior Ave.	0.1	0.8	1.7	0.0
west of Hoag Dr.	-0.3	0.6	1.3	0.0
east of Hoag Dr.	-1.0	-0.6	-0.1	0.3
west of Newport Blvd.	-1.3	-0.8	-0.2	0.3
Pacific Coast Highway				
west of Orange St.	0.4	-0.5	0.5	0.0
east of Orange St.	0.3	-0.5	0.5	0.0
east of Hoag Dr.	1.6	0.8	2.0	-0.5
west of Newport Blvd. SB Off Ramp	1.6	***1.0***	2.1	-0.3
west of Riverside Ave.	-0.2	-0.7	0.4	-0.1
east of Riverside Ave.	0.0	-0.5	0.6	-0.1
Via Lido				
east of Newport Blvd.	1.2	***1.0***	1.4	0.0
Orange Street				
south of West Coast Hwy.	-0.9	-2.4	-1.4	0.0
Prospect Street				
north of West Coast Hwy.	-2.3	-1.3	-0.9	0.0
south of West Coast Hwy.	0.5	-1.3	1.3	0.0
Placentia Avenue				
north of Hospital Rd.	0.7	0.8	1.8	0.0
Superior Avenue				
north of 17th St.	0.7	0.8	1.9	0.0
south of 17th St.	0.7	0.7	0.2	0.0
north of 16th St.\Industrial Way	0.7	0.7	0.9	0.0
south of 16th St.\Industrial Way	0.7	0.7	0.8	0.0
north of Placentia Ave.	1.6	0.7	0.1	0.0
north of West Coast Hwy.	-0.6	-1.1	-2.2	0.0
Balboa Boulevard				
south of West Coast Hwy.	0.0	-1.1	-0.5	0.0
Hoag Drive				
south of Hospital Rd.	***4.2***	***3.8***	***5.8***	0.5
north of West Coast Hwy.	0.9	-2.2	***3.0***	-1.5

Table continued on next page.

Table 6 (Continued)
Traffic Noise CNEL Changes With Project (dB)

Roadway Segment	Change in 2015 Over Existing	Change in 2015 Due to Project	Change in 2025 Over Existing	Change in 2025 Due to Project
Newport Boulevard				
south of Hospital Rd.	-0.7	-0.7	0.1	-0.1
north of Via Lido	-1.1	-0.8	-0.4	0.0
south of Via Lido	-1.2	-0.7	-0.3	0.0
Riverside Avenue				
north of West Coast Hwy.	-1.2	-1.0	-0.2	0.0
Tustin Avenue				
north of West Coast Hwy.	***3.4***	***1.6***	***3.5***	0.0
Bay Shore Drive				
south of West Coast Hwy.	-2.0	-2.1	-5.9	0.0
Bayside Drive				
north of East Coast Hwy.	***4.8***	***1.0***	***5.6***	0.0

The distances to the future 60, 65 and 70 CNEL contours with the Project are presented in Table 7. These represent the distance from the centerline of the road to the contour value shown. The CNEL at 100 feet from the roadway centerline is also presented. These are worst-case noise levels, in that the highest traffic volume projected for the scenarios presented in Table 6 were used to estimate the future noise level. The contours do not take into account the effect of any noise barriers or topography that may affect ambient noise levels. The traffic data used to calculate these noise levels is presented in the appendix. Table 7 presents the contours along the same roadway segments presented in Table 7. Table A-7 in the appendix presents traffic noise levels with the Project for all roadways analyzed.

Table 7
Future Traffic Noise Levels With Project

Roadway Segment	CNEL @ 100' †	Distance To CNEL Contour† (feet) 70 CNEL	65 CNEL	60 CNEL
17th Street				
west of Superior Ave.	61.9	RW	62	135
east of Superior Ave.	64.4	42	91	196
16th Street				
west of Superior Ave.	56.3	RW	RW	57
Industrial Way				
east of Superior Ave.	55.4	RW	RW	49
Hospital Road				
east of Superior Ave.	58.9	RW	39	85
west of Hoag Dr.	58.1	RW	35	75
east of Hoag Dr.	59.9	RW	46	98
west of Newport Blvd.	59.9	RW	46	98

† From centerline.
RW – Contour falls within right-of-way.
Table continued on next page.

Table 7 (Continued)
Future Traffic Noise Levels With Project

Roadway Segment	CNEL @ 100' †	Distance To CNEL Contour† (feet) 70 CNEL	65 CNEL	60 CNEL
Pacific Coast Highway				
west of Orange St.	69.0	86	186	400
east of Orange St.	69.0	86	186	400
east of Hoag Dr.	65.9	53	114	247
west of Newport Blvd. SB Off Ramp	66.2	55	119	257
west of Riverside Ave.	67.1	64	137	295
east of Riverside Ave.	66.6	59	128	275
Via Lido				
east of Newport Blvd.	59.3	RW	41	89
Orange Street				
south of West Coast Hwy.	47.0	RW	RW	RW
Prospect Street				
north of West Coast Hwy.	49.4	RW	RW	RW
south of West Coast Hwy.	46.2	RW	RW	RW
Placentia Avenue				
north of Hospital Rd.	63.1	34	74	160
Superior Avenue				
north of 17th St.	60.0	RW	47	101
south of 17th St.	64.6	44	94	202
north of 16th St.\Industrial Way	64.1	40	86	186
south of 16th St.\Industrial Way	64.0	40	86	185
north of Placentia Ave.	64.0	40	86	185
north of West Coast Hwy.	63.8	39	83	179
Balboa Boulevard				
south of West Coast Hwy.	60.0	RW	47	101
Hoag Drive				
south of Hospital Rd.	58.7	RW	38	82
north of West Coast Hwy.	54.9	RW	RW	46
Newport Boulevard				
south of Hospital Rd.	68.9	85	183	395
north of Via Lido	65.2	48	103	222
south of Via Lido	64.1	41	88	189
Riverside Avenue				
north of West Coast Hwy.	58.1	RW	35	75
Tustin Avenue				
north of West Coast Hwy.	52.9	RW	RW	34
Bay Shore Drive				
south of West Coast Hwy.	50.3	RW	RW	RW
Bayside Drive				
north of East Coast Hwy.	54.2	RW	RW	41

† From centerline.
RW – Contour falls within right-of-way.

Table 6 shows that the Project is projected to increase noise levels by 1 dB or more along five roadway segments; (1) Pacific Coast Highway West of Newport Boulevard Southbound Off-Ramp, (2) Via Lido east of Newport Boulevard, (3) Hoag Drive, south of Hospital Road, (4) Tustin Avenue north of West Coast Highway, and (5) Bayside Drive north of East Coast Highway. Conditions along each of these road segments were assessed to determine if the City's noise standards would be exceeded at any sensitive receptors are discussed below.

Pacific Coast Highway west of Newport Boulevard Southbound Off-Ramp. The Project site is located north of this road segment. The future 65 CNEL noise contour along this road segment is projected to extend 119 feet from the centerline. There are homes located on the south side of this road segment approximately 120 from the centerline and there is a 10 foot high block wall. This block wall provides approximately 9 dB of noise reduction. Therefore, traffic noise levels at the homes will not exceed the City's 65 CNEL outdoor noise standard. Therefore, the Project's traffic will not result in a significant noise impact along this road segment.

Via Lido east of Newport Boulevard. The future 65 CNEL noise contour along this road segment is projected to extend 41 feet from the centerline. There are only commercial uses along this road segment and, based on their distance from the centerline, all buildings along this segment would be expected to provide adequate outdoor-to-indoor noise reduction so that interior noise levels due to traffic on this road segment will not exceed the applicable standards. Therefore, the Project's traffic will not result in a significant noise impact along this road segment.

Hoag Drive south of Hospital Road. This road segment is located within the Project itself. The future 65 CNEL noise contour along this road segment is only projected to extend 38 feet from the centerline of the road. There are no noise sensitive outdoor areas located within this distance of the centerline and, based on their distance from the centerline, all buildings along this segment would be expected to provide adequate outdoor-to-indoor noise reduction so that interior noise levels due to traffic on this road segment will not exceed the applicable standards. Therefore, the Project's traffic will not result in a significant noise impact along this road segment.

Tustin Avenue north of West Coast Highway. The future 65 CNEL noise contour along this road segment is not projected to extend beyond the right-of-way. There are only commercial uses along Tustin Avenue just north of West Cost Highway with homes located along Tustin Avenue approximately 350 feet north of West Coast Highway. These residences front Tustin Avenue. Because the 65 CNEL contour is not projected to extend beyond the right-of-way no exceedances of the applicable noise standards is expected. Therefore, the Project's traffic will not result in a significant noise impact along this road segment.

Bayside Drive north of West Coast Highway. The future 65 CNEL noise contour along this road segment is not projected to extend beyond the right-of-way. There are mobile home residences located along both sides of this segment of Bayside Drive. These residences are set back approximately 40 feet from the roadway centerline. Because the 65 CNEL contour is not projected to extend beyond the right-of-way no exceedances of the applicable noise standards is expected. Therefore, the Project's traffic will not result in a significant noise impact along this road segment.

Table 6 shows that noise levels along four roadway segments are projected to increase by 3 dB or more over existing conditions. Potentially, there are cumulative traffic noise impacts along these road segments. Cumulative traffic noise impacts are discussed in Section 2.3.4.

2.3.2 Traffic Noise Impacts With Project Alternative

Potential traffic noise impacts with the development of the Project Alternative are examined below. Table 8 presents the traffic noise level changes projected with the Project Alternative in the same format as Table 6, which presented the traffic noise level increases with the Project. As with Table 6, to focus on those roads that the Project Alternative affects, only those roadway segments with noise level changes due to the Project Alternative greater than 0.5 dB (under any scenario analyzed) are presented in Table 8. Noise level changes along all roadways analyzed are presented in Table A-8 in the appendix. Traffic noise level increases due to the Project Alternative of 1 dB or more, and over existing conditions of 3 dB or more, are shown in bold-italics.

Table 8
Traffic Noise CNEL Changes With Project Alternative (dB)

	Change in 2015		Change in 2025	
Roadway Segment	Over Existing	Due to Project Alternative	Over Existing	Due to Project Alternative
17th Street				
west of Superior Ave.	0.6	0.6	1.1	-0.1
east of Superior Ave.	0.6	0.6	0.6	-0.1
16th Street				
west of Superior Ave.	0.6	0.6	0.2	-0.1
Industrial Way				
east of Superior Ave.	0.6	0.6	0.7	-0.1
Hospital Road				
east of Superior Ave.	0.1	0.7	1.7	0.0
west of Hoag Dr.	-0.3	0.5	1.3	0.0
east of Hoag Dr.	-1.0	-0.6	-0.1	0.3
west of Newport Blvd.	-1.3	-0.8	-0.2	0.3
Pacific Coast Highway				
west of Orange St.	0.4	-0.5	0.5	0.0
east of Orange St.	0.3	-0.5	0.5	0.0
east of Hoag Dr.	1.8	***1.1***	2.4	-0.2
west of Newport Blvd. SB Off Ramp	1.6	***1.0***	2.2	-0.2
west of Riverside Ave.	-0.2	-0.7	0.5	0.0
east of Riverside Ave.	0.1	-0.4	0.7	0.0
Via Lido				
east of Newport Blvd.	1.2	***1.0***	1.4	0.0
Orange Street				
south of West Coast Hwy.	-0.9	-2.4	-1.4	0.0
Prospect Street				
north of West Coast Hwy.	-2.3	-1.3	-0.9	0.0
south of West Coast Hwy.	0.5	-1.3	1.3	0.0

Table continued on next page.

Table 8 (Continued)
Traffic Noise CNEL Changes With Project Alternative (dB)

Roadway Segment	Change in 2015 Over Existing	Change in 2015 Due to Project Alternative	Change in 2025 Over Existing	Change in 2025 Due to Project Alternative
Placentia Avenue				
north of Hospital Rd.	0.7	0.8	1.8	0.0
Superior Avenue				
north of 17th St.	0.7	0.7	1.9	0.0
south of 17th St.	0.7	0.7	0.2	0.0
north of 16th St.\Industrial Way	0.7	0.7	0.9	0.0
south of 16th St.\Industrial Way	0.7	0.7	0.8	0.0
north of Placentia Ave.	1.6	0.7	0.1	0.0
north of West Coast Hwy.	-0.7	-1.2	-2.2	0.0
Balboa Boulevard				
south of West Coast Hwy.	0.0	-1.1	-0.5	0.0
Hoag Drive				
south of Hospital Rd.	***4.0***	***3.5***	***5.8***	0.5
north of West Coast Hwy.	0.7	-2.3	***3.6***	-1.0
Newport Boulevard				
south of Hospital Rd.	-0.7	-0.7	0.1	-0.1
north of Via Lido	-1.1	-0.8	-0.4	0.0
south of Via Lido	-1.2	-0.7	-0.3	0.0
Riverside Avenue				
north of West Coast Hwy.	-1.2	-1.0	-0.2	0.0
Tustin Avenue				
north of West Coast Hwy.	***3.4***	***1.6***	***3.5***	0.0
Bay Shore Drive				
south of West Coast Hwy.	-2.0	-2.1	-5.9	0.0
Bayside Drive				
north of East Coast Hwy.	***4.8***	***1.0***	***5.6***	0.0

The distances to the future 60, 65 and 70 CNEL contours with the Project Alternative are presented in Table 9. These represent the distance from the centerline of the road to the contour value shown. The CNEL at 100 feet from the roadway centerline is also presented. These are worst-case noise levels, in that the highest traffic volume projected for the scenarios presented in Table 8 were used to estimate the future noise level. The contours do not take into account the effect of any noise barriers or topography that may affect ambient noise levels. The traffic data used to calculate these noise levels is presented in the appendix. Table 9 presents the contours along the same roadway segments presented in Table 8. Table A-9 in the appendix presents traffic noise levels with the Project for all roadways analyzed.

Table 9
Future Traffic Noise Levels With Project Alternative

Roadway Segment	CNEL @ 100' †	Distance To CNEL Contour† (feet) 70 CNEL	65 CNEL	60 CNEL
17th Street				
west of Superior Ave.	61.9	RW	62	134
east of Superior Ave.	64.4	42	91	195
16th Street				
west of Superior Ave.	56.3	RW	RW	56
Industrial Way				
east of Superior Ave.	55.4	RW	RW	49
Hospital Road				
east of Superior Ave.	58.9	RW	39	85
west of Hoag Dr.	58.1	RW	35	75
east of Hoag Dr.	59.9	RW	46	98
west of Newport Blvd.	59.9	RW	46	98
Pacific Coast Highway				
west of Orange St.	69.0	86	186	400
east of Orange St.	69.0	86	186	400
east of Hoag Dr.	66.2	56	121	261
west of Newport Blvd. SB Off Ramp	66.2	56	121	261
west of Riverside Ave.	67.1	64	139	299
east of Riverside Ave.	66.7	60	129	278
Via Lido				
east of Newport Blvd.	59.3	RW	41	89
Orange Street				
south of West Coast Hwy.	47.0	RW	RW	RW
Prospect Street				
north of West Coast Hwy.	49.4	RW	RW	RW
south of West Coast Hwy.	46.2	RW	RW	RW
Placentia Avenue				
north of Hospital Rd.	63.1	34	74	160
Superior Avenue				
north of 17th St.	60.0	RW	47	100
south of 17th St.	64.6	43	93	201
north of 16th St.\Industrial Way	64.0	40	86	186
south of 16th St.\Industrial Way	64.0	40	86	185
north of Placentia Ave.	64.0	40	85	184
north of West Coast Hwy.	63.8	38	83	178
Balboa Boulevard				
south of West Coast Hwy.	60.1	RW	47	101
Hoag Drive				
south of Hospital Rd.	58.7	RW	38	82
north of West Coast Hwy.	55.5	RW	RW	50

† From centerline.
RW – Contour falls within right-of-way.
Table continued on next page.

Table 9 (Continued)
Future Traffic Noise Levels With Project Alternative

Roadway Segment	CNEL @ 100' †	Distance To CNEL Contour† (feet) 70 CNEL	65 CNEL	60 CNEL
Newport Boulevard				
south of Hospital Rd.	68.9	85	183	395
north of Via Lido	65.2	48	103	222
south of Via Lido	64.1	41	88	189
Riverside Avenue				
north of West Coast Hwy.	58.1	RW	35	75
Tustin Avenue				
north of West Coast Hwy.	52.9	RW	RW	34
Bay Shore Drive				
south of West Coast Hwy.	50.3	RW	RW	RW
Bayside Drive				
north of East Coast Hwy.	54.2	RW	RW	41

† From centerline.
RW – Contour falls within right-of-way.

Table 8 shows that the Project Alternative is projected to increase noise levels by 1 dB or more along six roadway segments; (1) Pacific Coast Highway West of Newport Boulevard Southbound Off-Ramp, (2) Pacific Coast Highway east of Hoag Drive (3) Via Lido east of Newport Boulevard, (4) Hoag Drive, south of Hospital Road, (5) Tustin Avenue north of West Coast Highway, and (6) Bayside Drive north of East Coast Highway. Conditions along each of these road segments were assessed to determine if the City's noise standards would be exceeded at any sensitive receptors are discussed below.

Pacific Coast Highway East of Hoag Drive. The Project Alternative site is located north of this road segment. The future 65 CNEL noise contour along this road segment is projected to extend 121 feet from the centerline. There are homes located on the south side of this road segment approximately 120 from the centerline and there is a 10-foot high block wall. This block wall provides approximately 9 dB of noise reduction. Therefore, traffic noise levels at the homes will not exceed the City's 65 CNEL outdoor noise standard. There are commercial uses located to the north and south of the road segment and, based on their distance from the centerline, all commercial buildings along this segment would be expected to provide adequate outdoor-to-indoor noise reduction so that interior noise levels due to traffic on this road segment will not exceed the applicable standards. Therefore, the Project Alternative's traffic will not result in a significant noise impact along this road segment.

Pacific Coast Highway west of Newport Boulevard Southbound Off-Ramp. The Project Alternative site is located north of this road segment. The future 65 CNEL noise contour along this road segment is projected to extend 121 feet from the centerline. There are homes located on the south side of this road segment approximately 120 from the centerline and there is a 10-foot high block wall. This block wall provides approximately 9 dB of noise reduction. Therefore, traffic noise levels at the homes will not exceed the City's 65 CNEL outdoor noise standard. There are commercial uses located to the north of the road segment and, based on their distance from the centerline, all commercial buildings along this segment would be expected to provide adequate outdoor-to-indoor noise reduction so that interior noise levels due to traffic on

this road segment will not exceed the applicable standards. Therefore, the Project Alternative's traffic will not result in a significant noise impact along this road segment.

Via Lido east of Newport Boulevard. The future 65 CNEL noise contour along this road segment is projected to extend 41 feet from the centerline. There are only commercial uses along this road segment and, based on their distance from the centerline, all buildings along this segment would be expected to provide adequate outdoor-to-indoor noise reduction so that interior noise levels due to traffic on this road segment will not exceed the applicable standards. Therefore, the Project Alternative's traffic will not result in a significant noise impact along this road segment.

Hoag Drive south of Hospital Road. This road segment is located within the Project Alternative area itself. The future 65 CNEL noise contour along this road segment is only projected to extend 38 feet from the centerline of the road. There are no noise sensitive outdoor areas located within this distance of the centerline and, based on their distance from the centerline, all buildings along this segment would be expected to provide adequate outdoor-to-indoor noise reduction so that interior noise levels due to traffic on this road segment will not exceed the applicable standards. Therefore, the Project Alternative's traffic will not result in a significant noise impact along this road segment.

Tustin Avenue north of West Coast Highway. The future 65 CNEL noise contour along this road segment is not projected to extend beyond the right-of-way. There are only commercial uses along Tustin Avenue just north of West Cost Highway with homes located along Tustin Avenue approximately 350 feet north of West Coast Highway. These residences front Tustin Avenue. Because the 65 CNEL contour is not projected to extend beyond the right-of-way no exceedances of the applicable noise standards is expected. Therefore, the Project Alternative's traffic will not result in a significant noise impact along this road segment.

Bayside Drive north of West Coast Highway. The future 65 CNEL noise contour along this road segment is not projected to extend beyond the right-of-way. There are mobile home residences located along both sides of this segment of Bayside Drive. These residences are set back approximately 40 feet from the roadway centerline. Because the 65 CNEL contour is not projected to extend beyond the right-of-way no exceedances of the applicable noise standards is expected. Therefore, the Project Alternative's traffic will not result in a significant noise impact along this road segment.

Table 8 shows that noise levels along four roadway segments are projected to increase by more than 3 dB over existing conditions. Potentially, there are cumulative traffic noise impacts along these road segments. Cumulative traffic noise impacts are discussed in Section 2.3.4.

2.3.3 Traffic Noise Level Changes with Project vs. Alternative

Table 10 presents the difference in changes in traffic noise CNEL levels under conditions with the proposed Project versus with the Project Alternative. A positive number indicates that the Project Alternative would result in a higher noise level by the amount shown than the conditions with the Project. A negative number indicates that the Project would result in a higher noise level by the amount shown than conditions with the Project Alternative. Data is only presented for roadway segments with projected noise level difference between the Project and Project Alternative of 0.1 dB or more. Traffic noise level differences between the two scenarios will be less than 0.1 dB along all other roadway segments. Table A-10 presents the difference in changes in traffic noise levels between the Project and the Project Alternative for all roadway segments analyzed.

Table 10
Traffic Noise CNEL Changes with Project vs. Project Alternative (dB)

Roadway Segment	2015	2025
19th Street		
west of Newport Ave.	0.1	0.1
Hospital Road		
east of Superior Ave.	-0.1	0.0
west of Hoag Dr.	-0.1	0.0
east of Newport Blvd.	-0.1	0.0
Pacific Coast Highway		
east of Balboa Blvd.\Superior Ave.	0.1	0.1
west of Hoag Dr.	-0.2	-0.2
east of Hoag Dr.	0.2	0.4
west of Newport Blvd. SB Off Ramp	0.0	0.1
west of Riverside Ave.	0.0	0.1
east of Riverside Ave.	0.1	0.1
west of Bay Shore Dr.\Dover Dr.	0.1	0.1
east of Bay Shore Dr.\Dover Dr.	0.0	0.1
west of Bayside Dr.	0.0	0.1
west of Marine Dr.\Jamboree Rd.	0.1	0.1
Placentia Avenue		
north of Superior Ave.	-0.1	0.0
south of Superior Ave.	-0.1	0.0
Hoag Drive		
south of Hospital Rd.	-0.2	0.0
north of West Coast Hwy.	-0.2	0.6

Table 10 shows that, in general, there is little difference in the projected traffic noise levels with the Project or with the Project Alternative. The greatest differences occur along Hoag Drive. This is primarily due to the low level of traffic on Hoag Drive. Table 7 and Table 9 show that traffic noise levels along Hoag Drive will be less than 65 CNEL and will just exceed 60 CNEL. The greatest difference in noise levels along Hoag Drive would be 0.6 dB under 2025 conditions. This is an imperceptible difference. Traffic noise CNEL differences along all other roadway segments would 0.4 dB or less with the Project compared to the Project Alternative. This

difference is imperceptible.

2.3.4 Cumulative Traffic Noise Impacts

Cumulative traffic noise impacts are measured based on projected noise level increases over existing conditions. These increases were presented previously in Table 6 for the Project and Table 8 for the Project Alternative. Table 6 and Table 8 show traffic noise levels are projected to increase by 3 dB or more over existing conditions along the same four roadway segments under either condition. These segments are (1) Hoag Drive south of Hospital Road, (2) Hoag Drive north of West Coast Highway, (3) Tustin Avenue north of West Coast Highway, and (4) Bayside Drive north of East Coast Highway. The Project and Project Alternative are projected to cause an increase of 1 dB or greater along all of these segments except Hoag Drive north of West Coast Highway. The analysis presented in Sections 2.3.1 and 2.3.2 concluded that the City's Noise Standards would not be exceeded along these three segments and therefore, neither the Project nor the Project Alternative would result in a significant impact. Because the noise standards will not be exceeded, there will also not be a significant cumulative impact along these three road segments. Conditions along the remaining road segments were assessed to determine if the City's noise standards would be exceeded at any sensitive receptors are discussed below.

Hoag Drive north of West Coast Highway. This road segment is located within the Project itself. The future 65 CNEL noise contour along this road segment is not projected to extend beyond the roadway right-of-way. There are no noise sensitive outdoor areas located within this distance of the centerline and all buildings along this segment provide adequate outdoor-to-indoor noise reduction so that interior noise levels due to traffic on this road segment will not exceed the applicable standards. Therefore, there are no significant cumulative noise impacts along this road segment.

Therefore, no sensitive uses are projected to be exposed to traffic noise levels in excess of the City's Standards and cumulative traffic noise level increases of 3dB or greater for either conditions with the Project or Project Alternative. Therefore, there are no cumulative traffic noise impacts due to the Project or Project Alternative.

2.3.5 Noise Impacts from On-Site Activities

As discussed previously, the proposed Project only changes and reallocates the levels of development allowed for the Hoag Hospital site. No specific projects are proposed. Therefore, a detailed analysis of impacts from on-site activities associated with the proposed Project cannot be performed. Four existing noise sources of noise from activities on the Hospital Site that are causing current noise issues were discussed in Section 1.4. These sources include grease pit cleaning, loading dock activities, mechanical equipment, and the cogeneration plant. As discussed in Section 1.4.1, 1.4.2, and 1.4.3, grease pit cleaning, loading dock activities, and mechanical equipment generate levels that exceed the basic Noise Ordinance Standards presented in Table 1. However, as discussed in these sections, the Noise Ordinance Standards from Table 1 are not necessarily applicable to the sources. Noise from these sources, the potential for the Project to change these noise levels, and potential measures to reduce the noise are discussed below for each source. As discussed in Section 1.4.4 noise generated by the cogeneration facility currently does not generate noise in excess of the Noise Ordinance. However, equipment may be added in the future. Additional noise measurements will be warranted when the facility is in full operation to insure that it remains within the limits of the

Noise Ordinance. The cogeneration facility is completely permitted at this time. The City will have the right to require noise mitigation of the facility only if the cogeneration facility is shown to not be in compliance with the Noise Ordinance.

Grease Pit Cleaning

As discussed in Section 1.4.1, grease pit cleaning is considered a property maintenance activity which is exempted from the Noise Ordinance Standards presented in Table 1 as long as it occurs between 7:00 a.m. and 6:30 p.m. Monday through Friday and between 8:00 a.m. and 6:00 p.m. on Saturday and at no time on Sundays or national holidays. However, the Grease Pit Cleaning generates very high levels of noise during the time the activity is being conducted. Noise levels at the nearest residences were approximately 77 dBA for over an hour. This is 17 dB higher, perceptually almost four times as loud as the City's 60 dBA Leq Noise Ordinance limit for residential uses located within 100 feet of a commercial use. Interior noise levels would be approximately 20 dB lower than outdoor levels or approximately 57 dBA. This is 12 dB greater, perceptually more than twice as loud, as the interior Noise Ordinance standard.

The Project would add up to 76 beds, a 19% increase, and add up to 225,000 square feet, a 30% increase, of allowable development to the Upper Campus. These increases could result in an increase in the utilization of the cafeteria facilities due to the increased beds and facilities on the upper campus would be expected to utilize the cafeteria at higher rates than facilities on the lower campus. The increased cafeteria usage results in a corresponding increase in grease being trapped within the grease pit. This would result in more frequent cleaning of the grease pit being required. The grease pit cleaning already generates high levels of noise and the Project could increase the frequency of cleanings. However, it is exempt from the Noise Ordinance and the Noise Ordinance represents the threshold criteria for this activity. Therefore, a significant impact due to grease pit cleaning is not projected.

Mechanical Equipment

Completion of build out of the Hospital may require additional HVAC equipment, which could include roof top mounted equipment. At the time of the previous EIR, the City of Newport Beach had not adopted a Noise Ordinance with specific noise level limits. Using the County of Orange Noise Ordinance as guidance, the 1991 EIR set a noise level limit for mechanical equipment of 55 dBA. The analysis presented in Section 1.4.3 shows that this limit is being exceeded for the existing mechanical equipment. The current noise level at the residents has been measured at 58 dBA and this exceeds the current PC text limits by 3 dBA. The current noise is due both to rooftop equipment mounted on the Ancillary Building and to HVAC equipment located on the third floor of the West Tower. This condition should be corrected prior to issuance of any additional building permits for projects on the Upper Campus. This is discussed in Section 3.2.2. New mechanical equipment will need to comply with the PC Text. The current PC Text requires that HVAC equipment cannot generate a noise level in excess of 55 dBA.

In fact, Hoag Hospital has initiated plans to revamp the HVAC system for the Ancillary Building. Paulo Fundament of Fundament and Associates outlined the new plans in his narrative entitled "Strategies for Mitigation of Noise Generating Mechanical Ventilation Equipment," (dated February 6, 2007). The following is a discussion of the proposed changes and possible measures to reduce the noise to acceptable levels.

Currently the kitchen exhaust fans come through a "doghouse" in the center of the roof of the Ancillary Building. These fans currently are the prime noise generators on the Ancillary Building. According to Fundament, these fans will be replaced with new ducting and new fans. The new fans would operate at a lower speed and be selected for their low noise generation.

Since the new fans have not been selected, it is not possible to calculate the resulting noise levels at the nearby residences. However, the new fans will operate at a much slower speed and will have an aerodynamic fan blade. It is very possible that the new fans by themselves will result in noise levels that will comply with the noise ordinance. It should be noted that kitchen exhaust fans might be difficult to mitigate if additional mitigation is necessary. Sound traps are commonly used to reduce the noise coming through the exhaust outlet. However, due to the grease loading of kitchen fans, sound traps are not viable. Other options may need to be considered including orienting all of the kitchen exhausts away from the residential area, and beefing up substantially the construction of the doghouse on the sides of the doghouse facing the residential area. In fact, according to Fundament the doghouse will likely be replaced with a 10 foot high sound wall. In summary, the new kitchen exhaust fans will probably result in a significant improvement in the noise levels. In order to insure that a significant noise reduction is achieved, a noise study should be required to show that the new fans, in combination with the other mechanical equipment, will meet the proposed PC text requirements. Mitigation options appear to be available, if needed, that would insure that the new fans could comply with these requirements.

In addition to the new kitchen exhaust fans, twenty-two (22) new exhaust fans would be located on the roof of the Ancillary Building (Fundament, 2006). These will be small fans that will be scattered across the roof. These fans have been selected for quiet operation. Additionally, a 7 foot architectural screen wall is planned to be added to the west and portions of the north and south edges of the Ancillary Building. This screen wall is solid and will act as an effective noise barrier for the small exhaust fans that are located along the western portion of the building. According to Cary Brooks of Hoag Hospital, a gap of a few inches may be needed along the bottom of the parapet wall for drainage, but will be fitted with a skirt to cover the gap as viewed from the residential area.

Since the specific fans that are going to be used are known, we were able to calculate the noise levels at the nearby residential area. A noise level at the upper floor of the nearest residence was calculated including the effect of the 7 foot screen wall. The projected noise level for the site is 42.1 dBA and is well below the current PC Text criteria of 55 dBA at the property line (and is below the 50 dBA nighttime limit in the noise ordinance). Even when the other fans in the area are added in, these new fans will not add significantly to the total noise level. In summary, the addition of the 22 fans on the Ancillary Building, in combination with the construction of the 7 foot screen wall, will not generate significant noise levels and will not exceed the current or proposed PC Text limitations.

The air handlers on the third floor of the west face of the West Tower would also need to be reduced by 3 dBA to comply with the current PC Text. There are large air handler units in this floor of the West Tower that exhaust or intake air for the building. Six fans (i.e., EF-8, FC-4, SF-1, EF-12, EF-9, and EF-10) were identified in the West Patient Tower. Fundament confirms

that acoustic louvers will be used to mitigate four of the fans (i.e., EF-8, EF-9, EF-10, and SF-1). Fundament confirmed that FC-4 will remain and concurs that acoustic louvers could be used to mitigate this noise also. In fact, due to the open nature of this floor, acoustic louvers will be used all around the perimeter of this floor. EF-12 protrudes through the side of building, and is one of the louder fans. It is possible to fit a sound trap on EF-12, and not have the ducting protrude through the side of the building. Acoustic louvers are being planned around the outside perimeter of this floor as shown in Exhibit 10. Industrial Acoustics Noishield Louver Model R or equivalent will be used to attain the necessary noise reduction.

It appears that Hoag Hospital has feasible options to control the mechanical equipment noise located in the West Patient Tower. The air handlers could be controlled with the use of appropriately rated acoustic louvers. Exhaust fan EF-12 needs to incorporate a sound trap and the exhaust duct needs to be shortened so that it would not extend past the acoustic louvers. These measures are projected to bring the mechanical equipment noise into compliance with the current PC Text.

As discussed previously, the proposed Project only changes and reallocates the levels of development allowed for the Hoag Hospital site. No specific projects are proposed. Because of this, it is not known what new HVAC equipment, if any, may be required and an analysis of the potential noise impacts from this equipment is precluded. With proper equipment selection, location, and potentially incorporation of noise reduction features, there is no reason to believe that new HVAC equipment cannot meet the noise level standards discussed above. However, without proper planning it is possible that new HVAC equipment could generate noise levels in excess of the levels set forth in the proposed PC Text and result in a significant noise impact. Section 3.2.2 presents a mitigation measure to ensure that these standards are met.

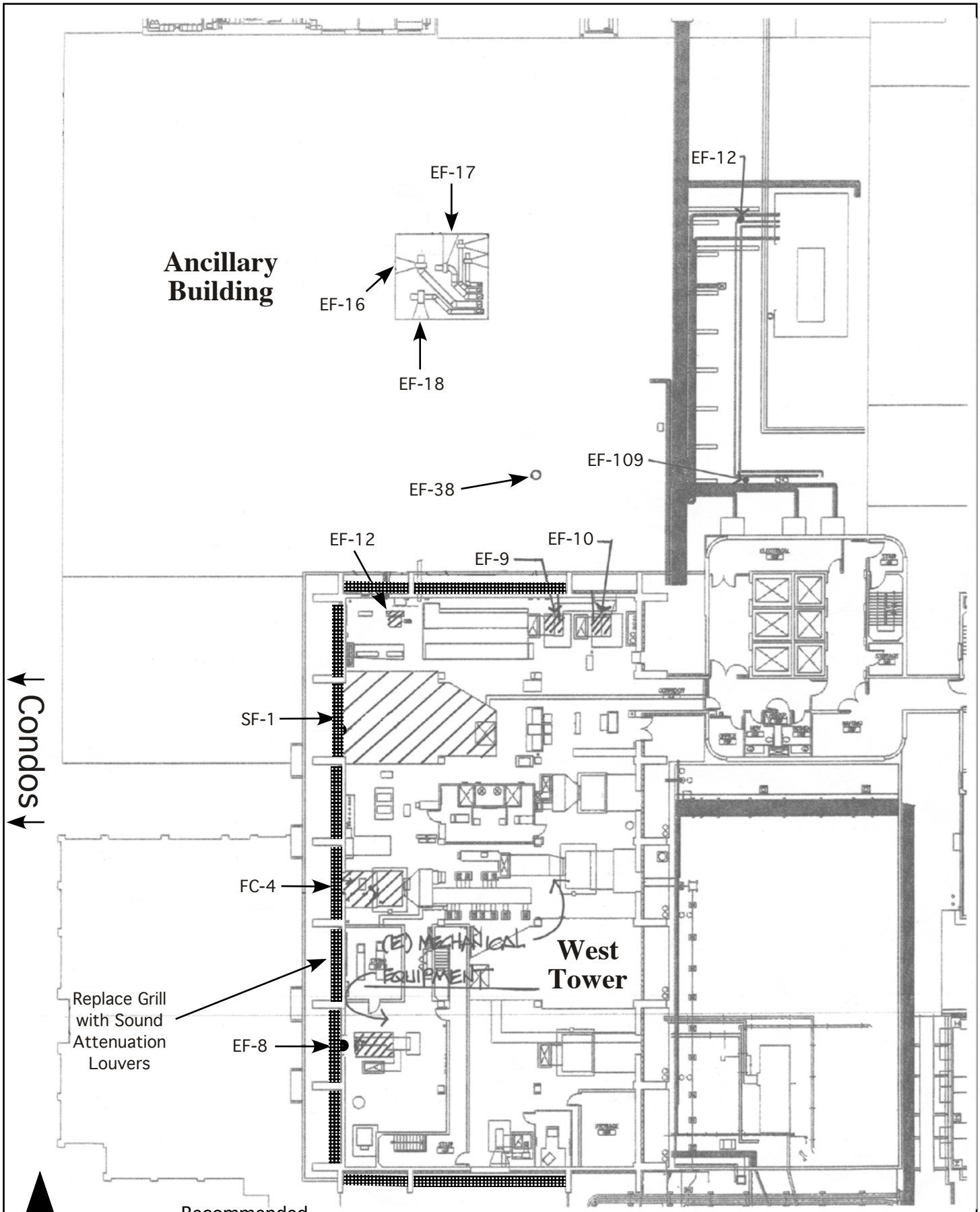


Exhibit 10
Acoustic Louver Locations on West Tower

Mestre Greve Associates

Loading Dock Activity

Existing noise levels generated by loading dock activities were presented in Section 1.4.2. The analysis shows that the noise generated by loading dock activities result in noise levels that exceed the Noise Ordinance limits on a regular basis. The completion of build out at the Hospital would likely result an increase in activity at the loading dock. By increasing the development at the Upper Campus, the Project could result in an additional increase in activity at the loading dock. However, it would not be expected to increase substantially over that which would have been otherwise occurred with the already approved build out of the Master Plan.

The primary source of noise at the dock is from delivery trucks. While more delivery truck visits to the loading dock could occur with the completion of build out at the Hospital, it is likely that increased deliveries would be accommodated through larger loads in a similar number of trucks. An increase in the number of trucks would not be expected to result in an increase in noise levels generated by the loading dock but increase the frequency of high noise levels generated by the truck activity. As discussed in Section 1.4.2, the noise levels near the loading dock do not appear to have changed substantially from what was measured for the 1992 EIR prepared for the Hospital.

The Hospital has limited the hours of access to the loading dock and the road that runs along the west side of the Upper Campus. Gates are closed at 8:00 p.m. and open at 7:00 a.m. This limits the loading dock noise to the hours when persons are generally considered less impacted by noise. Because of the topography of the area and the adjacent residential uses being three story condominiums it would not be feasible to construct noise barriers on hospital property that would provide considerable noise reduction for the residents in the vicinity of the loading dock, beyond enclosing the entire loading dock area and road adjacent to the residential uses (which is not considered feasible). A noise barrier is only effective when it breaks the line of site between the noise source and the receiver.

It does not appear that noise generated by the loading dock has changed substantially from the noise levels measured in 1991. The Project is not expected to substantially increase loading dock activities or related noise beyond that which would have occurred with the build out of the already approved Master Plan. Therefore, noise levels the loading dock noise due to the proposed project will not result in a significant noise impact. However, it should be noted that the loading dock is currently and will continue to exceed the noise limits contained in the Noise Ordinance; however, the proposed project proposes exemption language to address this issue.

Cogeneration Facility

The measured noise levels from the cogeneration equipment have been in compliance with the City's Noise Ordinance, and have ranged from 46.1 dBA to 49.8 dBA at the upper floor of the nearest residence. A fourth cooling tower is being installed at the site. The addition of this cooling tower is expected to increase the cooling tower portion of the noise levels by about 1.2 dB. However, the noise at the nearest residence in not just due to the cooling tower; it is a combination of noise from the generator exhaust stacks and the cooling towers. A series of noise measurements was conducted on August 1and 2, 2007 to determine the relative contribution of the exhaust stacks and cooling towers at the nearest residence. The noise monitor used to

measure the noise levels was a Brüel & Kjær Type 2260 Sound Level Meter (Serial #1772179) with a Brüel & Kjær Type 4189 1/2" electret condenser microphone (Serial #2143233). The measurement system was calibrated before and after the measurements with a Brüel & Kjær Type 4231 sound level calibrator, with current calibration traceable to the National Institute of Standards and Technology.

The noise measurements were conducted at several locations and, and for a number of the locations the measurements were made at two microphone heights. Analysis of the data indicates that at the upper floors of the residences of concern, the rooftop exhaust stacks are the major contributor, accounting for roughly 60% of the noise. The cooling towers account for about 40% of the noise.

Previous measurements (see Section 1.4.4) at the worst-case residence of concern have ranged between 46.1 dBA to 49.8 dBA. These levels are below the City's Noise Ordinance limit of 50 dBA (nighttime), but are close. The addition of a fourth cooling tower would raise the overall noise level to between 46.7 and 50.4 dBA. The operation of a fourth cooling tower is not part of this project since the cogeneration facility is already permitted and no further approvals from the City are required for this facility to operate. Therefore, the operation of the cogeneration plant becomes a Noise Ordinance compliance issue. That is, the City or their representative would need to take measurements once the fourth cooling tower is in operation and determine if it is in compliance or not. If the facility is not in compliance, then Hoag Hospital would need to correct the situation to maintain complaince with the Noise Ordinance. Additionally, it would become a Development Agreement issue, since the hospital is required to make yearly reports to the City stating whether it is complying with City requirements. Hoag Hospital would have to report the compliance status of the cogeneration facility. Finally, there is the issue of whether or not the cogeneration facility will remain in compliance with the Noise Ordinance. It is clear that the cogeneration facility is right at the borderline of compliance. If the cogeneration facility is operating at the upper end of the range measured (i.e., 49.8 dBA), then an additional 0.6 dB increase would put it over the Noise Ordinance limits. This presumes that the ambient noise level will drop even lower on occasion than has been observed so far. The Newport Beach Noise Ordinance does not require that noise source levels be lower than the ambient levels caused by traffic, waves, crickets, etc., and so far we have not observed ambient noise levels less than 50 dBA at the residential site. It is probable that even later at night in the 2 a.m. to 5 a.m. period that ambient noise levels drop below 50 dBA. Mitigation is recommended in Section 3.2.2 to address potential future conditions upon build out of the cogeneration facility

Finally, it should be noted that whether the cogeneration facility is subject or not to the current PC Text is a matter of dispute. For reasons discussed in Section 1.4.4, it is our opinion that the cogeneration facility is subject to the City's noise ordinance and not subject to the current PC Text. As already discussed in Section 1.4.4, the noise levels are almost 15 dBA higher than would be allowed under the current PC Text since the restrictions in the current PC Text could be applied to the undeveloped parcel of land (not residential) located to the west of the cogeneration facility. The operation of the fourth cooling tower would cause the cogeneration facility to be about 16 dBA higher than would be allowed under the current PC Text. The use of the Noise Ordinance is also more consistent with standard acoustical practice. Standard practice examines locations where sensitive receptors are or would be expected to be located. Clearly the residential buildings fall into this category. The vacant land to the west of the cogeneration

facility would not be expected to have sensitive receptors late at night, and therefore, standard practice would be to not apply a noise standard to this area.

2.3.6 Changes in the Development Agreement/PC Text

As discussed previously, the Project proposes changes to the Development Agreement that would change the noise limits imposed on noise sources located on Hoag Hospital property. The proposed changes have been presented previously in Section 1.1. Table 11 below contrasts the requirements of the current noise limits with those proposed for the four main categories of noise generators at Hoag Hospital. The second column of the table shows the current noise levels of the equipment. The third and fourth columns indicate the current noise limits and whether those limits are currently being met. The fifth and sixth columns show the proposed limit and whether the hospital would meet those limits without further mitigation.

Table 11
Comparison of Noise Limits

Noise Source	Current Noise Level (dBA)[1]	Current Limit (dBA)	Compliant With Current Limit?	Proposed Limit (dBA)	Compliant With Proposed Limit?
Mechanical Equipment at West Tower & Ancillary Building	58 Leq	55 Leq[2]	No	70 Leq Day/ 58 Leq Night	Yes
Loading Dock (delivery vehicles and the loading/unloading ops.)	68 Leq 86 Lmax	60 Leq 80 Lmax[3]	No	Exempt	Yes
Loading Dock (non-delivery operations)	None Observed	60 Leq 80 Lmax[3]	Yes	70 Leq Day/ 58 Leq Night	Yes
Grease Trap	77 Leq	Exempt	Yes	Exempt	Yes
Cogeneration Plant (nearest residence)	49 Leq[4]	60 Leq Day/ 50 Leq[3]	Yes	60 Leq Day/ 50 Leq Night	Yes

Notes:
1. Highest of measured values
2. Based on current PC Text
3. Based on Mixed Use Residential standard contained in Noise Ordinance
4. Based on July 2, 2007 measurements at nearest residence

The mechanical equipment currently located on the roof of the Ancillary Building and in the West Tower are currently not in compliance with the current noise limit of 55 dBA. The Ancillary Building and West Tower are in the "loading dock area," and therefore, would be subject to the noise limits that apply in that area. The proposed change to the PC Text would increase those limits to 70 dBA (Leq) during the day and 58 dBA (Leq) during the night (measured at the property line adjacent to the loading dock), and the mechanical equipment would be in compliance with the new limits. The proposed requirements would allow the mechanical equipment to operate at a level 15 dBA higher during the day and 8 dBA higher at

night than currently allowed. No specific projects are proposed at this time that would increase these noise levels, but if future projects were constructed that operated at the levels proposed in the new PC Text it would constitute a significant increase in noise and a significant noise impact due to the fact that the Project would modify the applicable noise limits to allow noise levels over those contained in the Noise Ordinance. Additionally, current equipment would not be required to be reduced to the 55 dBA limit currently in effect.

The loading dock currently operates at levels higher than allowed by the Noise Ordinance. The proposed language of the PC text would exempt "delivery vehicles and the loading and unloading of delivery vehicles" within the loading dock area. Other activities in and near the loading dock area, such as the trash compactor, would be subject to the Leq limits of 70 dBA during the day and 58 dBA during the night when measured at the property line. The loading dock exceeds the current Noise Ordinance requirements by about 8 dB. The proposed changes to the PC Text would increase the noise limits to 70 dBA (Leq) for non-delivery operations and the loading dock would be in compliance with that level. (The focus of the discussion is on the daytime limits for the loading dock area since this operation only occurs during the day.) Delivery trucks and loading/unloading operations would be exempt. The proposed change to the PC text for non-delivery operations would increase the acceptable level (Leq) by 10 dB during the daytime, and would eliminate the Lmax requirement. Currently the non-delivery truck noise is relatively minor in this area except for the trash compactor. The noise measurements conducted in this area show that during the nighttime the HVAC equipment at the West Tower and Ancillary Building are the main sources of nighttime noise. The delivery truck noise and loading/unloading operations currently are about 68 dBA (Leq), but would be exempt under the proposed agreement. Since the Project would modify the noise limits in the PC Text and allow noise in the loading dock to occur over the levels contained in the Noise Ordinance, a significant noise increase would be allowed with the proposed Project, and a significant noise impact would occur.

The grease trap operation is currently exempt from the Noise Ordinance since it falls under the maintenance of real property exemption. By incorporating the Noise Ordinance, the proposed project would allow for continued exemption of the grease trap cleaning. Since the proposed project would not modify the currently applicable limits, there would be no significant impacts from this particular activity.

The cogeneration facility is currently subject to a nighttime noise limit of 50 dBA (Leq) at the residences and is currently consistent with that limit. (The nighttime limit is the most critical limit because it is the lower limit of the day and night periods, and because the ambient traffic noise level is much higher during the daytime periods.) The proposed project would continue to apply the Noise Ordinance to the cogeneration operations. Since the proposed project would not modify the currently applicable limits, there would be no significant impacts from this particular activity.

In summary, for activities and equipment in the loading dock vicinity, the proposed noise limits in the PC Text would result in a relaxation of the noise limits compared with the limits contained in the Noise Ordinance and current PC Text, and if the modified limits were attained by activities at the hospital then a significant impact would occur as noise would be allowed to occur in excess of the Noise Ordinance limits. Mitigation measures discussed below in Section 3.2.2 will

reduce noise levels generated by the Hospital, but not to a level of insignificance for the areas adjacent to the loading dock given the fact that the allowable limits would be above those contained in the Noise Ordinance.

2.4 Long-Term On-Site Noise Impacts

The highest future traffic noise levels impacting the Project site are presented below in Table 12. The noise contours shown in Table 12 do not include any barriers or topography that may reduce noise levels, rather they are intended to identify areas that require a more refined assessment.

Table 12
Future Traffic Noise Levels Impacting Project

Roadway Segment	CNEL @ 100' †	Distance To CNEL Contour† (feet) 70 CNEL	65 CNEL	60 CNEL
Hospital Road				
West of Hoag Dr.	58.1	RW	35	75
East of Hoag Dr.	59.9	RW	46	98
West of Newport Blvd.	59.9	RW	46	98
Pacific Coast Highway				
East of Balboa Blvd.\Superior Ave.	68.6	80	173	373
West of Hoag Dr.	68.9	84	182	392
East of Hoag Dr.	65.9	53	114	247
West of Newport Blvd. SB Off Ramp	66.2	55	119	257
Superior Avenue				
North of West Coast Hwy.	63.8	39	83	179
Hoag Drive				
South of Hospital Rd.	58.7	RW	38	82
North of West Coast Hwy.	54.9	RW	RW	46
Newport Boulevard				
South of Hospital Rd.	68.9	85	183	395

† From centerline.
RW – Contour falls within right-of-way.

As discussed previously, the proposed Project only changes and reallocates the levels of development allowed for the Hoag Hospital site. No specific projects are proposed. Therefore a detailed analysis of the potential noise impacts on the uses developed under the Project is precluded.

Specific uses developed by the Project will be required to comply with the City's General Plan Noise Standards presented previously in Exhibit 5. The standards applicable to the Hospital are the outdoor standard of 65 CNEL, the interior 45 CNEL standard for hospital uses (e.g. patient rooms) and 50 CNEL for office uses.

The outdoor standard 65 CNEL standard is only applicable to outdoor patio areas where persons would be expected to congregate for extended periods of time. Any patio areas proposed to be located closer to the roadways than the 65 CNEL contour distance shown in Table 12 would be significantly impacted by traffic noise. Mitigation to eliminate these impacts is discussed in Section 3.3.1.

Typical commercial construction includes mechanical ventilation that allows windows to remain closed. With closed windows, typical construction provides at least 20 dB of outdoor-to-indoor noise reduction. Therefore, hospital buildings exposed to noise levels of 65 CNEL or less will experience indoor noise levels of 45 CNEL or less. Hospital buildings proposed to be located closer to roadways than the 65 CNEL contour distance shown in Table 10 could be significantly impacted by traffic noise. Mitigation to eliminate these impacts is discussed in Section 3.3.2.

Office buildings exposed to noise levels of 70 CNEL or less will experience indoor noise levels of 50 CNEL or less. Office buildings proposed to be located closer to roadways than the 70 CNEL contour distance shown in Table 12 could be significantly impacted by traffic noise. Mitigation to eliminate these impacts is discussed in Section 3.3.2.

2.5 Comparison of impacts with 1991 EIR

The previous EIR found that the build out of the Master Plan would not result in any significant traffic noise impacts but would contribute to existing noise level exceedances along five road segments; (1) Coast Highway from Superior Avenue to East of Bayside, (2) Balboa Boulevard southeast of Newport Boulevard, (3) Superior Avenue between 15th Street and Placentia, (4) Newport Boulevard between Balboa Boulevard and north of Hospital Road, (5) Dover Drive north of Coast Highway, and result in a significant cumulative impact. The currently proposed Project will not increase noise levels along these roadways by more than 0.1 dB and in many cases results in a slight reduction in projected noise levels for the roadways analyzed in this study.

As discussed previously, the 1991 EIR found that an exhaust fan was generating excessive noise levels resulting in a significant impact. Mitigation was defined, but it does not appear that this mitigation was applied because there is some mechanical equipment in the same general location as the exhaust fan previously analyzed generating noise levels in excess of the mitigation requirements. Mitigation described in Section 3.2.2 is intended to mitigate this impact and should be fully implemented.

Loading dock noise was not identified as a noise issue in the 1991 EIR. However, the noise measurements performed for the exhaust fan analysis were in the general location of the loading dock. As discussed previously, it does not appear that the loading dock is generating considerably more noise now than it was in 1991.

Grease traps were not in use at the Hospital in 1991 and have only recently been implemented to comply with water quality regulations. Therefore, noise generated by the grease trap cleaning was not analyzed in the previous EIR.

The previous EIR also assessed traffic noise impacts within the Hospital boundaries resulting from buildout of the Master Plan . As specific projects were not defined at that time a specific analysis was not performed but it was concluded that patios and buildings located within the 65 CNEL contours of the roadways could be significantly impacted. Mitigation similar to that described in Section 3.3 of this document, requiring specific acoustical studies for projects as they came forward, was called for in the 1991 EIR.

3.0 MITIGATION MEASURES

3.1 Temporary Impacts

3.1.1 General Construction Noise

It is unknown exactly what procedures will be used in the Project's construction. It is anticipated that usual and customary construction methods and procedures will be employed as the area develops. In order to not result in a significant noise impact the construction activity will need to comply with the Noise Ordinance. The City of Newport Beach has adopted a Noise Ordinance that excludes control of construction activities during specific periods of time. Limiting construction to these hours will ensure that the construction of the Project does not result in a significant noise impact. The proposed mitigation measure is:

> Control of Construction Hours - The City of Newport Beach has adopted a Noise Ordinance that excludes control of construction activities during the hours between 7:00 a.m. and 6:30 p.m. Monday through Friday and between 8:00 a.m. and 6:00 p.m. on Saturday and at no time on Sundays or national holidays. All noise generating construction activities shall be limited to these hours.

3.2 Long Term Off-Site Impacts

3.2.1 Traffic Noise

The analysis presented in Section 2.3.1, 2.3.2, and 2.3.3 showed that neither the Project nor the Project Alternative will result in long-term off-site traffic noise impacts when considered alone or cumulatively. Therefore, no mitigation is required.

3.2.2 On-Site Activities

The analysis presented in Section 2.3.5 concluded that the loading dock and existing mechanical equipment operation exceed current requirements, and therefore, result in a significant noise impact. Further, future mechanical equipment implemented as a result of the build out of the Hospital could result in a significant noise impact. Mitigation for these impacts is discussed below. However, the proposed changes to the PC Text would allow higher noise levels in excess of the City's Noise Ordinance adjacent to the loading dock area, and this modification to the applicable noise limits would result in a significant impact despite the application of the mitigation measures described below.

Mechanical Equipment

The analysis presented in Section 1.4.3 showed that existing HVAC equipment exceeds the noise level limit defined in the previous EIR prepared for the Hospital, which is not to exceed 55 dBA. The hospital is currently redesigning the mechanical equipment system for the Ancillary Building and planning to install acoustic louvers around the mechanical equipment in the West Tower. These measures are discussed in detail in Section 2.3.5. In summary, the hospital is planning to use quieter ventilation equipment, a reconstructed doghouse on the roof to house some of the equipment, and a 7 foot screening wall on the Ancillary Building. While final plans are not available, the preliminary analysis indicates that noise levels less than 55 dBA could be

achieved. In the West Tower, the hospital is planning on installing Industrial Acoustic Noishield Louvers Model R around the mechanical equipment floor and use sound traps where necessary. These measures will reduce the mechanical equipment noise to less than 55 dBA (the level allowed by the current PC Text and a level below the proposed PC Text) in the West Tower. Since plans for the Ancillary Building are not finalized, the following mitigation measure is proposed.

> The final HVAC plans for the Ancillary Building and West Tower shall be submitted to the City for review. The plans should be reviewed by an Acoustical Engineer to insure that they will achieve the 58 dBA nighttime limit when measured at the property line adjacent to the loading dock. These plans need to be submitted within six months of the certification of the SEIR. If Hoag Hospital does not go through with the redesign of the HVAC systems for the Ancillary Building and West Tower, the hospital shall submit to the City within six months of the certification of the SEIR a plan detailing how they will bring the current equipment into compliance with the proposed PC Text.

The above measure and the planned facilities would mitigate the HVAC equipment noise that is generated by the Hospital at the Ancillary Building and West Tower to a level meeting the revised PC Text level (58 dBA at night) and also is expected to meet the 55 dBA level from the current PC Text.

As specific projects are brought forward the following mitigation measure will ensure that HVAC equipment complies with the applicable standard.

> Prior to issuance of building permits for any project that includes HVAC equipment an acoustical study of the noise generated by the HVAC equipment will be performed. This report shall present the noise levels generated by the equipment and methodology used to estimate the noise levels at nearby residential uses or property boundaries as applicable, and demonstrate that combined noise levels generated by all new and existing HVAC equipment does not exceed the applicable PC Text limits. This study shall be reviewed and approved by the City prior to issuance of building permits. After installation of the equipment, noise measurements shall be performed demonstrating compliance with the applicable noise level limits and provided to the City.

It should be noted that the Project would modify the Development Agreement to allow mechanical equipment in the vicinity of the loading dock to operate at a noise level higher than the City's Noise Ordinance. These modifications proposed by the Project will create a significant and unavoidable noise impact.

Loading Dock

As discussed in Sections 1.4.2 and 2.3.5 the loading dock activity generates noise levels that exceed the Noise Ordinance limits defined in Table 1.

Two options were considered for mitigating the loading dock noise impact; a soundwall at the property line and a cover over the loading dock area. The hospital has existing time restrictions

for the loading dock operations. Truck deliveries can only occur during daytime hours between 7 a.m. and 8 p.m. Currently the loading dock is subject to the Noise Ordinance. Specifically, residences are located within 100 feet of the property boundary and therefore, the Zone III – Mixed Use requirements would apply. Specifically, the loading dock noise should not exceed 60 dBA (Leq) or 80 dBA (Lmax) to be in compliance with the daytime requirements of the noise ordinance.

A soundwall could be constructed along the Hoag Hospital westerly property line to reduce noise levels at the residences. However, the geometry in this area is not favorable for the construction of a soundwall. The hospital property is lower than the residential property, and therefore, the soundwall would in effect be constructed in a hole. That is, the wall would need to be exceptionally high to provide the appropriate level of noise reduction for the residents on the top floor. Our calculations indicate that the soundwall would need to be 25.5 feet high to provide the 8 dB noise reduction to bring the loading dock noise into compliance with the noise ordinance. A 25.5 foot soundwall is not feasible. Caltrans for example, limits soundwalls along freeways to 16 feet high. In addition to being very costly, a soundwall this high and that is so close to the residents would probably not be supported by the residents since it would result in many residences looking straight into a solid block wall when on their balcony.

As a second option, a cover over the loading dock area was investigated. The cover would incorporate a solid roof and the structure would be open on the sides. The cover would extend over the loading dock area all the way to the west property line. The area covered would be about 6,400 square feet. There are several design questions that are not addressed by this report such as what would the roof material be, how would lighting be provided, where would the support columns be located, etc. The loading dock cover would not provide the 8 dB noise reduction necessary to bring the loading dock operations into compliance with the noise ordinance. Some residents located west and to the south of the loading dock would only get about 5 dB of noise reduction. These residents would have a sight line in through the side of the covered area, and therefore, the noise reduction benefit to them is minimal. It does not appear that there is a reasonable and feasible measure to bring the loading dock noise into compliance with the City of Newport Beach Noise Ordinance.

As concluded above, there are no feasible measures that would bring the loading dock area into compliance with the City's noise ordinance. However, there are several measures that would provide some improvement in the noise levels associated with the loading dock. In most cases, the noise level improvement with these additional measures will be minimal or cannot be quantified. The measures do represent feasible measures that will provide some noise relief, and therefore, many of them are recommended as mitigation measures.

Reconfiguration of Loading Dock Area. Hoag Hospital has preliminary plans that would reconfigure the loading dock area. According to Hoag Hospital the reconfiguration is intended to service the truck unloading more efficiently and not to accommodate a significant increase in truck deliveries. The plan would reconfigure the loading dock area so that more trucks could be serviced at any one time. The plan could have two significant benefits from a noise standpoint. First, the trash compactor and baler are being re-located into a new area. If this area was an enclosed structure with solid walls and a solid roof, then it would eliminate the noise impact of these activities on the nearby residents. In fact the structure could be a three sided structure with

the open side facing away from the residents and still eliminate the noise impacts due to the baler and compactor. (A measure addressing the compactor and baler enclosure is presented later in this subsection.) The second benefit is that there are times when all of the trucks cannot be serviced and they end up parking in the alley parallel to the property line. The truck engines will run sometimes when they are waiting. The reconfiguration would, according to Hoag staff, eliminate most of the truck parking in the alley. Trucks idling in the alley close to the residents would be mostly eliminated. (Measures to eliminate idling are discussed later in this section.) The preliminary plans for the reconfigured loading dock show that the dock would be moved or extended further to the west and closer to the residents. This is a negative impact of the reconfiguration since moving the dock closer to the residents would increase noise levels generated in that area and heard at the residents a slight amount. However, it should be noted that most of the noise generated in the loading dock area is due to the trucks arriving, leaving and idling. Measures that facilitate a quick arrival, a quick departure, and eliminate idle would reduce noise levels.

Currently, the gates to the loading dock area are closed at 7 p.m. and opened at 7 a.m. No truck deliveries are allowed during this period. To insure that this practice continues and to partially offset the impact of the proposed Development Agreement which exempts truck deliveries, the following measure is proposed.

> Truck deliveries to the loading dock area are restricted to the hours of 7:00 AM to 8:00 PM. It is noted that special situations may arise that require the delivery outside of these hours.

Installation of Acoustic Panels. Currently some of the loading dock noise heard at the residents is generated on the loading dock and reflects off of the building face back towards the residents. Installation of acoustic panels would nearly eliminate this reflected noise. Sound absorption panels on the east wall of the loading dock are recommended. The preliminary plans for the modified loading dock (Exhibit 11) show that up to six trucks could back in to the "Clean Dock" area. This loading dock abuts a building wall (shown as a bold blue line in Exhibit 11) that has about 84 lineal feet. Putting absorptive panels on this wall would help reduce reflected noise generated on the dock back to the residents to the west. Therefore a noise, such as the banging of a cart as it is unloaded from a truck, will not bounce off the building wall towards the residents. To be most effective the sound absorption panels should cover about 2/3 or more of the building wall. (Covering 2/3 of the building wall would require approximately 448 square feet of absorptive panels.) Complete coverage is usually not possible, because there are pipes and vents on the wall that cannot be covered by panels. If the entire wall cannot be covered, which is likely, it is important to spread the panels throughout the wall area and not concentrate them in only one section of the building wall. The absorptive panels should start 1 foot above the surface of the dock and extend up 8 feet (to 9 feet above the dock surface). A typical absorptive panel is made by Industrial Acoustics (www.industrialacoustics.com/usa/index.htm) and is referred to as their Noise-Foil panels. This panel or an equivalent is recommended. Even if the loading dock area is not reconfigured, acoustic panels should be employed to reduce reflected noise. The following measure is recommended.

> Approximately 450 square feet of absorptive panels shall be used to cover major portions of the back wall of the loading dock area. The Noise-Foil panels by Industrial Acoustics

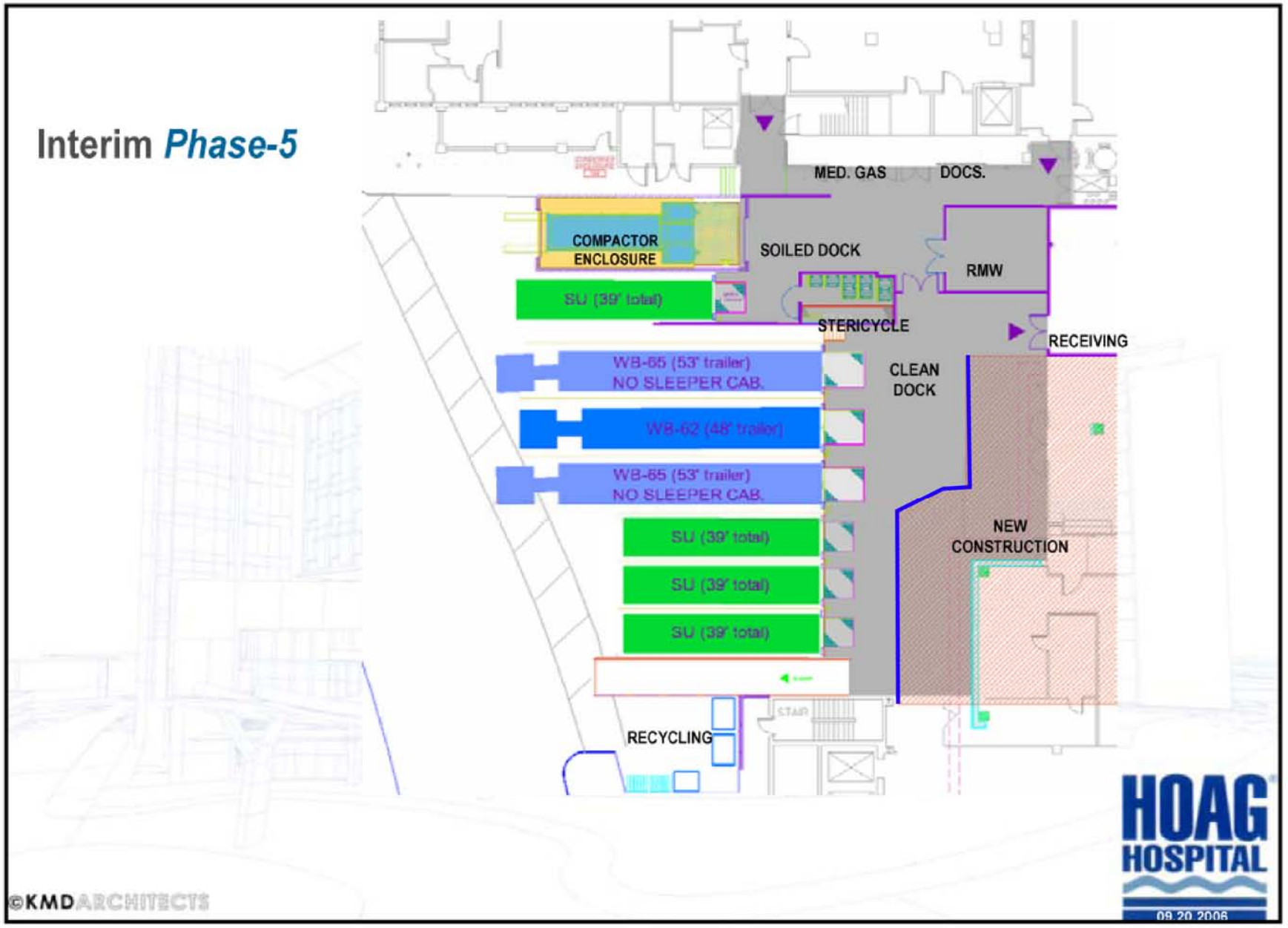
or a panel with an equivalent or better sound rating will be used.

Compactor and Baler Enclosure. The compactor would be relocated with the new loading dock plan, and this provides an opportunity to redesign the new compactor and balerenclosure as a sound enclosure. The compactor will have an enclosure and if designed properly will act to eliminate compactor operation noise at the residential area. Three components of the enclosure are critical; the roof, walls, and openings. All three components must be of sufficient density to stop noise from passing through. The walls should be concrete block or similar masonry construction. The roof could be lightweight concrete roof or a plywood surface with concrete tiles. A built-up roof with 5.5" of insulation on the inside would also be acceptable. A built-up roof without insulation or a tin roof would not be acceptable. The east side of the enclosure (facing away from the residents) can be open. The west side of the enclosure will have to have doors for access. Heavy metal doors should be used on this side. It is also important that the edges of the doors overlap with the door opening otherwise there will be a gap around the edge of the doors that will allow noise to leak out. The doors must be kept closed when the compactor is operating. The following mitigation measure is proposed:

The trash compactor and baler will be enclosed in a three sided structure. The walls should be concrete block or similar masonry construction. The roof will be lightweight concrete roof or a plywood surface with concrete tiles. A built-up roof with 5.5" of insulation on the inside would also be acceptable. The open side will face away from the residents. Doors may be on the side of the enclosure facing the residents, but must be closed when the baler or compactor are operating. The compactor and baler will only be operated between the hours of 7 a.m. and 7 p.m.

Post No Idling Signs. "No Idling" shall be posted in the loading dock area. These signs help to minimize the idling time of trucks by reminding them that idling for long periods of time is prohibited. It also makes the Dock Manager's job a little easier when he can tell the truck drivers to shut down their engines and point to a sign to emphasize that it is a hospital policy that he is trying to enforce. The following measure is recommended.

Post "No Idling" signs in the loading dock area and any area where the trucks might queue.



Wall for Absorptive Panels

Exhibit 11
Re-configured Dock/Acoustic Panels

Modifications to Residences. There are two measures that could be employed at the residences that would reduce noise impacts, but would not bring the loading dock noise into compliance with the City's noise ordinance. These measures, which could be done either individually or in combination, consist of providing balcony barriers and providing window upgrades. Balcony barriers would consist of extending the balcony enclosures up to a height of 6 or 7 feet. Typically, the balcony barrier extension would consist of 3/8" tempered (safety) glass or 5/8" plexiglass. The balcony barrier would reduce the noise levels on the balcony by about 6 dB, but would not bring the balcony area into compliance. As stated earlier, about 8 dB reduction is needed to bring the balcony areas into compliance with the noise ordinance. A variation of the balcony barrier would be to enclose the balcony completely with glass, in effect making it a sun room. This measure would achieve more than the 8 dB reduction needed, but would be subject to homeowner and homeowner association approvals. A second measure would be to upgrade the windows in the residences. How much noise reduction would be achieved would depend on the quality of the existing windows and the quality of the retrofit windows. A noise reduction would only be accomplished if the windows were in the closed position. It should be noted that the indoor noise ordinance criteria is applied with the windows in the open position, and no benefit would occur with the windows open. Measures that would modify the residences are not recommended, but are offered for consideration by the lead agency. The acceptability of enclosing balcony areas or modifying windows to the homeowners and homeowner association is unknown and the feasibility is questionable. Therefore, these measures are not recommended at this time.

Grease Trap

Hoag Hospital has continued to examine ways in which the grease trap operation would be less intrusive to the neighbors. Currently the traps are cleaned during the morning on a weekend day about once per month. The typical cleanout operation lasts for 2 to 2.5 hours. The operation, according to Hoag staff, involves three trucks; one 10,000 gallon tanker, one 7,500 gallon tanker and a support van. All three trucks show up together to minimize down time. However, each tanker must be filled separately due to limited access to the underground storage tanks. Two tankers cannot physically occupy the available parking and street area adjacent to the access points for the underground tanks. Therefore, the option of bringing in more trucks to simultaneously pump out the grease traps and shorten the time of operation is not feasible.

Moving the cleanout operation to a weekday would probably be less annoying to the residences and was investigated by Hoag staff. The area necessary for access by the tankers requires that the trucks occupy the vehicular parking above the underground tanks, as well as one drive aisle in West Hoag Road. On Saturday and Sunday the twenty (approximately) parking stalls needed to park the truck can be reserved for the trucks with limited impact on Hospital operations. During the week these stalls, directly adjacent to the ancillary building and HVI outpatient facility, are important for safe and accessible parking to the hospital. As noted above, the tankers also occupy one drive aisle during the cleaning operation which while manageable on a Saturday morning or afternoon would pose a significant hurdle to safe operations during the week as West Hoag Road is very busy with patient and staff traffic as well as emergency traffic.

The grease trap operation is exempt from noise regulations. However, the residents have

complained about the noise and Hoag Hospital has indicated that they will agree to certain time limits. The following measure is proposed:

> Limit the grease trap cleaning operation to Saturday between the hours of 11:00 a.m. and 3:00 p.m.

This is an improvement over existing conditions that allow the grease trap cleaning to occur at any time. Often the grease trap cleaning occurs during the early morning, which is a less desirable time than midday.

Cogeneration Facility

The operation of the fourth cooling tower at the cogeneration facility could result in an exceedance of the Noise Ordinance. The exceedance of the Noise Ordinance would be marginal at most. Therefore the following measure is recommended:

> Once the fourth cooling tower is installed, additional noise measurements will be performed to determine whether a violation of the Noise Ordinance is occurring or not. The measurements shall be made and a report submitted to the City within 3 months of the commencement of operation of the fourth cooling tower. If a violation is occurring then the problem must be corrected and a second set of measurements submitted to the City showing compliance with the Noise Ordinance within 1 year of the commencement of operation of the fourth cooling tower.

3.3 Long Term On-Site Impacts

The analysis presented in Section 2.4.1 showed that development within the 65 CNEL traffic noise contour could be significantly impacted by traffic. Mitigation must be provided to ensure that these noise levels do not exceed the City of Newport Beach noise standards. Section 3.3.1 presents the measures that will be required to meet the outdoor noise standards. Section 3.3.2 presents the measures that will be required to meet the indoor noise standards.

3.3.1 Outdoor Traffic Noise Mitigation

Any patio areas proposed to be located closer to the roadway than the 65 CNEL contour distance shown in Table 10 could be significantly impacted by traffic noise. Mitigation through the design and construction of a noise barrier (wall, berm, or combination wall/berm) is the most efficient method of reducing outdoor noise exposure levels. The effect of a noise barrier is critically dependent on the geometry between the noise source and the receiver. A noise barrier effect occurs when the "line of sight" between the source and receiver is broken by the barrier. The greater the distance the sound must travel around the barrier to reach the receiver, the greater the noise reduction of the barrier.

To be effective, noise barriers are required to have a surface density of at least 3.5 pounds per square foot, and have no openings or cracks. They may be a solid wall, an earthen berm, or a combination of the two. They may be constructed of wood studs with stucco exterior, 1/4 inch plate glass, 5/8 inch plexiglass, any masonry material, or a combination of these materials.

Wood and other materials may be acceptable if properly designed as a noise barrier. For small patios and balconies, the barriers must run along the entire edge of the patio or balcony from building face to building face.

Even if patios are located adjacent to the roadways shown in Table 10, the maximum noise barrier to reduce noise levels below 65 CNEL on the patio would be less than 7 feet high. Patio locations and final grading plans are not yet available for the Project. These plans are required to determine the final barrier heights and ensure compliance with the appropriate standard. The above analysis shows that this standard is achievable with feasible barrier heights. Application of the following mitigation measure will ensure that the City's outdoor noise standards are met in the on-site hospital areas.

> Prior to the issuance of building permits for any hospital patio use proposed to be located closer to the roadway then the 65 CNEL contour distance shown in Table 10 a detailed acoustical analysis study shall be prepared by a qualified acoustical consultant and submitted to the City. This acoustical analysis report shall describe and quantify the noise sources impacting the area and the measures required to meet the 65 CNEL exterior hospital noise standard. The final building plans shall incorporate the noise barriers (wall, berm or combination wall/berm) required by the analysis and the hospital shall install these barriers.

The analysis above shows that feasible noise barriers will reduce exterior noise levels to below the City of Newport Beach noise standards. The detailed acoustical study required above will ensure that these standards are met based on final grading plans for the Project. With these measures outdoor noise impacts on the Project will be mitigated to less than significant.

3.3.2 Indoor Traffic Noise Mitigation

Typical construction achieves at least 20 dB of outdoor-to-indoor noise reduction with windows closed. With windows open outdoor-to-indoor noise reduction falls to 12 dB. Therefore, buildings requiring more than 12 dB of noise reduction require adequate ventilation per the Uniform Building Code to allow windows to remain closed. Typically, this is provided through mechanical ventilation which is assumed to be present in commercial buildings.

With extensive building upgrades, outdoor-to-indoor noise reductions of up to 32 dB typically can be achieved for commercial construction. Even if a hospital building was located adjacent to the roadways shown in Table 10 it would require less than 32 dB of outdoor-to-indoor noise reduction to meet the 45 CNEL interior standard. Detailed calculations are required to demonstrate a building achieves more than 20 dB of noise reduction. Architectural drawings are required to analyze the actual noise reduction achieved by a building. The following mitigation measure will ensure that hospital buildings exposed to noise levels in excess of 65 CNEL and office buildings exposed to noise levels in excess of 70 CNEL will achieve the required outdoor-to-indoor noise reduction levels to achieve the City's 45 CNEL interior hospital noise standard and the 50 CNEL interior office noise standard.

> Prior to issuance of building permits, a detailed acoustical study using architectural plans shall be prepared by a qualified acoustical consultant and submitted to the City for hospital buildings proposed to be located closer to the roadway than the 65 CNEL contour distance shown in Table 10 and for office buildings proposed to be located closer

to the roadway than the 70 CNEL contour distance shown in Table 10. This report shall describe and quantify the noise sources impacting the building(s), the amount of outdoor-to-indoor noise reduction provided by the design in the architectural plans, and any upgrades required to meet the City's interior noise standards (45 CNEL for hospital uses and 50 CNEL for office uses). The measures described in the report shall be incorporated into the architectural plans for the buildings and implemented with building construction.

The analysis above shows that it is feasible to reduce indoor noise levels to below the City of Newport Beach interior noise standards with appropriate construction. The detailed acoustical study required above will ensure that these standards are met based on final architectural plans for the Project. With these measures indoor noise impacts on the Project will be mitigated to less than significant.

4.0 UNAVOIDABLE NOISE IMPACTS

The proposed changes to the Development Agreement/PC Text could eventually result in higher noise levels at the nearby residences (compared to existing conditions). Mitigation measures are recommended above and it has been determined that no other feasible mitigation exists that would reduce impacts from the loading dock area to below a level below the limits contained in the City's Noise Ordinance. Modification of the Development Agreement/PC Text as proposed will allow noise to exceed the Noise Ordinance criteria in the vicinity of the loading dock only, even after application of the feasible mitigation measures discussed above; therefore, the proposed changes must be identified as resulting in significant and unavoidable adverse impacts.

APPENDIX

Traffic Data Used for Noise Modeling

Table A-1 presents the average daily traffic volumes (ADT), speed, and traffic mix index used for traffic noise modeling. The speeds were taken from Figure 3 of the traffic study. The traffic mix used to calculate CNEL levels is presented in Table A-4. ADTs were estimated from the peak hour traffic volumes as described below.

The traffic study prepared for the Project only presented AM and PM peak hour traffic volumes. ADTs are required to calculate traffic noise CNEL levels. ADTs were provided by the traffic engineer for 2015 and 2025 conditions without the Project, and 2025 conditions with the Project and with the Project Alternative for 16 of the 24 intersections analyzed. The ratio of these ADTs to the AM and PM Peak hour traffic volumes were determined for these roadway links and are presented in Table A-2. In Table A-2, the first two columns of numbers show the percentage of ADT that the AM and PM peak hour traffic volumes represent for 2015 No Project conditions. The next two columns of numbers show the percentage of ADT that the AM and PM peak hour traffic volumes represent for 2025 No Project conditions. The fifth and sixth column of numbers show the percentage of ADT that the AM and PM peak hour traffic volumes represent for 2025 With Project conditions. These percentages were used to estimate the ADT volumes for the 2015 With Project, and 2025 With Project conditions as described below. The seventh and eighth column of numbers show the same information for the 2025 With Project Alternative conditions. These percentages were used to estimate the ADT volumes for the 2015 With Project Alternative, and 2025 With Project Alternative conditions as described below. The final two columns show the average of the percentages for the 2015 and 2025 No Project conditions. These were used to estimate the existing No Project ADT traffic volumes.

Table A-3 shows the peak hour percentage of ADT that was used to estimate the ADTs for the scenarios and links where ADTs were not provided (i.e.; existing conditions, and 2015 conditions with the Project and the Project Alternative, and the links not shown in Table A-2 for all scenarios). The AM and PM peak hour traffic volumes for each scenario were divided by the percentages shown in Table A-3 and the average of these two numbers was used to estimate the ADT shown in Table A-1. The last column of Table A-3 also shows the links used to estimate the percent of ADT for those links where ADT data as not provided.

Table A-1
Average Daily Traffic Volume and Speed Data Used For Noise Modeling

	Speed		-----No Project-----			----With Project----		----With Alt.----	
Roadway Segment	**(mph)**	**Mix**	**Exist.**	**2015**	**2025**	**2015**	**2025**	**2015**	**2025**
19th Street									
west of Newport Ave.	25	1	19,716	20,816	25,226	21,496	24,864	21,792	25,207
east of Newport Ave.	25	1	10,150	11,027	12,306	11,144	12,554	11,026	12,432
Broadway									
east of Newport Blvd.	25	1	3,008	3,299	3,519	3,272	3,595	3,239	3,557
18th Street									
west of Newport Blvd.	30	1	8,235	8,967	6,814	9,121	7,048	9,025	7,016
Rochester Street									
east of Newport Blvd.	25	1	3,969	4,326	5,287	4,349	5,404	4,304	5,345
17th Street									
west of Superior Ave.	35	1	13,974	13,988	18,319	16,304	18,136	16,224	18,047
east of Superior Ave.	35	1	27,473	27,576	31,921	31,920	31,606	31,775	31,452
west of Newport Blvd.	35	1	23,029	24,990	29,937	25,357	30,588	25,086	30,259
east of Newport Blvd.	35	1	24,831	27,018	28,941	27,191	29,493	26,903	29,215
16th Street									
west of Superior Ave.	30	1	5,645	5,668	5,966	6,557	5,912	6,528	5,885
west of Newport Ave.	30	1	1,749	1,909	3,876	1,913	3,957	1,893	3,916
east of Newport Ave.	30	1	3,241	3,529	6,039	3,555	6,169	3,517	6,103
Industrial Way									
east of Superior Ave.	30	1	4,527	4,547	5,364	5,257	5,319	5,233	5,297
west of Newport Blvd.	30	1	5,096	5,506	4,867	5,639	4,977	5,577	4,921
east of Newport Blvd.	30	1	3,749	4,055	3,172	4,142	3,243	4,097	3,207
Hospital Road									
east of Superior Ave.	30	1	8,182	7,000	12,000	8,445	12,000	8,303	12,000
west of Hoag Dr.	30	1	7,340	6,000	10,000	6,882	10,000	6,801	10,000
east of Hoag Dr.	30	1	15,337	14,000	14,000	12,303	15,000	12,298	15,000
west of Newport Blvd.	30	1	15,856	14,000	14,000	11,662	15,000	11,762	15,000
east of Newport Blvd.	30	1	6,300	8,000	8,000	8,649	8,000	8,514	8,000

Table Continued on Next Page

Roadway Segment	Speed (mph)	Mix	-----No Project----- Exist.	2015	2025	----With Project---- 2015	2025	----With Alt.---- 2015	2025
Pacific Coast Highway									
west of Orange St.	45	1	44,365	54,000	50,000	48,511	50,000	48,230	50,000
east of Orange St.	45	1	44,847	54,000	50,000	48,239	50,000	47,962	50,000
west of Prospect St.	45	1	42,693	54,000	50,000	50,224	50,000	49,931	50,000
east of Prospect St.	45	1	43,439	54,000	50,000	50,053	50,000	49,770	50,000
west of Balboa Blvd.\Superior Ave.	45	1	47,507	54,000	52,000	58,639	52,000	58,443	52,000
east of Balboa Blvd.\Superior Ave.	45	1	37,889	44,000	47,000	44,133	45,000	44,741	46,000
west of Hoag Dr.	45	1	36,655	44,000	47,000	48,366	48,000	45,737	46,000
east of Hoag Dr.	35	1	28,366	34,000	51,000	40,976	45,000	43,364	49,000
west of Newport Blvd. SB Off Ramp	35	1	29,732	34,000	51,000	43,252	48,000	43,050	49,000
east of Newport Blvd. SB Off Ramp	35	1	47,458	54,000	56,000	51,873	56,000	51,549	56,000
west of Riverside Ave.	35	1	53,908	60,000	60,000	51,096	59,000	51,637	60,000
east of Riverside Ave.	35	1	46,196	52,000	54,000	46,403	53,000	47,040	54,000
west of Tustin Ave.	35	1	43,929	51,000	50,000	47,182	50,000	46,980	50,000
east of Tustin Ave.	40	1	41,149	48,000	48,000	45,422	47,000	45,225	47,000
west of Bay Shore Dr.\Dover Dr.	40	1	45,370	47,000	56,000	44,834	55,000	45,430	56,000
east of Bay Shore Dr.\Dover Dr.	40	1	66,612	70,000	79,000	68,018	78,000	68,739	79,000
west of Bayside Dr.	40	1	62,175	70,000	74,000	67,852	73,000	68,631	74,000
east of Bayside Dr.	45	1	49,741	57,000	65,000	61,501	65,000	61,384	65,000
west of Marine Dr.\Jamboree Rd.	45	1	55,579	57,000	62,000	55,781	61,000	56,559	62,000
east of Marine Dr.\Jamboree Rd.	45	1	49,682	47,000	50,000	43,764	50,000	43,771	50,000
Via Lido									
east of Newport Blvd.	30	1	9,513	10,000	13,000	12,561	13,000	12,633	13,000
Orange Street									
north of West Coast Hwy.	25	1	845	1,000	1,000	983	1,000	983	1,000
south of West Coast Hwy.	25	1	1,395	2,000	1,000	1,146	1,000	1,146	1,000
Prospect Street									
north of West Coast Hwy.	25	1	2,472	2,000	2,000	1,467	2,000	1,467	2,000
south of West Coast Hwy.	25	1	709	1,074	956	800	956	800	956
Placentia Avenue									
north of Superior Ave.	40	1	12,596	14,000	12,000	15,125	12,000	14,877	12,000
south of Superior Ave.	40	1	7,385	9,000	10,000	9,640	10,000	9,487	10,000
north of Hospital Rd.	40	1	11,306	11,000	17,000	13,200	17,000	13,138	17,000

Table Continued on Next Page

Roadway Segment	Speed (mph)	Mix	-----No Project----- Exist.	2015	2025	----With Project---- 2015	2025	----With Alt.---- 2015	2025
Superior Avenue									
north of 17th St.	35	1	7,619	7,590	11,762	9,021	11,729	8,971	11,713
south of 17th St.	40	1	20,569	20,610	21,637	24,073	21,559	23,957	21,521
north of 16th St.\Industrial Way	40	1	17,392	17,385	21,410	20,419	21,332	20,316	21,294
south of 16th St.\Industrial Way	40	1	17,519	17,498	21,194	20,581	21,121	20,475	21,085
north of Placentia Ave.	40	1	14,598	18,000	15,000	21,033	15,000	20,933	15,000
south of Placentia Ave.	40	1	21,448	25,000	15,000	22,859	15,000	22,701	15,000
north of Hospital Rd.	40	1	24,051	22,000	18,000	21,204	18,000	21,224	18,000
south of Hospital Rd.	40	1	27,568	25,000	25,000	26,029	25,000	25,869	25,000
north of West Coast Hwy.	40	1	23,387	26,000	14,000	20,168	14,000	19,939	14,000
Balboa Boulevard									
south of West Coast Hwy.	30	1	15,626	20,000	14,000	15,584	14,000	15,643	14,000
Hoag Drive									
south of Hospital Rd.	25	1	4,489	5,000	15,000	11,912	17,000	11,304	17,000
north of West Coast Hwy.	25	1	3,482	7,000	10,000	4,258	7,000	4,113	8,000
Harbor Boulevard									
west of Newport Blvd.	40	1	10,569	11,538	16,339	11,498	16,624	11,378	16,488

Table Continued on Next Page

Roadway Segment	Speed (mph)	Mix	-----No Project----- Exist.	2015	2025	----With Project---- 2015	2025	----With Alt.---- 2015	2025
Newport Boulevard									
north of 19th St.	35	1	75,447	81,862	89,624	82,287	90,764	81,407	90,263
south of 19th St.	35	1	56,970	61,830	66,168	61,905	66,784	61,243	66,550
north of Broadway	35	1	58,074	63,035	63,457	63,112	64,017	62,438	63,812
south of Broadway	35	1	56,870	61,715	62,287	61,801	62,822	61,141	62,630
north of Harbor Blvd.	35	1	56,211	61,022	63,622	61,050	64,176	60,399	63,974
south of Harbor Blvd.	35	1	64,842	70,430	77,620	70,446	78,410	69,696	78,097
north of 18th St./Rochester St.	35	1	65,040	70,678	76,409	70,627	77,178	69,876	76,876
south of 18th St./Rochester St.	35	1	60,649	65,907	72,224	65,712	72,812	65,013	72,515
north of 17th St.	35	1	58,541	63,489	69,047	63,534	69,576	62,853	69,308
south of 17th St.	35	1	41,724	45,303	49,240	44,877	49,263	44,398	49,251
north of 16th St.	35	1	40,220	43,677	46,116	43,216	46,072	42,755	46,094
south of 16th St.	45	1	39,760	43,178	48,484	42,709	48,493	42,253	48,488
north of Industrial Way	45	1	39,988	43,402	50,470	42,984	50,515	42,525	50,493
south of Industrial Way	45	1	38,887	42,219	46,865	41,759	46,830	41,313	46,848
north of Hospital Rd.	45	1	40,987	41,000	48,000	40,767	48,000	40,327	48,000
south of Hospital Rd.	45	1	48,029	48,000	50,000	40,794	49,000	40,502	49,000
north of Via Lido	30	1	55,587	52,000	51,000	42,933	51,000	43,006	51,000
south of Via Lido	30	1	42,417	38,000	40,000	32,347	40,000	32,347	40,000
Riverside Avenue									
north of West Coast Hwy.	30	1	10,508	10,000	10,000	7,969	10,000	7,887	10,000
Tustin Avenue									
north of West Coast Hwy.	30	1	1,329	2,000	3,000	2,889	3,000	2,889	3,000
Dover Drive									
north of West Coast Hwy.	40	1	31,690	31,000	30,000	28,802	30,000	28,917	30,000
Bay Shore Drive									
south of West Coast Hwy.	25	1	3,888	4,000	1,000	2,452	1,000	2,452	1,000
Bayside Drive									
north of East Coast Hwy.	25	1	1,649	4,000	6,000	5,008	6,000	5,008	6,000
south of East Coast Hwy.	25	1	10,690	11,000	14,000	11,607	14,000	11,666	14,000
Jamboree Road									
north of East Coast Hwy.	50	1	37,121	36,000	40,000	33,719	40,000	33,631	40,000
Marine Drive									
south of East Coast Hwy.	35	1	14,374	13,000	15,000	12,000	15,000	12,045	15,000

Table A-2
Peak Hour Volumes as Percentage of ADT From Data Provided

	From Data								Calculated	
	2015 No Proj.		2025 No Proj.		2025 Project		2025 Alt		No Proj. Avg	
Road Segment	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
Hospital Rd.										
East of Superior Ave.	8.3%	10.9%	6.6%	9.5%	6.8%	9.5%	6.9%	9.6%	7.4%	10.2%
West of Hoag Dr./Placentia Ave	9.2%	10.7%	7.6%	9.7%	7.7%	9.4%	7.8%	9.5%	8.4%	10.2%
East of Hoag Dr./Placentia Ave	10.2%	10.6%	11.0%	15.2%	10.9%	14.6%	10.8%	14.7%	10.6%	12.9%
West of Newport Blvd.	8.8%	7.4%	10.1%	11.1%	10.2%	10.8%	10.0%	10.9%	9.5%	9.2%
East of Newport Blvd.	9.1%	12.1%	10.4%	9.4%	9.3%	9.3%	9.6%	9.3%	9.8%	10.8%
Pacific Coast Hwy.										
West of Orange St.	9.3%	9.5%	10.3%	10.6%	10.2%	10.6%	10.3%	10.6%	9.8%	10.1%
East of Orange St.	9.3%	9.5%	10.4%	10.7%	10.3%	10.7%	10.4%	10.7%	9.9%	10.1%
West of Prospect St.	9.4%	9.5%	10.4%	9.9%	10.3%	9.9%	10.4%	9.9%	9.9%	9.7%
East of Prospect St.	9.7%	9.6%	10.8%	10.1%	10.7%	10.0%	10.8%	10.1%	10.3%	9.9%
West of Balboa Blvd/Superior Ave	8.8%	11.0%	8.9%	9.4%	8.8%	9.3%	8.8%	9.4%	8.8%	10.2%
East of Balboa Blvd/Superior Ave	8.5%	10.7%	8.4%	9.9%	8.6%	10.0%	8.5%	9.8%	8.5%	10.3%
West of Hoag Dr.	9.1%	9.2%	8.1%	9.0%	7.7%	8.5%	8.2%	9.0%	8.6%	9.1%
East of Hoag Dr.	11.7%	12.2%	8.6%	8.8%	9.0%	9.4%	8.6%	8.8%	10.2%	10.5%
West of Newport Blvd SB Off-Ramp	11.8%	13.9%	10.2%	8.9%	10.2%	8.9%	10.3%	8.9%	11.0%	11.4%
East of Newport Blvd SB Off-Ramp	7.7%	9.4%	8.7%	9.1%	8.7%	9.0%	8.7%	9.1%	8.2%	9.3%
West of Riverside Ave.	7.4%	8.8%	8.5%	10.1%	8.5%	10.2%	8.5%	10.1%	8.0%	9.4%
East of Riverside Ave.	7.7%	9.0%	8.5%	9.8%	8.5%	9.9%	8.4%	9.8%	8.1%	9.4%
West of Tustin Ave.	8.1%	9.4%	8.8%	10.1%	8.7%	10.1%	8.7%	10.1%	8.4%	9.7%
East of Tustin Ave.	8.8%	10.0%	9.0%	10.5%	9.1%	10.6%	9.1%	10.7%	8.9%	10.2%
West of Bay Shore Dr./Dover Dr.	8.6%	10.0%	8.8%	10.3%	8.9%	10.4%	8.8%	10.2%	8.7%	10.1%
East of Bay Shore Dr./Dover Dr.	8.1%	9.7%	8.2%	9.8%	8.2%	9.9%	8.2%	9.8%	8.1%	9.8%
West of Bayside Dr.	8.1%	9.7%	8.3%	9.8%	8.3%	9.9%	8.2%	9.8%	8.2%	9.7%
East of Bayside Dr.	8.9%	10.3%	8.2%	9.6%	8.2%	9.6%	8.2%	9.6%	8.5%	10.0%
West of Jamboree Rd.	8.9%	10.7%	8.9%	10.8%	9.0%	11.0%	8.9%	10.8%	8.9%	10.7%
East of Jamboree Rd.	7.5%	9.0%	8.1%	9.6%	8.1%	9.6%	8.1%	9.6%	7.8%	9.3%
Via Lido										
East of Newport Blvd.	9.5%	11.2%	7.2%	9.5%	7.1%	9.5%	7.0%	9.5%	8.3%	10.3%

Table Continued on Next Page

	From Data								Calculated	
	2015 No Proj.		2025 No Proj.		2025 Project		2025 Alt		No Proj. Avg	
Road Segment	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
Orange St.										
North of West Coast Hwy.	12.0%	13.0%	10.0%	17.0%	10.0%	17.0%	10.0%	17.0%	11.0%	15.0%
South of West Coast Hwy.	7.0%	8.5%	13.0%	14.0%	13.0%	14.0%	13.0%	14.0%	10.0%	11.3%
Prospect St.										
North of West Coast Hwy.	9.5%	7.5%	15.0%	9.0%	15.0%	9.0%	15.0%	9.0%	12.3%	8.3%
Placentia Ave.										
North of Superior Ave.	10.0%	9.9%	8.3%	10.3%	8.3%	10.0%	8.3%	10.3%	9.2%	10.1%
South of Superior Ave.	9.7%	9.8%	8.7%	9.5%	8.4%	9.7%	8.5%	9.9%	9.2%	9.6%
North of Hospital Rd.	8.9%	10.5%	6.9%	9.5%	6.7%	9.6%	6.8%	9.6%	7.9%	10.0%
Superior Ave.										
North of Hospital Rd.	9.5%	9.3%	8.8%	7.3%	8.8%	7.5%	8.8%	7.5%	9.2%	8.3%
South of Placentia Ave.	9.2%	8.9%	10.1%	9.8%	10.2%	9.5%	10.2%	9.7%	9.6%	9.4%
North of Hospital Rd.	10.0%	8.3%	9.1%	9.9%	9.3%	9.8%	9.3%	9.9%	9.6%	9.1%
South of Hospital Rd.	9.9%	9.0%	8.4%	9.9%	8.6%	9.8%	8.6%	9.9%	9.2%	9.5%
North of West Coast Hwy.	8.3%	7.8%	10.9%	9.9%	11.3%	9.5%	11.3%	9.7%	9.6%	8.8%
Balboa Blvd.										
South of West Coast Hwy.	6.1%	8.2%	8.6%	9.6%	8.7%	9.5%	8.6%	9.5%	7.4%	8.9%
Hoag Dr.										
South of Hospital Rd.	8.4%	10.0%	4.2%	4.9%	4.1%	4.5%	4.3%	4.8%	6.3%	7.4%
North of West Coast Hwy.	10.6%	9.7%	12.8%	7.6%	12.1%	7.7%	13.0%	7.9%	11.7%	8.7%
Newport Blvd.										
North of Hospital Rd.	9.2%	8.6%	8.6%	9.3%	8.4%	9.1%	8.5%	9.2%	8.9%	9.0%
South of Hospital Rd.	7.4%	7.6%	8.0%	9.3%	7.8%	9.4%	7.9%	9.5%	7.7%	8.5%
North of Via Lido	6.4%	6.7%	6.7%	9.7%	6.7%	9.7%	6.7%	9.7%	6.5%	8.2%
South of Via Lido	6.5%	6.6%	6.4%	9.6%	6.4%	9.6%	6.4%	9.6%	6.4%	8.1%
Riverside Ave.										
North of West Coast Hwy.	6.8%	8.9%	8.6%	11.0%	8.5%	10.8%	8.6%	10.9%	7.7%	10.0%
Tustin Ave.										
North of West Coast Hwy.	7.5%	15.5%	6.3%	9.0%	6.0%	9.0%	6.0%	9.0%	6.9%	12.3%
Dover Dr.										
North of West Coast Hwy.	6.9%	8.6%	7.6%	9.1%	7.7%	9.1%	7.6%	9.0%	7.3%	8.9%
Bay Shore Dr.										
South of West Coast Hwy.	7.0%	8.5%	15.0%	11.0%	16.0%	11.0%	16.0%	11.0%	11.0%	9.8%

Table Continued on Next Page

	From Data								Calculated	
	2015 No Proj.		2025 No Proj.		2025 Project		2025 Alt		No Proj. Avg	
Road Segment	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
Bayside Dr.										
North of East Coast Hwy.	7.0%	9.0%	5.2%	7.8%	5.2%	7.8%	5.2%	7.8%	6.1%	8.4%
South of East Coast Hwy.	9.1%	8.8%	7.7%	9.4%	7.9%	9.3%	7.8%	9.3%	8.4%	9.1%
Jamboree Rd.										
North of East Coast Hwy.	8.3%	9.9%	8.8%	10.7%	8.7%	10.7%	8.7%	10.7%	8.5%	10.3%
Marine Dr.										
South of East Coast Hwy.	7.5%	10.0%	8.5%	10.3%	8.5%	10.1%	8.5%	10.1%	8.0%	10.1%

Table A-3
Peak Hour Volumes as Percentage of ADT Used to Calculate ADT's

	Exist		2015 NP		2025 NP		Project		Alt		Link Used Where
Road Segment	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**	**Data Was Not Provided**
19th St.											
West of Newport Blvd.	8.5%	10.3%	8.5%	10.7%	8.4%	9.9%	8.6%	10.0%	8.5%	9.8%	West Coast Hwy.: West of Hoag Dr.
East of Newport Blvd.	8.9%	9.0%	9.2%	8.6%	8.6%	9.3%	8.4%	9.1%	8.5%	9.2%	Newport Blvd.: South of Hospital Rd.
Broadway											
East of Newport Blvd.	8.9%	9.0%	9.2%	8.6%	8.6%	9.3%	8.4%	9.1%	8.5%	9.2%	Newport Blvd.: South of Hospital Rd.
18th St.											
West of Newport Blvd.	8.9%	9.0%	9.2%	8.6%	8.6%	9.3%	8.4%	9.1%	8.5%	9.2%	Newport Blvd.: South of Hospital Rd.
Rochester St.											
East of Newport Blvd.	8.9%	9.0%	9.2%	8.6%	8.6%	9.3%	8.4%	9.1%	8.5%	9.2%	Newport Blvd.: South of Hospital Rd.
17th St.											
West of Superior Ave.	9.2%	8.3%	9.5%	9.3%	8.8%	7.3%	8.8%	7.5%	8.8%	7.5%	Superior Ave.: South of Placentia Ave.
East of Superior Ave.	9.2%	8.3%	9.5%	9.3%	8.8%	7.3%	8.8%	7.5%	8.8%	7.5%	Superior Ave.: South of Placentia Ave.
West of Newport Blvd.	8.9%	9.0%	9.2%	8.6%	8.6%	9.3%	8.4%	9.1%	8.5%	9.2%	Newport Blvd.: South of Hospital Rd.
East of Newport Blvd.	8.9%	9.0%	9.2%	8.6%	8.6%	9.3%	8.4%	9.1%	8.5%	9.2%	Newport Blvd.: South of Hospital Rd.
16th St.											
West of Superior Ave.	9.2%	8.3%	9.5%	9.3%	8.8%	7.3%	8.8%	7.5%	8.8%	7.5%	Superior Ave.: South of Placentia Ave.
West of Newport Blvd.	8.9%	9.0%	9.2%	8.6%	8.6%	9.3%	8.4%	9.1%	8.5%	9.2%	Newport Blvd.: South of Hospital Rd.
East of Newport Blvd.	8.9%	9.0%	9.2%	8.6%	8.6%	9.3%	8.4%	9.1%	8.5%	9.2%	Newport Blvd.: South of Hospital Rd.
Industrial Way											
East of Superior Ave.	9.2%	8.3%	9.5%	9.3%	8.8%	7.3%	8.8%	7.5%	8.8%	7.5%	Superior Ave.: South of Placentia Ave.
West of Newport Blvd.	8.9%	9.0%	9.2%	8.6%	8.6%	9.3%	8.4%	9.1%	8.5%	9.2%	Newport Blvd.: South of Hospital Rd.
East of Newport Blvd.	8.9%	9.0%	9.2%	8.6%	8.6%	9.3%	8.4%	9.1%	8.5%	9.2%	Newport Blvd.: South of Hospital Rd.
Hospital Rd.											
East of Superior Ave.	8.3%	10.9%	8.3%	10.9%	6.6%	9.5%	6.8%	9.5%	6.9%	9.6%	Direct
West of Hoag Dr./Placentia Ave	9.2%	10.7%	9.2%	10.7%	7.6%	9.7%	7.7%	9.4%	7.8%	9.5%	Direct
East of Hoag Dr./Placentia Ave	10.2%	10.6%	10.2%	10.6%	11.0%	15.2%	10.9%	14.6%	10.8%	14.7%	Direct
West of Newport Blvd.	8.8%	7.4%	8.8%	7.4%	10.1%	11.1%	10.2%	10.8%	10.0%	10.9%	Direct
East of Newport Blvd.	9.1%	12.1%	9.1%	12.1%	10.4%	9.4%	9.3%	9.3%	9.6%	9.3%	Direct

Table Continued on Next Page

Road Segment	Exist AM	Exist PM	2015 NP AM	2015 NP PM	2025 NP AM	2025 NP PM	Project AM	Project PM	Alt AM	Alt PM	Link Used Where Data Was Not Provided
Pacific Coast Hwy.											
West of Orange St.	9.3%	9.5%	9.3%	9.5%	10.3%	10.6%	10.2%	10.6%	10.3%	10.6%	Direct
East of Orange St.	9.3%	9.5%	9.3%	9.5%	10.4%	10.7%	10.3%	10.7%	10.4%	10.7%	Direct
West of Prospect St.	9.4%	9.5%	9.4%	9.5%	10.4%	9.9%	10.3%	9.9%	10.4%	9.9%	Direct
East of Prospect St.	9.7%	9.6%	9.7%	9.6%	10.8%	10.1%	10.7%	10.0%	10.8%	10.1%	Direct
West of Balboa Blvd/Superior Ave	8.8%	11.0%	8.8%	11.0%	8.9%	9.4%	8.8%	9.3%	8.8%	9.4%	Direct
East of Balboa Blvd/Superior Ave	8.5%	10.7%	8.5%	10.7%	8.4%	9.9%	8.6%	10.0%	8.5%	9.8%	Direct
West of Hoag Dr.	9.1%	9.2%	9.1%	9.2%	8.1%	9.0%	7.7%	8.5%	8.2%	9.0%	Direct
East of Hoag Dr.	11.7%	12.2%	11.7%	12.2%	8.6%	8.8%	9.0%	9.4%	8.6%	8.8%	Direct
West of Newport Blvd SB Off-Ramp	11.8%	13.9%	11.8%	13.9%	10.2%	8.9%	10.2%	8.9%	10.3%	8.9%	Direct
East of Newport Blvd SB Off-Ramp	7.7%	9.4%	7.7%	9.4%	8.7%	9.1%	8.7%	9.0%	8.7%	9.1%	Direct
West of Riverside Ave.	7.4%	8.8%	7.4%	8.8%	8.5%	10.1%	8.5%	10.2%	8.5%	10.1%	Direct
East of Riverside Ave.	7.7%	9.0%	7.7%	9.0%	8.5%	9.8%	8.5%	9.9%	8.4%	9.8%	Direct
West of Tustin Ave.	8.1%	9.4%	8.1%	9.4%	8.8%	10.1%	8.7%	10.1%	8.7%	10.1%	Direct
East of Tustin Ave.	8.8%	10.0%	8.8%	10.0%	9.0%	10.5%	9.1%	10.6%	9.1%	10.7%	Direct
West of Bay Shore Dr./Dover Dr.	8.6%	10.0%	8.6%	10.0%	8.8%	10.3%	8.9%	10.4%	8.8%	10.2%	Direct
East of Bay Shore Dr./Dover Dr.	8.1%	9.7%	8.1%	9.7%	8.2%	9.8%	8.2%	9.9%	8.2%	9.8%	Direct
West of Bayside Dr.	8.1%	9.7%	8.1%	9.7%	8.3%	9.8%	8.3%	9.9%	8.2%	9.8%	Direct
East of Bayside Dr.	8.9%	10.3%	8.9%	10.3%	8.2%	9.6%	8.2%	9.6%	8.2%	9.6%	Direct
West of Jamboree Road	8.9%	10.7%	8.9%	10.7%	8.9%	10.8%	9.0%	11.0%	8.9%	10.8%	Direct
East of Jamboree Road	7.5%	9.0%	7.5%	9.0%	8.1%	9.6%	8.1%	9.6%	8.1%	9.6%	Direct
Via Lido											
East of Newport Blvd.	9.5%	11.2%	9.5%	11.2%	7.2%	9.5%	7.1%	9.5%	7.0%	9.5%	Direct

Table Continued on Next Page

Road Segment	Exist AM	Exist PM	2015 NP AM	2015 NP PM	2025 NP AM	2025 NP PM	Project AM	Project PM	Alt AM	Alt PM	Link Used Where Data Was Not Provided
Orange St.											
North of West Coast Hwy.	12.0%	13.0%	12.0%	13.0%	10.0%	17.0%	10.0%	17.0%	10.0%	17.0%	Direct
South of West Coast Hwy.	7.0%	8.5%	7.0%	8.5%	13.0%	14.0%	13.0%	14.0%	13.0%	14.0%	Direct
Prospect St.											
North of West Coast Hwy.	9.5%	7.5%	9.5%	7.5%	15.0%	9.0%	15.0%	9.0%	15.0%	9.0%	Direct
South of West Coast Hwy.	12.3%	8.3%	9.5%	7.5%	15.0%	9.0%	15.0%	9.0%	15.0%	9.0%	Prospect Street: South of West Coast Hwy.
Placentia Ave.											
North of Superior Ave.	10.0%	9.9%	10.0%	9.9%	8.3%	10.3%	8.3%	10.0%	8.3%	10.3%	Direct
South of Superior Ave.	9.7%	9.8%	9.7%	9.8%	8.7%	9.5%	8.4%	9.7%	8.5%	9.9%	Direct
North of Hospital Road	8.9%	10.5%	8.9%	10.5%	6.9%	9.5%	6.7%	9.6%	6.8%	9.6%	Direct
Superior Ave.											
North of 17th St.	9.2%	8.3%	9.5%	9.3%	8.8%	7.3%	8.8%	7.5%	8.8%	7.5%	Superior Ave.: South of Placentia Ave.
South of 17th St.	9.2%	8.3%	9.5%	9.3%	8.8%	7.3%	8.8%	7.5%	8.8%	7.5%	Superior Ave.: South of Placentia Ave.
North of 16th St.\Industrial Way	9.2%	8.3%	9.5%	9.3%	8.8%	7.3%	8.8%	7.5%	8.8%	7.5%	Superior Ave.: South of Placentia Ave.
South of 16th St.\Industrial Way	9.2%	8.3%	9.5%	9.3%	8.8%	7.3%	8.8%	7.5%	8.8%	7.5%	Superior Ave.: South of Placentia Ave.
North of Hospital Rd.	9.5%	9.3%	9.5%	9.3%	8.8%	7.3%	8.8%	7.5%	8.8%	7.5%	Direct
South of Placentia Ave.	9.2%	8.9%	9.2%	8.9%	10.1%	9.8%	10.2%	9.5%	10.2%	9.7%	Direct
North of Hospital Road	10.0%	8.3%	10.0%	8.3%	9.1%	9.9%	9.3%	9.8%	9.3%	9.9%	Direct
South of Hospital Road	9.9%	9.0%	9.9%	9.0%	8.4%	9.9%	8.6%	9.8%	8.6%	9.9%	Direct
North of West Coast Hwy.	8.3%	7.8%	8.3%	7.8%	10.9%	9.9%	11.3%	9.5%	11.3%	9.7%	Direct
Balboa Blvd.											
South of West Coast Hwy.	6.1%	8.2%	6.1%	8.2%	8.6%	9.6%	8.7%	9.5%	8.6%	9.5%	Direct
Hoag Dr.											
South of Hospital Road	8.4%	10.0%	8.4%	10.0%	4.2%	4.9%	4.1%	4.5%	4.3%	4.8%	Direct
North of West Coast Hwy.	10.6%	9.7%	10.6%	9.7%	12.8%	7.6%	12.1%	7.7%	13.0%	7.9%	Direct

Table Continued on Next Page

Road Segment	Exist AM	Exist PM	2015 NP AM	2015 NP PM	2025 NP AM	2025 NP PM	Project AM	Project PM	Alt AM	Alt PM	Link Used Where Data Was Not Provided
Harbor Blvd.											
West of Newport Blvd.	8.9%	9.0%	9.2%	8.6%	8.6%	9.3%	8.4%	9.1%	8.5%	9.2%	Newport Blvd.: South of Hospital Rd.
Newport Blvd.											
North of 19th St.	8.9%	9.0%	9.2%	8.6%	8.6%	9.3%	8.4%	9.1%	8.5%	9.2%	Newport Blvd.: South of Hospital Rd.
South of 19th St.	8.9%	9.0%	9.2%	8.6%	8.6%	9.3%	8.4%	9.1%	8.5%	9.2%	Newport Blvd.: South of Hospital Rd.
North of Broadway Blvd.	8.9%	9.0%	9.2%	8.6%	8.6%	9.3%	8.4%	9.1%	8.5%	9.2%	Newport Blvd.: South of Hospital Rd.
South of Broadway Blvd.	8.9%	9.0%	9.2%	8.6%	8.6%	9.3%	8.4%	9.1%	8.5%	9.2%	Newport Blvd.: South of Hospital Rd.
North of Harbor Blvd.	8.9%	9.0%	9.2%	8.6%	8.6%	9.3%	8.4%	9.1%	8.5%	9.2%	Newport Blvd.: South of Hospital Rd.
South of Harbor Blvd.	8.9%	9.0%	9.2%	8.6%	8.6%	9.3%	8.4%	9.1%	8.5%	9.2%	Newport Blvd.: South of Hospital Rd.
North of 18th St./Rochester St.	8.9%	9.0%	9.2%	8.6%	8.6%	9.3%	8.4%	9.1%	8.5%	9.2%	Newport Blvd.: South of Hospital Rd.
South of 18th St./Rochester St.	8.9%	9.0%	9.2%	8.6%	8.6%	9.3%	8.4%	9.1%	8.5%	9.2%	Newport Blvd.: South of Hospital Rd.
North of 17th St.	8.9%	9.0%	9.2%	8.6%	8.6%	9.3%	8.4%	9.1%	8.5%	9.2%	Newport Blvd.: South of Hospital Rd.
South of 17th St.	8.9%	9.0%	9.2%	8.6%	8.6%	9.3%	8.4%	9.1%	8.5%	9.2%	Newport Blvd.: South of Hospital Rd.
North of 16th St.	8.9%	9.0%	9.2%	8.6%	8.6%	9.3%	8.4%	9.1%	8.5%	9.2%	Newport Blvd.: South of Hospital Rd.
South of 16th St.	8.9%	9.0%	9.2%	8.6%	8.6%	9.3%	8.4%	9.1%	8.5%	9.2%	Newport Blvd.: South of Hospital Rd.
North of Industrial Way	8.9%	9.0%	9.2%	8.6%	8.6%	9.3%	8.4%	9.1%	8.5%	9.2%	Newport Blvd.: South of Hospital Rd.
South of Industrial Way	8.9%	9.0%	9.2%	8.6%	8.6%	9.3%	8.4%	9.1%	8.5%	9.2%	Newport Blvd.: South of Hospital Rd.
North of Hospital Road	9.2%	8.6%	9.2%	8.6%	8.6%	9.3%	8.4%	9.1%	8.5%	9.2%	Direct
South of Hospital Road	7.4%	7.6%	7.4%	7.6%	8.0%	9.3%	7.8%	9.4%	7.9%	9.5%	Direct
North of Via Lido	6.4%	6.7%	6.4%	6.7%	6.7%	9.7%	6.7%	9.7%	6.7%	9.7%	Direct
South of Via Lido	6.5%	6.6%	6.5%	6.6%	6.4%	9.6%	6.4%	9.6%	6.4%	9.6%	Direct
Riverside Ave.											
North of West Coast Hwy.	6.8%	8.9%	6.8%	8.9%	8.6%	11.0%	8.5%	10.8%	8.6%	10.9%	Direct
Tustin Ave.											
North of West Coast Hwy.	7.5%	15.5%	7.5%	15.5%	6.3%	9.0%	6.0%	9.0%	6.0%	9.0%	Direct
Dover Dr.											
North of West Coast Hwy.	6.9%	8.6%	6.9%	8.6%	7.6%	9.1%	7.7%	9.1%	7.6%	9.0%	Direct

Table Continued on Next Page

Road Segment	Exist AM	Exist PM	2015 NP AM	2015 NP PM	2025 NP AM	2025 NP PM	Project AM	Project PM	Alt AM	Alt PM	Link Used Where Data Was Not Provided
Bay Shore Dr.											
South of West Coast Hwy.	7.0%	8.5%	7.0%	8.5%	15.0%	11.0%	16.0%	11.0%	16.0%	11.0%	Direct
Bayside Dr.											
North of East Coast Hwy.	7.0%	9.0%	7.0%	9.0%	5.2%	7.8%	5.2%	7.8%	5.2%	7.8%	Direct
South of East Coast Hwy.	9.1%	8.8%	9.1%	8.8%	7.7%	9.4%	7.9%	9.3%	7.8%	9.3%	Direct
Jamboree Rd.											
North of East Coast Hwy.	8.3%	9.9%	8.3%	9.9%	8.8%	10.7%	8.7%	10.7%	8.7%	10.7%	Direct
Marine Dr.											
South of East Coast Hwy.	7.5%	10.0%	7.5%	10.0%	8.5%	10.3%	8.5%	10.1%	8.5%	10.1%	Direct

Table A-4 presents the day/evening/nighttime traffic mix by vehicle type auto, medium truck (MT), and heavy truck (HT) used for the traffic noise modeling. The arterial mix (index 1) was developed by the Orange County Environmental Management Agency based on traffic surveys at arterial intersections throughout the county.

Table A-4
Traffic Distribution Used for Traffic Noise Modeling
1. Arterial Roadways

	Day	Eve	Night
Auto	75.51%	12.57%	9.34%
MT	1.56%	0.09%	0.19%
HT	0.64%	0.02%	0.08%

Existing Traffic Noise Levels

Table A-5
Existing Traffic Noise Levels

Roadway Segment	CNEL @ 100' †	Distance To CNEL Contour (feet)† 70 CNEL	65 CNEL	60 CNEL
19th Street				
west of Newport Ave.	59.4	RW	42	91
east of Newport Ave.	56.5	RW	RW	58
Broadway				
east of Newport Blvd.	51.2	RW	RW	RW
18th Street				
west of Newport Blvd.	57.3	RW	31	66
Rochester Street				
east of Newport Blvd.	52.4	RW	RW	31
17th Street				
west of Superior Ave.	60.8	RW	52	113
east of Superior Ave.	63.7	38	82	177
west of Newport Blvd.	63.0	34	73	158
east of Newport Blvd.	63.3	36	77	166
16th Street				
west of Superior Ave.	55.6	RW	RW	51
west of Newport Ave.	50.5	RW	RW	RW
east of Newport Ave.	53.2	RW	RW	35
Industrial Way				
east of Superior Ave.	54.7	RW	RW	44
west of Newport Blvd.	55.2	RW	RW	48
east of Newport Blvd.	53.9	RW	RW	39
Hospital Road				
east of Superior Ave.	57.2	RW	30	65
west of Hoag Dr.	56.8	RW	RW	61
east of Hoag Dr.	60.0	RW	46	100
west of Newport Blvd.	60.1	RW	47	102
east of Newport Blvd.	56.1	RW	RW	55

Table Continued on Next Page

Roadway Segment	CNEL @ 100' †	Distance To CNEL Contour (feet)† 70 CNEL	65 CNEL	60 CNEL
Pacific Coast Highway				
west of Orange St.	68.5	80	172	370
east of Orange St.	68.6	80	173	372
west of Prospect St.	68.4	78	167	360
east of Prospect St.	68.4	79	169	365
west of Balboa Blvd.\Superior Ave.	68.8	83	180	387
east of Balboa Blvd.\Superior Ave.	67.8	72	154	333
west of Hoag Dr.	67.7	70	151	325
east of Hoag Dr.	63.9	39	84	181
west of Newport Blvd. SB Off Ramp	64.1	40	87	187
east of Newport Blvd. SB Off Ramp	66.1	55	119	255
west of Riverside Ave.	66.7	60	129	278
east of Riverside Ave.	66.0	54	116	251
west of Tustin Ave.	65.8	52	113	243
east of Tustin Ave.	66.9	62	134	289
west of Bay Shore Dr.\Dover Dr.	67.3	66	143	308
east of Bay Shore Dr.\Dover Dr.	69.0	86	185	398
west of Bayside Dr.	68.7	82	176	380
east of Bayside Dr.	69.0	86	185	399
west of Marine Dr.\Jamboree Rd.	69.5	93	199	430
east of Marine Dr.\Jamboree Rd.	69.0	86	185	399
Via Lido				
east of Newport Blvd.	57.9	RW	34	72
Orange Street				
north of West Coast Hwy.	45.7	RW	RW	RW
south of West Coast Hwy.	47.9	RW	RW	RW
Prospect Street				
north of West Coast Hwy.	50.4	RW	RW	RW
south of West Coast Hwy.	44.9	RW	RW	RW
Placentia Avenue				
north of Superior Ave.	61.8	RW	61	131
south of Superior Ave.	59.4	RW	43	92
north of Hospital Rd.	61.3	RW	57	122
Superior Avenue				
north of 17th St.	58.2	RW	35	75
south of 17th St.	63.9	39	84	182
north of 16th St.\Industrial Way	63.2	35	75	163
south of 16th St.\Industrial Way	63.2	35	76	163
north of Placentia Ave.	62.4	31	67	145
south of Placentia Ave.	64.1	40	87	187
north of Hospital Rd.	64.6	43	94	202
south of Hospital Rd.	65.2	48	103	221
north of West Coast Hwy.	64.5	43	92	198

Table Continued on Next Page

Roadway Segment	CNEL @ 100' †	Distance To CNEL Contour (feet)† 70 CNEL	65 CNEL	60 CNEL
Balboa Boulevard				
south of West Coast Hwy.	60.1	RW	47	101
Hoag Drive				
south of Hospital Rd.	53.0	RW	RW	34
north of West Coast Hwy.	51.8	RW	RW	RW
Harbor Boulevard				
west of Newport Blvd.	61.0	RW	54	117
Newport Boulevard				
north of 19th St.	68.1	75	161	348
south of 19th St.	66.9	62	134	288
north of Broadway	67.0	63	136	292
south of Broadway	66.9	62	134	288
north of Harbor Blvd.	66.8	62	133	286
south of Harbor Blvd.	67.5	68	146	314
north of 18th St./Rochester St.	67.5	68	146	315
south of 18th St./Rochester St.	67.2	65	140	301
north of 17th St.	67.0	63	136	294
south of 17th St.	65.5	51	109	234
north of 16th St.	65.4	49	106	229
south of 16th St.	68.0	74	159	344
north of Industrial Way	68.1	74	160	345
south of Industrial Way	67.9	73	157	339
north of Hospital Rd.	68.2	76	163	351
south of Hospital Rd.	68.9	84	181	390
north of Via Lido	65.6	51	109	235
south of Via Lido	64.4	42	91	196
Riverside Avenue				
north of West Coast Hwy.	58.3	RW	36	77
Tustin Avenue				
north of West Coast Hwy.	49.3	RW	RW	RW
Dover Drive				
north of West Coast Hwy.	65.8	52	113	243
Bay Shore Drive				
south of West Coast Hwy.	52.3	RW	RW	31
Bayside Drive				
north of East Coast Hwy.	48.6	RW	RW	RW
south of East Coast Hwy.	56.7	RW	RW	60
Jamboree Road				
north of East Coast Hwy.	68.9	85	182	393
Marine Drive				
south of East Coast Hwy.	60.9	RW	53	115

† From roadway centerline

RW – Contour does not extend beyond right-of-way

Traffic Noise Level CNEL Changes and Future Levels With Project

Table A-6
Traffic Noise CNEL Changes With Project

Roadway Segment	Change in 2015 Over Existing	Change in 2015 Due to Project	Change In 2025 Over Existing	Change In 2025 Due to Project
19th Street				
west of Newport Ave.	0.4	0.1	1.0	-0.1
east of Newport Ave.	0.4	0.0	0.9	0.1
Broadway				
east of Newport Blvd.	0.4	0.0	0.8	0.1
18th Street				
west of Newport Blvd.	0.4	0.1	-0.7	0.1
Rochester Street				
east of Newport Blvd.	0.4	0.0	1.3	0.1
17th Street				
west of Superior Ave.	0.7	0.7	1.1	0.0
east of Superior Ave.	0.7	0.6	0.6	0.0
west of Newport Blvd.	0.4	0.1	1.2	0.1
east of Newport Blvd.	0.4	0.0	0.7	0.1
16th Street				
west of Superior Ave.	0.7	0.6	0.2	0.0
west of Newport Ave.	0.4	0.0	***3.5***	0.1
east of Newport Ave.	0.4	0.0	2.8	0.1
Industrial Way				
east of Superior Ave.	0.6	0.6	0.7	0.0
west of Newport Blvd.	0.4	0.1	-0.1	0.1
east of Newport Blvd.	0.4	0.1	-0.6	0.1
Hospital Road				
east of Superior Ave.	0.1	0.8	1.7	0.0
west of Hoag Dr.	-0.3	0.6	1.3	0.0
east of Hoag Dr.	-1.0	-0.6	-0.1	0.3
west of Newport Blvd.	-1.3	-0.8	-0.2	0.3
east of Newport Blvd.	1.4	0.3	1.0	0.0

Table Continued on Next Page

Roadway Segment	Change in 2015 Over Existing	Change in 2015 Due to Project	Change In 2025 Over Existing	Change In 2025 Due to Project
Pacific Coast Highway				
west of Orange St.	0.4	-0.5	0.5	0.0
east of Orange St.	0.3	-0.5	0.5	0.0
west of Prospect St.	0.7	-0.3	0.7	0.0
east of Prospect St.	0.6	-0.3	0.6	0.0
west of Balboa Blvd.\Superior Ave.	0.9	0.4	0.4	0.0
east of Balboa Blvd.\Superior Ave.	0.7	0.0	0.7	-0.2
west of Hoag Dr.	1.2	0.4	1.2	0.1
east of Hoag Dr.	1.6	0.8	2.0	-0.5
west of Newport Blvd. SB Off Ramp	1.6	***1.0***	2.1	-0.3
east of Newport Blvd. SB Off Ramp	0.4	-0.2	0.7	0.0
west of Riverside Ave.	-0.2	-0.7	0.4	-0.1
east of Riverside Ave.	0.0	-0.5	0.6	-0.1
west of Tustin Ave.	0.3	-0.3	0.6	0.0
east of Tustin Ave.	0.4	-0.2	0.6	-0.1
west of Bay Shore Dr.\Dover Dr.	-0.1	-0.2	0.8	-0.1
east of Bay Shore Dr.\Dover Dr.	0.1	-0.1	0.7	-0.1
west of Bayside Dr.	0.4	-0.1	0.7	-0.1
east of Bayside Dr.	0.9	0.3	1.2	0.0
west of Marine Dr.\Jamboree Rd.	0.0	-0.1	0.4	-0.1
east of Marine Dr.\Jamboree Rd.	-0.6	-0.3	0.0	0.0
Via Lido				
east of Newport Blvd.	1.2	***1.0***	1.4	0.0
Orange Street				
north of West Coast Hwy.	0.7	-0.1	0.7	0.0
south of West Coast Hwy.	-0.9	-2.4	-1.4	0.0
Prospect Street				
north of West Coast Hwy.	-2.3	-1.3	-0.9	0.0
south of West Coast Hwy.	0.5	-1.3	1.3	0.0
Placentia Avenue				
north of Superior Ave.	0.8	0.3	-0.2	0.0
south of Superior Ave.	1.2	0.3	1.3	0.0
north of Hospital Rd.	0.7	0.8	1.8	0.0
Superior Avenue				
north of 17th St.	0.7	0.8	1.9	0.0
south of 17th St.	0.7	0.7	0.2	0.0
north of 16th St.\Industrial Way	0.7	0.7	0.9	0.0
south of 16th St.\Industrial Way	0.7	0.7	0.8	0.0
north of Placentia Ave.	1.6	0.7	0.1	0.0
south of Placentia Ave.	0.3	-0.4	-1.6	0.0
north of Hospital Rd.	-0.5	-0.2	-1.3	0.0
south of Hospital Rd.	-0.2	0.2	-0.4	0.0
north of West Coast Hwy.	-0.6	-1.1	-2.2	0.0

Table Continued on Next Page

Roadway Segment	Change in 2015 Over Existing	Change in 2015 Due to Project	Change In 2025 Over Existing	Change In 2025 Due to Project
Balboa Boulevard				
south of West Coast Hwy.	0.0	-1.1	-0.5	0.0
Hoag Drive				
south of Hospital Rd.	***4.2***	***3.8***	***5.8***	0.5
north of West Coast Hwy.	0.9	-2.2	***3.0***	-1.5
Harbor Boulevard				
west of Newport Blvd.	0.4	0.0	2.0	0.1
Newport Boulevard				
north of 19th St.	0.4	0.0	0.8	0.1
south of 19th St.	0.4	0.0	0.7	0.0
north of Broadway	0.4	0.0	0.4	0.0
south of Broadway	0.4	0.0	0.4	0.0
north of Harbor Blvd.	0.4	0.0	0.6	0.0
south of Harbor Blvd.	0.4	0.0	0.8	0.0
north of 18th St./Rochester St.	0.4	0.0	0.7	0.0
south of 18th St./Rochester St.	0.3	0.0	0.8	0.0
north of 17th St.	0.4	0.0	0.7	0.0
south of 17th St.	0.3	0.0	0.7	0.0
north of 16th St.	0.3	0.0	0.6	0.0
south of 16th St.	0.3	0.0	0.9	0.0
north of Industrial Way	0.3	0.0	1.0	0.0
south of Industrial Way	0.3	0.0	0.8	0.0
north of Hospital Rd.	0.0	0.0	0.7	0.0
south of Hospital Rd.	-0.7	-0.7	0.1	-0.1
north of Via Lido	-1.1	-0.8	-0.4	0.0
south of Via Lido	-1.2	-0.7	-0.3	0.0
Riverside Avenue				
north of West Coast Hwy.	-1.2	-1.0	-0.2	0.0
Tustin Avenue				
north of West Coast Hwy.	***3.4***	***1.6***	***3.5***	0.0
Dover Drive				
north of West Coast Hwy.	-0.4	-0.3	-0.2	0.0
Bay Shore Drive				
south of West Coast Hwy.	-2.0	-2.1	-5.9	0.0
Bayside Drive				
north of East Coast Hwy.	***4.8***	***1.0***	***5.6***	0.0
south of East Coast Hwy.	0.4	0.2	1.2	0.0
Jamboree Road				
north of East Coast Hwy.	-0.4	-0.3	0.3	0.0
Marine Drive				
south of East Coast Hwy.	-0.8	-0.3	0.2	0.0

Table A-7
Future Traffic Noise Levels With Project

Roadway Segment	CNEL @ 100' †	Distance To CNEL Contour† (feet) 70 CNEL	65 CNEL	60 CNEL
19th Street				
west of Newport Ave.	60.4	RW	49	106
east of Newport Ave.	57.4	RW	31	67
Broadway				
east of Newport Blvd.	52.0	RW	RW	RW
18th Street				
west of Newport Blvd.	57.7	RW	33	70
Rochester Street				
east of Newport Blvd.	53.8	RW	RW	38
17th Street				
west of Superior Ave.	61.9	RW	62	135
east of Superior Ave.	64.4	42	91	196
west of Newport Blvd.	64.2	41	88	191
east of Newport Blvd.	64.0	40	86	186
16th Street				
west of Superior Ave.	56.3	RW	RW	57
west of Newport Ave.	54.1	RW	RW	40
east of Newport Ave.	56.0	RW	RW	54
Industrial Way				
east of Superior Ave.	55.4	RW	RW	49
west of Newport Blvd.	55.6	RW	RW	51
east of Newport Blvd.	54.3	RW	RW	42
Hospital Road				
east of Superior Ave.	58.9	RW	39	85
west of Hoag Dr.	58.1	RW	35	75
east of Hoag Dr.	59.9	RW	46	98
west of Newport Blvd.	59.9	RW	46	98
east of Newport Blvd.	57.5	RW	32	68

Table Continued on Next Page

Roadway Segment	CNEL @ 100' †	Distance To CNEL Contour† (feet) 70 CNEL	65 CNEL	60 CNEL
Pacific Coast Highway				
west of Orange St.	69.0	86	186	400
east of Orange St.	69.0	86	186	400
west of Prospect St.	69.1	87	186	402
east of Prospect St.	69.0	86	186	401
west of Balboa Blvd.\Superior Ave.	69.7	96	207	445
east of Balboa Blvd.\Superior Ave.	68.6	80	173	373
west of Hoag Dr.	68.9	84	182	392
east of Hoag Dr.	65.9	53	114	247
west of Newport Blvd. SB Off Ramp	66.2	55	119	257
east of Newport Blvd. SB Off Ramp	66.8	61	132	285
west of Riverside Ave.	67.1	64	137	295
east of Riverside Ave.	66.6	59	128	275
west of Tustin Ave.	66.3	57	123	264
east of Tustin Ave.	67.5	68	146	315
west of Bay Shore Dr.\Dover Dr.	68.2	75	163	350
east of Bay Shore Dr.\Dover Dr.	69.7	95	205	442
west of Bayside Dr.	69.4	91	196	423
east of Bayside Dr.	70.2	103	221	477
west of Marine Dr.\Jamboree Rd.	69.9	98	212	457
east of Marine Dr.\Jamboree Rd.	69.0	86	186	400
Via Lido				
east of Newport Blvd.	59.3	RW	41	89
Orange Street				
north of West Coast Hwy.	46.4	RW	RW	RW
south of West Coast Hwy.	47.0	RW	RW	RW
Prospect Street				
north of West Coast Hwy.	49.4	RW	RW	RW
south of West Coast Hwy.	46.2	RW	RW	RW
Placentia Avenue				
north of Superior Ave.	62.6	32	69	148
south of Superior Ave.	60.8	RW	52	112
north of Hospital Rd.	63.1	34	74	160
Superior Avenue				
north of 17th St.	60.0	RW	47	101
south of 17th St.	64.6	44	94	202
north of 16th St.\Industrial Way	64.1	40	86	186
south of 16th St.\Industrial Way	64.0	40	86	185
north of Placentia Ave.	64.0	40	86	185
south of Placentia Ave.	64.4	42	91	195
north of Hospital Rd.	64.4	42	91	195
south of Hospital Rd.	65.3	49	105	225
north of West Coast Hwy.	63.8	39	83	179

Table Continued on Next Page

Roadway Segment	CNEL @ 100' †	Distance To CNEL Contour† (feet) 70 CNEL	65 CNEL	60 CNEL
Balboa Boulevard				
south of West Coast Hwy.	60.0	RW	47	101
Hoag Drive				
south of Hospital Rd.	58.7	RW	38	82
north of West Coast Hwy.	54.9	RW	RW	46
Harbor Boulevard				
west of Newport Blvd.	63.0	34	73	158
Newport Boulevard				
north of 19th St.	68.9	85	183	394
south of 19th St.	67.6	69	149	321
north of Broadway	67.4	67	145	312
south of Broadway	67.3	66	143	308
north of Harbor Blvd.	67.4	67	145	312
south of Harbor Blvd.	68.3	77	166	357
north of 18th St./Rochester St.	68.2	76	164	353
south of 18th St./Rochester St.	68.0	73	158	340
north of 17th St.	67.8	71	153	330
south of 17th St.	66.3	56	122	262
north of 16th St.	66.0	54	116	250
south of 16th St.	68.9	85	182	392
north of Industrial Way	69.1	87	187	403
south of Industrial Way	68.8	83	178	383
north of Hospital Rd.	68.9	84	181	390
south of Hospital Rd.	68.9	85	183	395
north of Via Lido	65.2	48	103	222
south of Via Lido	64.1	41	88	189
Riverside Avenue				
north of West Coast Hwy.	58.1	RW	35	75
Tustin Avenue				
north of West Coast Hwy.	52.9	RW	RW	34
Dover Drive				
north of West Coast Hwy.	65.5	50	109	234
Bay Shore Drive				
south of West Coast Hwy.	50.3	RW	RW	RW
Bayside Drive				
north of East Coast Hwy.	54.2	RW	RW	41
south of East Coast Hwy.	57.9	RW	34	72
Jamboree Road				
north of East Coast Hwy.	69.2	89	192	413
Marine Drive				
south of East Coast Hwy.	61.1	RW	55	119

† From roadway centerline

RW – Contour does not extend beyond right-of-way

Traffic Noise Level CNEL Changes and Future Levels With Project Alternative

Table A-8
Traffic Noise CNEL Changes With Project Alternative

Roadway Segment	Change in 2015 Over Existing	Change in 2015 Due to Project Alternative	Change in 2025 Over Existing	Change in 2025 Due to Project Alternative
19th Street				
west of Newport Ave.	0.4	0.2	1.1	0.0
east of Newport Ave.	0.4	0.0	0.9	0.0
Broadway				
east of Newport Blvd.	0.3	-0.1	0.7	0.0
18th Street				
west of Newport Blvd.	0.4	0.0	-0.7	0.1
Rochester Street				
east of Newport Blvd.	0.4	0.0	1.3	0.0
17th Street				
west of Superior Ave.	0.6	0.6	1.1	-0.1
east of Superior Ave.	0.6	0.6	0.6	-0.1
west of Newport Blvd.	0.4	0.0	1.2	0.0
east of Newport Blvd.	0.3	0.0	0.7	0.0
16th Street				
west of Superior Ave.	0.6	0.6	0.2	-0.1
west of Newport Ave.	0.3	0.0	***3.5***	0.0
east of Newport Ave.	0.4	0.0	2.7	0.0
Industrial Way				
east of Superior Ave.	0.6	0.6	0.7	-0.1
west of Newport Blvd.	0.4	0.1	-0.2	0.0
east of Newport Blvd.	0.4	0.0	-0.7	0.0
Hospital Road				
east of Superior Ave.	0.1	0.7	1.7	0.0
west of Hoag Dr.	-0.3	0.5	1.3	0.0
east of Hoag Dr.	-1.0	-0.6	-0.1	0.3
west of Newport Blvd.	-1.3	-0.8	-0.2	0.3
east of Newport Blvd.	1.3	0.3	1.0	0.0

Table Continued on Next Page

Roadway Segment	Change in 2015 Over Existing	Change in 2015 Due to Project Alternative	Change in 2025 Over Existing	Change in 2025 Due to Project Alternative
Pacific Coast Highway				
west of Orange St.	0.4	-0.5	0.5	0.0
east of Orange St.	0.3	-0.5	0.5	0.0
west of Prospect St.	0.7	-0.3	0.7	0.0
east of Prospect St.	0.6	-0.4	0.6	0.0
west of Balboa Blvd.\Superior Ave.	0.9	0.3	0.4	0.0
east of Balboa Blvd.\Superior Ave.	0.7	0.1	0.8	-0.1
west of Hoag Dr.	1.0	0.2	1.0	-0.1
east of Hoag Dr.	1.8	***1.1***	2.4	-0.2
west of Newport Blvd. SB Off Ramp	1.6	***1.0***	2.2	-0.2
east of Newport Blvd. SB Off Ramp	0.4	-0.2	0.7	0.0
west of Riverside Ave.	-0.2	-0.7	0.5	0.0
east of Riverside Ave.	0.1	-0.4	0.7	0.0
west of Tustin Ave.	0.3	-0.4	0.6	0.0
east of Tustin Ave.	0.4	-0.3	0.6	-0.1
west of Bay Shore Dr.\Dover Dr.	0.0	-0.1	0.9	0.0
east of Bay Shore Dr.\Dover Dr.	0.1	-0.1	0.7	0.0
west of Bayside Dr.	0.4	-0.1	0.8	0.0
east of Bayside Dr.	0.9	0.3	1.2	0.0
west of Marine Dr.\Jamboree Rd.	0.1	0.0	0.5	0.0
east of Marine Dr.\Jamboree Rd.	-0.6	-0.3	0.0	0.0
Via Lido				
east of Newport Blvd.	1.2	***1.0***	1.4	0.0
Orange Street				
north of West Coast Hwy.	0.7	-0.1	0.7	0.0
south of West Coast Hwy.	-0.9	-2.4	-1.4	0.0
Prospect Street				
north of West Coast Hwy.	-2.3	-1.3	-0.9	0.0
south of West Coast Hwy.	0.5	-1.3	1.3	0.0
Placentia Avenue				
north of Superior Ave.	0.7	0.3	-0.2	0.0
south of Superior Ave.	1.1	0.2	1.3	0.0
north of Hospital Rd.	0.7	0.8	1.8	0.0
Superior Avenue				
north of 17th St.	0.7	0.7	1.9	0.0
south of 17th St.	0.7	0.7	0.2	0.0
north of 16th St.\Industrial Way	0.7	0.7	0.9	0.0
south of 16th St.\Industrial Way	0.7	0.7	0.8	0.0
north of Placentia Ave.	1.6	0.7	0.1	0.0
south of Placentia Ave.	0.2	-0.4	-1.6	0.0
north of Hospital Rd.	-0.5	-0.2	-1.3	0.0
south of Hospital Rd.	-0.3	0.1	-0.4	0.0
north of West Coast Hwy.	-0.7	-1.2	-2.2	0.0

Table Continued on Next Page

Roadway Segment	Change in 2015 Over Existing	Change in 2015 Due to Project Alternative	Change in 2025 Over Existing	Change in 2025 Due to Project Alternative
Balboa Boulevard				
south of West Coast Hwy.	0.0	-1.1	-0.5	0.0
Hoag Drive				
south of Hospital Rd.	***4.0***	***3.5***	***5.8***	0.5
north of West Coast Hwy.	0.7	-2.3	***3.6***	-1.0
Harbor Boulevard				
west of Newport Blvd.	0.3	-0.1	1.9	0.0
Newport Boulevard				
north of 19th St.	0.3	0.0	0.8	0.0
south of 19th St.	0.3	0.0	0.7	0.0
north of Broadway	0.3	0.0	0.4	0.0
south of Broadway	0.3	0.0	0.4	0.0
north of Harbor Blvd.	0.3	0.0	0.6	0.0
south of Harbor Blvd.	0.3	0.0	0.8	0.0
north of 18th St./Rochester St.	0.3	0.0	0.7	0.0
south of 18th St./Rochester St.	0.3	-0.1	0.8	0.0
north of 17th St.	0.3	0.0	0.7	0.0
south of 17th St.	0.3	-0.1	0.7	0.0
north of 16th St.	0.3	-0.1	0.6	0.0
south of 16th St.	0.3	-0.1	0.9	0.0
north of Industrial Way	0.3	-0.1	1.0	0.0
south of Industrial Way	0.3	-0.1	0.8	0.0
north of Hospital Rd.	-0.1	-0.1	0.7	0.0
south of Hospital Rd.	-0.7	-0.7	0.1	-0.1
north of Via Lido	-1.1	-0.8	-0.4	0.0
south of Via Lido	-1.2	-0.7	-0.3	0.0
Riverside Avenue				
north of West Coast Hwy.	-1.2	-1.0	-0.2	0.0
Tustin Avenue				
north of West Coast Hwy.	***3.4***	***1.6***	***3.5***	0.0
Dover Drive				
north of West Coast Hwy.	-0.4	-0.3	-0.2	0.0
Bay Shore Drive				
south of West Coast Hwy.	-2.0	-2.1	-5.9	0.0
Bayside Drive				
north of East Coast Hwy.	***4.8***	***1.0***	***5.6***	0.0
south of East Coast Hwy.	0.4	0.3	1.2	0.0
Jamboree Road				
north of East Coast Hwy.	-0.4	-0.3	0.3	0.0
Marine Drive				
south of East Coast Hwy.	-0.8	-0.3	0.2	0.0

Table A-9
Future Traffic Noise Levels With Project Alternative

Roadway Segment	CNEL @ 100' †	Distance To CNEL Contour† (feet) 70 CNEL	65 CNEL	60 CNEL
19th Street				
west of Newport Ave.	60.4	RW	50	107
east of Newport Ave.	57.4	RW	31	67
Broadway				
east of Newport Blvd.	51.9	RW	RW	RW
18th Street				
west of Newport Blvd.	57.7	RW	32	70
Rochester Street				
east of Newport Blvd.	53.7	RW	RW	38
17th Street				
west of Superior Ave.	61.9	RW	62	134
east of Superior Ave.	64.4	42	91	195
west of Newport Blvd.	64.2	41	88	189
east of Newport Blvd.	64.0	40	86	185
16th Street				
west of Superior Ave.	56.3	RW	RW	56
west of Newport Ave.	54.0	RW	RW	40
east of Newport Ave.	56.0	RW	RW	54
Industrial Way				
east of Superior Ave.	55.4	RW	RW	49
west of Newport Blvd.	55.6	RW	RW	51
east of Newport Blvd.	54.2	RW	RW	41
Hospital Road				
east of Superior Ave.	58.9	RW	39	85
west of Hoag Dr.	58.1	RW	35	75
east of Hoag Dr.	59.9	RW	46	98
west of Newport Blvd.	59.9	RW	46	98
east of Newport Blvd.	57.4	RW	31	67

Table Continued on Next Page

Roadway Segment	CNEL @ 100' †	Distance To CNEL Contour† (feet) 70 CNEL	65 CNEL	60 CNEL
Pacific Coast Highway				
west of Orange St.	69.0	86	186	400
east of Orange St.	69.0	86	186	400
west of Prospect St.	69.0	86	186	400
east of Prospect St.	69.0	86	186	400
west of Balboa Blvd.\Superior Ave.	69.7	96	206	444
east of Balboa Blvd.\Superior Ave.	68.7	82	176	379
west of Hoag Dr.	68.7	82	176	379
east of Hoag Dr.	66.2	56	121	261
west of Newport Blvd. SB Off Ramp	66.2	56	121	261
east of Newport Blvd. SB Off Ramp	66.8	61	132	285
west of Riverside Ave.	67.1	64	139	299
east of Riverside Ave.	66.7	60	129	278
west of Tustin Ave.	66.3	57	123	264
east of Tustin Ave.	67.5	68	146	315
west of Bay Shore Dr.\Dover Dr.	68.2	76	165	355
east of Bay Shore Dr.\Dover Dr.	69.7	96	207	446
west of Bayside Dr.	69.5	92	198	427
east of Bayside Dr.	70.2	103	221	477
west of Marine Dr.\Jamboree Rd.	70.0	100	214	462
east of Marine Dr.\Jamboree Rd.	69.0	86	186	400
Via Lido				
east of Newport Blvd.	59.3	RW	41	89
Orange Street				
north of West Coast Hwy.	46.4	RW	RW	RW
south of West Coast Hwy.	47.0	RW	RW	RW
Prospect Street				
north of West Coast Hwy.	49.4	RW	RW	RW
south of West Coast Hwy.	46.2	RW	RW	RW
Placentia Avenue				
north of Superior Ave.	62.5	32	68	147
south of Superior Ave.	60.8	RW	52	112
north of Hospital Rd.	63.1	34	74	160
Superior Avenue				
north of 17th St.	60.0	RW	47	100
south of 17th St.	64.6	43	93	201
north of 16th St.\Industrial Way	64.0	40	86	186
south of 16th St.\Industrial Way	64.0	40	86	185
north of Placentia Ave.	64.0	40	85	184
south of Placentia Ave.	64.3	42	90	194
north of Hospital Rd.	64.4	42	91	195
south of Hospital Rd.	65.3	48	104	225
north of West Coast Hwy.	63.8	38	83	178

Table Continued on Next Page

Roadway Segment	CNEL @ 100' †	Distance To CNEL Contour† (feet) 70 CNEL	65 CNEL	60 CNEL
Balboa Boulevard				
south of West Coast Hwy.	60.1	RW	47	101
Hoag Drive				
south of Hospital Rd.	58.7	RW	38	82
north of West Coast Hwy.	55.5	RW	RW	50
Harbor Boulevard				
west of Newport Blvd.	62.9	34	73	157
Newport Boulevard				
north of 19th St.	68.9	84	182	392
south of 19th St.	67.6	69	149	320
north of Broadway	67.4	67	144	311
south of Broadway	67.3	66	143	307
north of Harbor Blvd.	67.4	67	145	312
south of Harbor Blvd.	68.3	77	165	356
north of 18th St./Rochester St.	68.2	76	164	352
south of 18th St./Rochester St.	67.9	73	157	339
north of 17th St.	67.8	71	153	329
south of 17th St.	66.3	56	122	262
north of 16th St.	66.0	54	116	250
south of 16th St.	68.9	85	182	392
north of Industrial Way	69.1	87	187	403
south of Industrial Way	68.8	83	178	383
north of Hospital Rd.	68.9	84	181	390
south of Hospital Rd.	68.9	85	183	395
north of Via Lido	65.2	48	103	222
south of Via Lido	64.1	41	88	189
Riverside Avenue				
north of West Coast Hwy.	58.1	RW	35	75
Tustin Avenue				
north of West Coast Hwy.	52.9	RW	RW	34
Dover Drive				
north of West Coast Hwy.	65.5	50	109	234
Bay Shore Drive				
south of West Coast Hwy.	50.3	RW	RW	RW
Bayside Drive				
north of East Coast Hwy.	54.2	RW	RW	41
south of East Coast Hwy.	57.9	RW	34	72
Jamboree Road				
north of East Coast Hwy.	69.2	89	192	413
Marine Drive				
south of East Coast Hwy.	61.1	RW	55	119

† From roadway centerline

RW – Contour does not extend beyond right-of-way

Traffic Noise Level CNEL Changes With Project vs. Project Alternative

Table A-10
Traffic Noise CNEL Level Changes With Project vs. Project Alternative (dB)

Roadway Segment	2015	2025
19th Street		
west of Newport Ave.	0.1	0.1
east of Newport Ave.	0.0	0.0
Broadway		
east of Newport Blvd.	0.0	0.0
18th Street		
west of Newport Blvd.	0.0	0.0
Rochester Street		
east of Newport Blvd.	0.0	0.0
17th Street		
west of Superior Ave.	0.0	0.0
east of Superior Ave.	0.0	0.0
west of Newport Blvd.	0.0	0.0
east of Newport Blvd.	0.0	0.0
16th Street		
west of Superior Ave.	0.0	0.0
west of Newport Ave.	0.0	0.0
east of Newport Ave.	0.0	0.0
Industrial Way		
east of Superior Ave.	0.0	0.0
west of Newport Blvd.	0.0	0.0
east of Newport Blvd.	0.0	0.0
Hospital Road		
east of Superior Ave.	-0.1	0.0
west of Hoag Dr.	-0.1	0.0
east of Hoag Dr.	0.0	0.0
west of Newport Blvd.	0.0	0.0
east of Newport Blvd.	-0.1	0.0

Table Continued on Next Page

Roadway Segment	2015	2025
Pacific Coast Highway		
west of Orange St.	0.0	0.0
east of Orange St.	0.0	0.0
west of Prospect St.	0.0	0.0
east of Prospect St.	0.0	0.0
west of Balboa Blvd.\Superior Ave.	0.0	0.0
east of Balboa Blvd.\Superior Ave.	0.1	0.1
west of Hoag Dr.	-0.2	-0.2
east of Hoag Dr.	0.2	0.4
west of Newport Blvd. SB Off Ramp	0.0	0.1
east of Newport Blvd. SB Off Ramp	0.0	0.0
west of Riverside Ave.	0.0	0.1
east of Riverside Ave.	0.1	0.1
west of Tustin Ave.	0.0	0.0
east of Tustin Ave.	0.0	0.0
west of Bay Shore Dr.\Dover Dr.	0.1	0.1
east of Bay Shore Dr.\Dover Dr.	0.0	0.1
west of Bayside Dr.	0.0	0.1
east of Bayside Dr.	0.0	0.0
west of Marine Dr.\Jamboree Rd.	0.1	0.1
east of Marine Dr.\Jamboree Rd.	0.0	0.0
Via Lido		
east of Newport Blvd.	0.0	0.0
Orange Street		
north of West Coast Hwy.	0.0	0.0
south of West Coast Hwy.	0.0	0.0
Prospect Street		
north of West Coast Hwy.	0.0	0.0
south of West Coast Hwy.	0.0	0.0
Placentia Avenue		
north of Superior Ave.	-0.1	0.0
south of Superior Ave.	-0.1	0.0
north of Hospital Rd.	0.0	0.0
Superior Avenue		
north of 17th St.	0.0	0.0
south of 17th St.	0.0	0.0
north of 16th St.\Industrial Way	0.0	0.0
south of 16th St.\Industrial Way	0.0	0.0
north of Placentia Ave.	0.0	0.0
south of Placentia Ave.	0.0	0.0
north of Hospital Rd.	0.0	0.0
south of Hospital Rd.	0.0	0.0
north of West Coast Hwy.	0.0	0.0

Table Continued on Next Page

Roadway Segment	2015	2025
Balboa Boulevard		
south of West Coast Hwy.	0.0	0.0
Hoag Drive		
south of Hospital Rd.	-0.2	0.0
north of West Coast Hwy.	-0.2	0.6
Harbor Boulevard		
west of Newport Blvd.	0.0	0.0
Newport Boulevard		
north of 19th St.	0.0	0.0
south of 19th St.	0.0	0.0
north of Broadway	0.0	0.0
south of Broadway	0.0	0.0
north of Harbor Blvd.	0.0	0.0
south of Harbor Blvd.	0.0	0.0
north of 18th St./Rochester St.	0.0	0.0
south of 18th St./Rochester St.	0.0	0.0
north of 17th St.	0.0	0.0
south of 17th St.	0.0	0.0
north of 16th St.	0.0	0.0
south of 16th St.	0.0	0.0
north of Industrial Way	0.0	0.0
south of Industrial Way	0.0	0.0
north of Hospital Rd.	0.0	0.0
south of Hospital Rd.	0.0	0.0
north of Via Lido	0.0	0.0
south of Via Lido	0.0	0.0
Riverside Avenue		
north of West Coast Hwy.	0.0	0.0
Tustin Avenue		
north of West Coast Hwy.	0.0	0.0
Dover Drive		
north of West Coast Hwy.	0.0	0.0
Bay Shore Drive		
south of West Coast Hwy.	0.0	0.0
Bayside Drive		
north of East Coast Hwy.	0.0	0.0
south of East Coast Hwy.	0.0	0.0
Jamboree Road		
north of East Coast Hwy.	0.0	0.0
Marine Drive		
south of East Coast Hwy.	0.0	0.0