



Noise Analysis for the
Centerpointe 78 Project,
City of Escondido,
California

Prepared for

City of Escondido
Planning Department
201 N. Broadway
Escondido, CA 92025
Contact: Mr. Jay Petrek

Prepared by

RECON Environmental, Inc.
1927 Fifth Avenue
San Diego, CA 92101-2358
P 619.308.9333 F 619.308.9334
RECON Number 7374
July 2, 2015

A handwritten signature in black ink that reads "Jessica Fleming".

Jessica Fleming Air/Noise/GHG Analyst

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Executive Summary

The Centerpointe 78 project (project) is located at 925 North Broadway in the city of Escondido, California. The 3.7-acre site is bounded by Lincoln Avenue to the north, North Broadway to the east, State Route 78 to the south and residences to the west. The project site is currently developed with a vacant approximately 30,000-square-foot auto dealership. The project proposes to redevelop the existing developed site into a market and a restaurant. The proposed market would be a specialty grocery store. The market building would be approximately 43,500 square feet and located in the western portion of the site. The 3,200-square-foot restaurant pad would be located in the eastern portion of the site.

This report discusses potential noise impacts from the construction and operation of the project. The potential for on- and off-site traffic noise impacts, noise impacts to adjacent receivers from future on-site sources, and noise impacts from construction activity was assessed in accordance with the City's noise standards established in the General Plan and Municipal Code.

Vehicle Traffic Noise

The project would increase traffic volumes on local roadways, and traffic noise level increases would be greatest nearest the project site, as this would represent the location with the greatest concentration of project-related traffic. As calculated in this analysis traffic noise increase adjacent to all roadway segments in the study area would be less than significant with the exception of Lincoln Avenue. The increases in traffic noise along Lincoln Avenue between Escondido Boulevard and North Broadway would exceed the exterior environmental noise impact standards contained in the Community Protection Element of the General Plan and, therefore, traffic noise impacts would be significant. Since the significant traffic noise impact would be to existing sensitive receptors adjacent to Lincoln Avenue, there is no feasible mitigation. Thus, traffic noise impacts along Lincoln Avenue between Escondido Boulevard and North Broadway would remain significant and unmitigated.

On-site Generated Noise

The primary noise sources on-site would include mechanical equipment used for heating, ventilation, and air conditioning (HVAC), trucks accessing the loading dock, a trash compactor, and the drive-through. Mechanical equipment would be located on the rooftop of the proposed market, the loading dock area and trash compactor would be located on the west side of the building, and a drive-through would be located at the southeastern corner of the project site. Residential uses are located west and northwest of the project site, and a school is located north of the project site. All of the adjacent properties are zoned R-2-12 (Light multiple residential). The applicable daytime and nighttime noise ordinance limits are 55 and 50 A-weighted average sound level [dB(A) L_{eq}], respectively. As calculated in this analysis, daytime noise levels generated by the project at the adjacent receivers would range up to 49 dB(A) L_{eq} .

at the property line of multi-family residences to the west, 46 dB(A) L_{eq} at the single-family residences use to the west, and 46 dB(A) L_{eq} at the school to the north. Nighttime noise levels generated by the project would range up to 47 dB(A) L_{eq} at the multi-family residences to the west, 44 dB(A) L_{eq} at the single-family residences use to the west, and 43 dB(A) L_{eq} at the school to the north. These noise levels do not exceed the City's Noise Ordinance limits and, therefore, on-site generated noise impacts would be less than significant.

Construction Noise

Grading would occur over the entire site and would not be situated at any one location for a long period of time. A majority of the construction activity would occur at the location of the two proposed buildings. The project would also include off-site roadway improvements to North Broadway along the project frontage.

Construction of the proposed market is projected to generate average noise levels of 72 dB(A) L_{eq} at the nearest property line to the west and 71 dB(A) L_{eq} at the nearest property line to the northwest. Construction of the proposed restaurant is projected to generate average noise levels of 72 dB(A) L_{eq} at the nearest property line to the north. Considering the similar distance to the property line to the north, roadway construction noise levels at the property line to the north would be similar to the restaurant construction noise levels of 72 dB(A) L_{eq} . Noise levels from construction would not exceed 75 dB(A) L_{eq} . Noise due to construction of the project would therefore not exceed the limits of the City's Noise Abatement and Control Ordinance. Additionally, construction of the project would only occur between the hours of 7:00 A.M. and 6:00 P.M. on Monday through Friday and between the hours of 9:00 A.M. and 5:00 P.M. on Saturdays, and thus would comply with local standards and regulations. Grading would be similarly limited, except on Saturdays when it would be limited to 10:00 A.M and 5:00 P.M. Construction noise impacts would be less than significant.

1.0 Introduction

1.1 Project Description

The Centerpointe 78 project (project) is located at 925 North Broadway in the City of Escondido, California. Figure 1 shows the regional location of the project. The 3.7-acre site is bound by Lincoln Avenue to the north, North Broadway to the east, State Route 78 to the south and residences to the west. Figure 2 shows an aerial photograph of the project and vicinity. The project site is currently developed with a vacant approximately 30,000-square-foot auto dealership, which has relocated across State Route 78 to the southeast. The project proposes to redevelop the existing developed site into a market and a restaurant. The project also includes parking, access, and utility improvements. Figure 3 shows the proposed site plan.

The proposed market would be a specialty grocery store. The market building would be approximately 43,500 square feet and located in the western portion of the site. The building would be approximately 230 feet wide east to west and 204 feet wide north to south, although the southwestern corner would be recessed to provide the loading dock area. The building would be approximately 30 feet tall, and the two main building entrances would be located on the eastern side of the building, facing North Broadway. The roof for the structure would be flat and recessed below the building's parapet walls to provide adequate visual screening of rooftop equipment. The loading dock would be located on the west side of the building and would include two large rollup doors as well as two other rear entrances on the west side of the building. The dock area would also include a trash compactor, cardboard bailer, and recycling and trash bin area. As shown on the site plan, the project would also include typical rooftop equipment for heating, air conditioning, and ventilation that would be recessed below the wall parapet to provide adequate screening from off-site vantage points. The project would retain the existing 6-foot concrete masonry unit wall located on the western property boundary.

The 3,200-square-foot restaurant pad would be located in the eastern portion of the site. No building plans proposed at this time. The proposed quick-service restaurant (e.g., taco shop or coffee shop) would include a one-way, 12-foot-wide drive-through wrapping around the southern and eastern side of the pad. The project would also include a total of 199 parking spaces.

1.2 Fundamentals of Noise

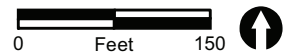
The impact of noise is not a function of loudness alone. The time of day when noise occurs and the duration of the noise are also important. In addition, most noise that lasts for more than a few seconds is variable in its intensity. Consequently, a variety of noise descriptors have been developed. The noise descriptors used for this study are the one-hour equivalent noise level (L_{eq}) and the CNEL.



 Project Location

FIGURE 1

Regional Location





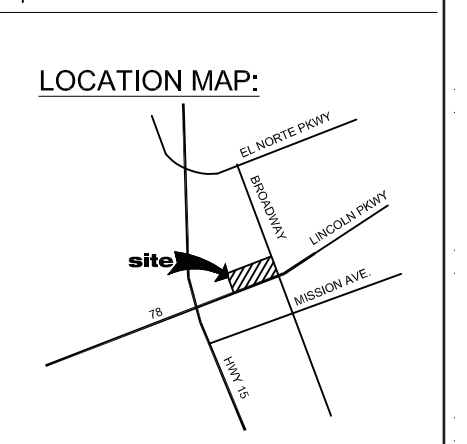
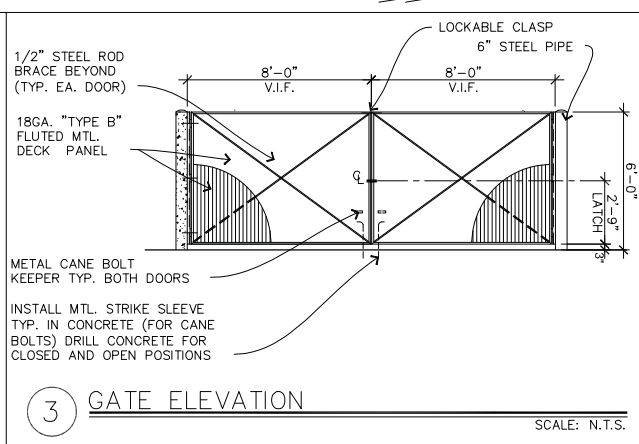
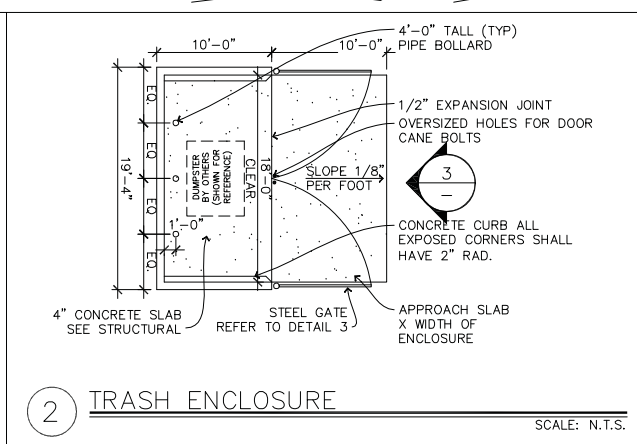
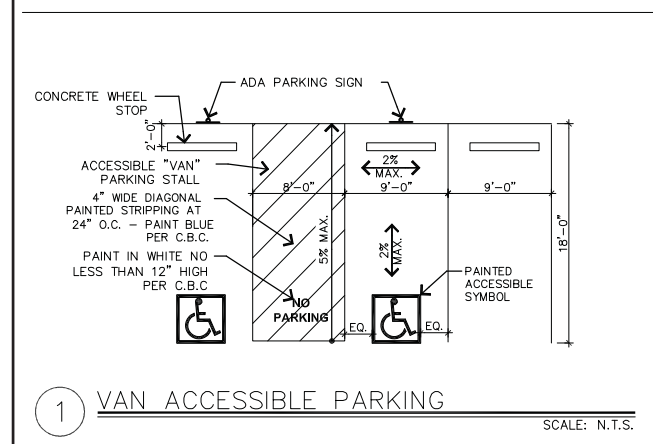
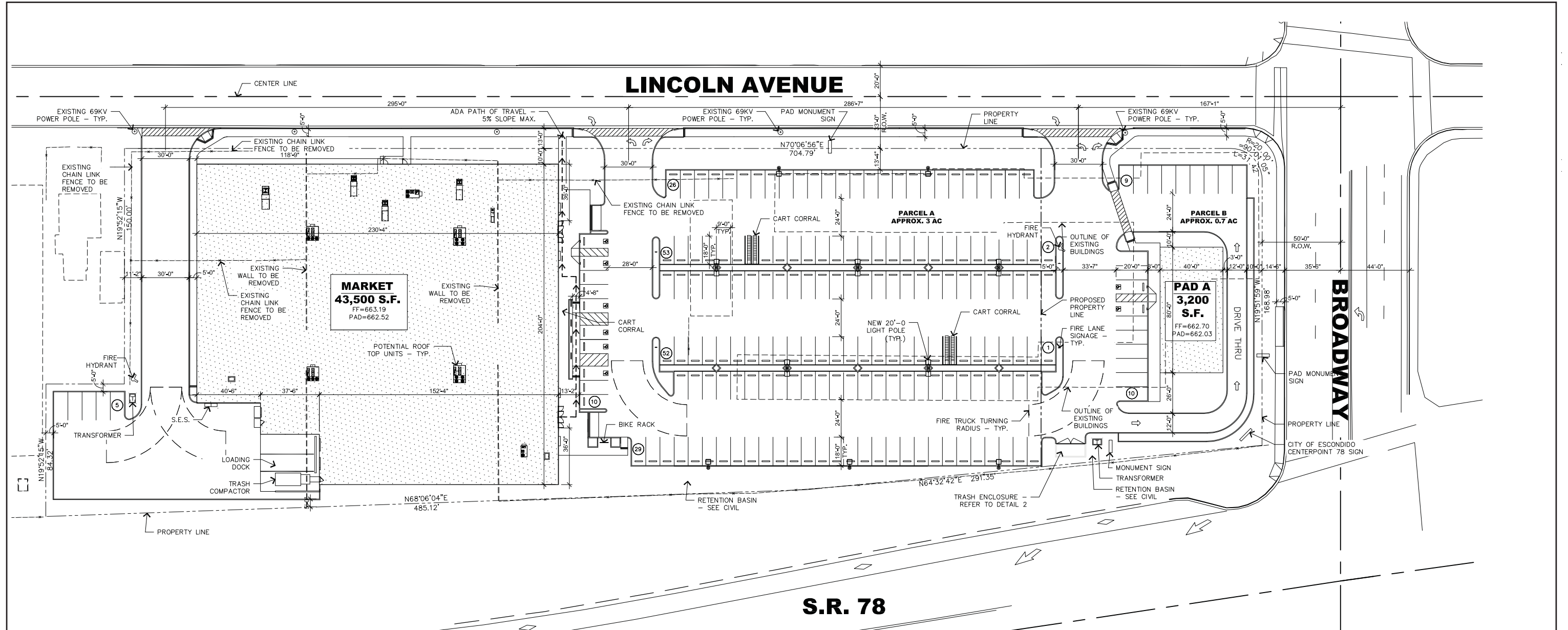
-  Project Boundary
-  Measurement Locations

FIGURE 2

Aerial Photograph of Project Vicinity and Noise Measurement Locations

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The L_{eq} is the average A-weighted decibel [dB(A)] sound level over a one-hour period. The CNEL is a 24-hour A-weighted average sound level [dB(A) L_{eq}] from midnight to midnight obtained after the addition of 5 decibels (dB) to sound levels occurring between 7:00 P.M. and 10:00 P.M., and 10 dB to sound levels occurring between 10:00 P.M. and 7:00 A.M. A-weighting is a frequency correction that often correlates well with the subjective response of humans to noise. Adding 5 dB and 10 dB to the evening and nighttime hours, respectively, accounts for the added sensitivity of humans to noise during these time periods.

Sound from a small, localized source (approximating a “point” source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level decreases or drops off at a rate of 6 dB(A) for each doubling of the distance.

However, traffic noise is not a single, stationary point source of sound. The movement of vehicles makes the source of the sound appear to emanate from a line (line source) rather than a point when viewed over some time interval. The drop-off rate for a line source is 3 dB(A) for each doubling of distance.

Change in noise levels is perceived as follows: 3 dB(A) barely perceptible, 5 dB(A) readily perceptible, and 10 dB(A) perceived as a doubling or halving of noise (California Department of Transportation [Caltrans] 2013).

2.0 Applicable Standards

2.1 General Plan

The Community Protection Element of the City of Escondido General Plan establishes noise and land use compatibility standards and outlines goals and policies to achieve these standards. Table 1 summarizes the land use compatibility standards.

The Community Protection Element also provides standards for projects that could significantly alter existing noise levels. It states that “noise impacts of proposed projects on existing land uses should be evaluated in terms of potential for adverse community response based on a significant increase in existing noise levels. For example, if an area is currently below the maximum normally acceptable noise level, an increase in noise up to the maximum allowable level should not necessarily be allowed. Projects increasing noise levels by 5 dB or greater should be considered as generating a significant impact and should require mitigation.” Table 2 summarizes the exterior incremental environmental noise impact standards for noise-sensitive uses.

**TABLE 1
LAND USE COMPATIBILITY STANDARDS**

Land Use Category	CNEL							
	55	60	65	70	75	80	85	
Residential – Single Family, Duplex, Mobile Home	Light	Light	Light	Light	Light	Light	Light	
Residential – Multi-Family, Residential Mixed Use	Light	Light	Light	Light	Light	Light	Light	
Transient Lodging, Motels, Hotels	Light	Light	Light	Light	Light	Light	Light	
Schools, Libraries, Churches, Hospitals, Nursing Home	Light	Light	Light	Light	Light	Light	Light	
Auditoriums, Concert Halls, Amphitheaters	Light	Light	Light	Light	Light	Light	Light	
Sports Arena, Outdoor Spectator Sports	Light	Light	Light	Light	Light	Light	Light	
Playgrounds, Parks	Light	Light	Light	Light	Light	Light	Light	
Golf Courses, Riding Stables, Water Recreation, Cemeteries	Light	Light	Light	Light	Light	Light	Light	
Office Buildings, Business Commercial, Professional	Light	Light	Light	Light	Light	Light	Light	
Industrial, Manufacturing, Utilities, Agriculture	Light	Light	Light	Light	Light	Light	Light	

	Normally Acceptable	Specified land use is satisfactory, based upon the assumption that buildings involved are of normal conventional construction, without any special noise insulation requirements.
	Conditionally Acceptable	New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will usually suffice.
	Normally Unacceptable	New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made with noise insulation features included in the design.
	Clearly Unacceptable	New construction or development should generally not be undertaken.

SOURCE: City of Escondido 2012

TABLE 2
EXTERIOR INCREMENTAL ENVIRONMENTAL NOISE IMPACT STANDARDS FOR NOISE-SENSITIVE USES

Residences and Buildings where People Normally Sleep ^a		Institutional Land Uses with Primarily Daytime and Evening Uses ^b	
Existing L_{dn}	Allowable Noise Increment	Existing Peak Hour L_{eq}	Allowable Noise Increment
45	8	45	12
50	5	50	9
55	3	55	6
60	2	60	5
65	1	65	3
70	1	70	3
75	0	75	1
80	0	80	0

Noise levels are measured at the property line of the noise-sensitive use.

^aThis category includes homes, hospitals, and hotels where a nighttime sensitivity to noise is assumed to be of utmost importance.

^bThis category includes schools, libraries, theaters, and churches where it is important to avoid interference with such activities as speech, meditation, and concentration on reading material.

SOURCE: Federal Transit Administration 2006; City of Escondido 2012

2.2 Municipal Code

2.2.1 Chapter 17, Article 12, Noise Abatement and Control (Noise Ordinance)

The Noise Ordinance establishes prohibitions for disturbing, excessive, or offensive noise, and provisions such as sound level limits for the purpose of securing and promoting the public health, comfort, safety, peace, and quiet for its citizens. Table 3, City of Escondido Exterior Sound Limit Levels, shows the allowable noise levels at any point on or beyond the boundaries of the property on which the sound is produced, and corresponding times of day for each zoning designation. The noise standards apply to each property or portion of property substantially used for a particular type of land use reasonably similar to the land use types shown in Table 3, City of Escondido Exterior Sound Limit Levels. Where two or more dissimilar land uses occur on a single property, the more restrictive noise limits apply.

Environmental noise is measured by the L_{eq} for the hours as specified in Table 3. If the noise is continuous, the L_{eq} for any hour will be represented by any lesser time period within that hour. If the noise is intermittent, the L_{eq} for any hour may be represented by a time period typical of the operating cycle, but the measurement period must be 15 minutes or longer. If the measured ambient level exceeds the permissible noise level, the allowable noise exposure standard is the ambient noise level. Noise restrictions are listed in Sections 17-230 through 17-241 of the Noise Ordinance, such as specific regulations pertaining to motor vehicles and burglar alarms. Additional sections of the Noise Ordinance applicable to this analysis are listed below.

**TABLE 3
CITY OF ESCONDIDO EXTERIOR SOUND LIMIT LEVELS**

Zone	Time	Applicable Limit 1-hour Average Sound Level (Decibels)
Residential zones	7:00 A.M. to 10:00 P.M.	50
	10:00 P.M. to 7:00 A.M.	45
Multi-residential zones	7:00 A.M. to 10:00 P.M.	55
	10:00 P.M. to 7:00 A.M.	50
Commercial zones	7:00 A.M. to 10:00 P.M.	60
	10:00 P.M. to 7:00 A.M.	55
Light industrial/Industrial park zones	Anytime	70
General Industrial zones	Anytime	75

SOURCE: City of Escondido Municipal Code

2.2.2 Chapter 17, Article 12, Construction Equipment and Grading

Sections 17-234 and 17-238 provide regulations for construction equipment and grading activities.

Section 17-234

Except for emergency work, the following applies to all construction equipment operating in the City:

- a) It shall be unlawful for any person, including the City of Escondido, to operate construction equipment at any construction site, except on Monday through Friday during a week between the hours of 7:00 A.M. and 6:00 P.M. and on Saturdays between the hours of 9:00 A.M. and 5:00 P.M., and provided that the operation of such construction equipment complies with the requirements of subsection (c) of this section.
- b) It shall be unlawful for any person, including the City of Escondido, to operate construction equipment at any construction site on Sundays and on days designated by the President, Governor, or City Council as public holidays.
- c) No construction equipment or combination of equipment, regardless of age or date of acquisition, shall be operated so as to cause noise in excess of a one-hour average sound level limit of 75 dB at any time, unless a variance has been obtained in advance from the City Manager.

Section 17-238

- a) It shall be unlawful for any person, including the City of Escondido, to do any authorized grading at any construction site, except on Mondays through Fridays during a week between the hours of 7:00 A.M. and 6:00 P.M. and, provided a variance has been obtained in advance from the City Manager, on Saturdays from 10:00 A.M. to 5:00 P.M.
- b) For the purpose of this section, “grading” shall include, but not be limited to, compacting, drilling, rock crushing or splitting, bulldozing, clearing, dredging, digging, filling and blasting.
- c) In addition, any equipment used for grading shall not be operated so as to cause noise in excess of a one-hour sound level limit of 75 dB at any time when measured at or within the property lines of any property which is developed and used in whole or in part for residential purposes, unless a variance has been obtained in advance from the City Manager.

2.2.3 Chapter 33, Article 47, Environmental Quality Regulations

The Environmental Quality Regulations (EQRs) implement the California Environmental Quality Act (CEQA) and the CEQA Guidelines (guidelines) by applying the provisions and procedures contained in CEQA to development projects proposed within the City of Escondido. Section (a)(2) pertains to noise impacts, specifically noise impacts related to the widening of Mobility and Infrastructure Element streets. According to this section, the following incremental noise increases are generally not considered significant:

- a) Short- or long-term increases, regardless of the extent, that do not result in noise increases in excess of general plan standards,
- b) Short- or long-term increases that result in a three (3) dB(A) or less incremental increase in noise beyond the general plan’s noise standards.

3.0 Existing Conditions

Existing noise levels at the project site were measured on September 16, 2014, using a Larson-Davis Model LxT Type 1 Integrating Sound Level Meter, serial number 3828. The following parameters were used:

Filter:	A-weighted
Response:	Slow
Time History Period:	5 seconds

The meter was calibrated before measurements. Three ground-floor measurements (5 feet above the ground) were taken.

As shown in Figure 2, the project site is currently developed with a vacant approximately 30,000-square-foot auto dealership and paved lots. Noise measurements were taken to obtain existing ambient noise levels. The weather was hot and clear with a slight breeze. A total of three 15-minute measurements were made on the project site, as described below. The primary source of on-site noise was due to traffic on State Route 78 (SR-78) and North Broadway. The locations of the measurements are shown on Figure 2, and the noise measurement data are contained in Attachment 1.

Measurement 1 was located at the northern project boundary adjacent to Lincoln Avenue. The main noise source at this location was vehicle traffic on SR-78. There was little traffic on Lincoln Avenue. Traffic volumes were counted on Lincoln Avenue, and the results are shown in Table 4. The average measured noise level during Measurement 1 was 57.0 dB(A) L_{eq} .

Measurement 2 was located at the northeastern corner of the project site adjacent to North Broadway and Lincoln Avenue, and across the street from Lincoln Elementary School. The main noise source at this location was vehicle traffic on North Broadway and SR-78. There were also several cars on Lincoln Avenue that would idle at the stop sign near the measurement location while waiting to turn on North Broadway. During the measurement period, traffic would queue on North Broadway at the stop light at SR-78. Traffic volumes on North Broadway were counted, and the results are shown in Table 4. The average measured noise level during Measurement 2 was 66.7 dB(A) L_{eq} .

**TABLE 4
15-MINUTE TRAFFIC COUNTS**

Measurement	Roadway	Direction	Autos	Medium Trucks	Heavy Trucks	Buses	Motor-cycles
1	Lincoln Avenue	Eastbound	5	0	0	0	0
		Westbound	11	0	0	0	0
2	North Broadway	Southbound	133	1	0	1	0
		Northbound	141	1	1	1	2

Measurement 3 was located at the southeastern portion of the project site adjacent to SR-78. The main source of noise at this location was vehicle traffic on SR-78 and traffic idling and passing through the intersection of SR-78 and North Broadway. Traffic volumes on SR-78 were not counted during the measurement period because the volume of traffic was too high to be counted manually. The average measured noise level during Measurement 3 was 69.8 dB(A) L_{eq} .

4.0 Analysis Methodology

4.1 Vehicle Traffic Noise

Traffic noise occurs adjacent to every roadway and is directly related to the traffic volume, speed, and mix of vehicles. The main source of traffic noise in the immediate vicinity of the project site is SR-78, North Broadway, and Lincoln Avenue.

Existing and future (Year 2035) traffic volumes with and without the project on study area roadways were obtained from the project traffic impact analysis prepared for the project (RK Engineering Group, Inc. 2015). The Federal Highway Administration (FHWA) Traffic Noise Model algorithms were used to calculate noise levels for each roadway. The FHWA model takes into account traffic mix, speed, and volume; roadway gradient; relative distances between sources, barriers, and sensitive receptors; and shielding provided by intervening terrain or structures. The analysis of the noise environment is based on a worst-case condition ; topography very flat with no intervening terrain between sensitive land uses and roadways. Because there are no obstructions, predicted noise levels are higher than would actually occur. In actuality, buildings and other obstructions along the roadways would shield distant receivers from the traffic noise.

The vehicle classification mix of 97.5 percent automobiles, 0.7 percent medium trucks, 0.4 percent heavy trucks, 0.7 percent buses, and 0.7 percent motorcycles obtained from field traffic counts was modeled. Vehicle speeds were modeled as the posted speed limit. Modeled traffic parameters are summarized in Table 5.

**TABLE 5
MODELED TRAFFIC PARAMETERS**

Roadway	From	To	Speed (mph)	Existing ADT	Existing + Project ADT	Future ADT	Future + Project ADT
Centre City Parkway	Country Club	Iris Lane	55	11,964	12,500	15,464	16,000
	Iris Lane	El Norte Parkway	55	14,464	15,065	21,199	21,800
Escondido Boulevard	El Norte Parkway	Decatur Way	35	7,400	8,935	12,565	14,100
	Decatur Way	Lincoln Avenue	35	9,618	11,180	11,838	13,400
	Lincoln Avenue	Mission Avenue	35	10,424	12,752	13,872	16,200
	Mission Avenue	Washington Avenue	35	15,302	15,947	16,832	17,477
North Broadway	El Norte Parkway	Lincoln Avenue	35	17,534	18,290	22,244	23,000
	Lincoln Avenue	SR-78/Lincoln Parkway	35	20,384	23,478	20,606	23,700
Fig Street	Lincoln Avenue	Mission Avenue	35	8,980	9,268	9,812	10,100
El Norte Parkway	Morning View Drive	Centre City Parkway	35	21,929	22,745	28,184	29,000
	Centre City Parkway	Escondido Boulevard	35	25,420	26,837	25,683	27,100
Lincoln Avenue	Escondido Boulevard	North Broadway	25	2,556	7,094	3,262	7,800
	North Broadway	Garrick Way	25	2,476	3,164	4,012	4,700
Lincoln Parkway/ Lincoln Avenue	North Broadway	Garrick Way	35	31,930	32,619	36,811	37,500
	Garrick Way	Fig Street	35	31,589	32,966	39,023	40,400
	Fig Street	Ash Street	35	24,699	25,608	37,691	38,600
	Ash Street	Harding Street	35	15,314	15,844	29,570	30,100
	Harding Street	Rose Street	35	12,591	12,961	23,430	23,800
Mission Avenue	Rose Street	Midway Drive	35	9,568	9,768	17,400	17,600
	Quince Street	Centre City Parkway	35	20,512	21,201	33,211	33,900
	Centre City Parkway	Escondido Boulevard	35	19,333	20,452	29,281	30,400

4.2 On-site Generated Noise

The primary noise sources on-site would be mechanical equipment, the loading dock, trash compactor, and the drive-through. Noise levels due to on-site sources were modeled using SoundPLAN. The SoundPLAN program models noise propagation following the International Organization for Standardization method *ISO 9613-2 – Acoustics, Attenuation of Sound during Propagation Outdoors*. The model calculates noise levels at selected receiver locations using input parameter estimates such as total noise generated by each noise source, distances between sources, barriers, and receivers; and shielding provided by intervening terrain, barriers, and structures.

4.2.1 HVAC Parameters

The HVAC system for the store would consist of rooftop air conditioning systems. The equipment would be shielded from view by building parapets that extend six inches above the top of the mechanical equipment.

It is not known at this time which manufacturer, brand, or model of unit or units will be selected for use in the project. HVAC units would be located on the rooftop of the building. Typically, a capacity of 1-ton per 500 square feet would be required. With this assumption, the 43,500-square-foot market would require five 20-ton units. The proposed site plan indicates six locations for potential rooftop units (see Figure 4). As a conservative analysis, a 20-ton unit was modeled at each of these six locations.

Based on review of various manufacturer specifications for example units, a representative noise level for a 20-ton unit would be a sound power level of 92 dB. This is approximately equal to a sound pressure level of 83 dB(A) L_{eq} at 3 feet. For a 20-ton unit, the representative noise level of 83 dB(A) L_{eq} at 3 feet per unit was used for this analysis. For the daytime hours, all units were modeled at full capacity. For the nighttime hours, it was assumed that the units would operate 50 percent of the time.

4.2.2 Loading Dock

In order to evaluate the truck delivery noise impacts, the analysis utilized reference noise level measurements taken at an Albertson's Shopping Center in San Diego, California in 2011. The measurements include truck drive-by noise, truck loading/unloading, and truck engine noise. The unmitigated exterior noise levels for truck drive-by noise and truck engine noise were measured at 66.5 dB(A) L_{eq} at a distance of 25 feet from the loading dock.



- Project Boundary
- Drive-through Speaker
- HVAC
- Trash Compactor
- Modeled Receivers
- Delivery Truck
- Six-foot Wall
- Proposed Buildings



FIGURE 4

On-site Noise Sources and Adjacent Modeled Receivers

The on-site maneuvering associated with the delivery trucks consists of the truck entering the site and traveling toward and backing into the loading dock. There are two loading docks proposed at the market 130 feet from the residential property line to the west. A truck would take approximately 5 minutes to drive in the site and position itself into a bay, 30 to 45 minutes to be unloaded or loaded, and another 5 minutes to exit the bay secure doors, complete necessary paperwork, and drive out of the site. This equates to 40 to 55 minutes it would take for one truck to complete a delivery or pickup, therefore only one truck at the most could deliver to this facility in one hour. During the loading/unloading of the truck the engine can only idle for 5 minutes in compliance with State air quality requirements. To be conservative, it was assumed the truck engine could be operating for 15 minutes of the total time required during the delivery process (5 minutes at arrival, 5 minutes of idle and 5 minutes at departure).

Noise levels drop 3 decibels each time the duration of the source is reduced in half. Therefore, hourly truck noise level over a 15-minute period would be reduced 6 decibels to 60.5 dB(A) L_{eq} at a distance of 25 feet based on the limited time of operation. This noise level was modeled as a line source as shown in Figure 4. It was assumed that deliveries would occur during daytime and nighttime hours.

4.2.3 Trash Compactor

A trash compactor would be located on the west side of the market adjacent to the proposed loading docks as shown in Figure 4. The trash compactor would be located approximately 140 feet from the nearest residential property to the south. Measurements taken at the Sonora Walmart found that a trash compactor produced a noise level of 70.4 dB(A) L_{eq} at 10 feet and a 85.0 dB(A) L_{max} at 10 feet (Michael Brandman Associates 2013). A trash compactor cycle lasted for approximately one minute, and may operate as many as three times per hour. The trash compactor noise source was modeled at 4 feet above ground level, and was assumed to operate 5 percent per hour, based on a noise level calibrated to the measured 70.4 dB(A) L_{eq} at 10 feet.

4.2.4 Drive-Through

A restaurant pad would be located in the eastern portion of the site. No building plans proposed at this time, however, the restaurant would include a one-way, 12-foot-wide drive-through wrapping around the southern and eastern side of the pad. The drive-thru speaker was modeled as a point source 4 feet high, calibrated to 61.2 dB(A) L_{eq} at 10 feet, and operational 50 percent of the daytime and 20 percent of the nighttime, based on measurements and observations taken at a McDonalds restaurant (Michael Brandman Associates 2013). The modeled speaker location is shown in Figure 4.

4.3 Construction Noise

Project construction noise would be generated by diesel engine-driven construction equipment used for site preparation and grading, removal of existing structures and pavement, loading, unloading, and placing materials and paving. Diesel engine-driven trucks also would bring materials to the site and remove the soils from excavation.

Construction equipment with a diesel engine typically generates maximum noise levels from 80 to 90 dB(A) L_{eq} at a distance of 50 feet (Federal Transit Administration 2006). Table 6 summarizes typical construction equipment noise levels.

During excavating, grading, and paving operations, equipment moves to different locations and goes through varying load cycles, and there are breaks for the operators and for non-equipment tasks, such as measurement. Although maximum noise levels may be 85 to 90 dB(A) at a distance of 50 feet during most construction activities, hourly average noise levels from the grading phase of construction would be 82 dB(A) L_{eq} at 50 feet from the center of construction activity when assessing the loudest pieces of equipment working simultaneously.

**TABLE 6
TYPICAL CONSTRUCTION EQUIPMENT NOISE LEVELS**

Equipment	Noise Level at 50 Feet [dB(A) L_{eq}]
Air Compressor	81
Backhoe	80
Compactor	82
Concrete Mixer	85
Crane, Derrick	88
Dozer	85
Grader	85
Jack Hammer	88
Loader	85
Paver	89
Pump	76
Roller	74
Scraper	89
Truck	88

SOURCE: Federal Transit Administration 2006.

5.0 Future Acoustical Environment and Impacts

5.1 Vehicle Traffic Noise

The project would increase traffic volumes on local roadways and traffic. Noise level increases would be greatest nearest the project site, as this location would represent the greatest concentration of project-related traffic. The project would not substantially alter the vehicle classifications mix on local or regional roadways, nor would the project alter the speed on an existing roadway or create a new roadway; thus, the primary factor affecting off-site noise levels would be increased traffic volumes. The Federal Highway Administration (FHWA) Traffic Noise Model algorithms were used to calculate distances to noise contours for each roadway. The FHWA model takes into account traffic mix, speed, and volume. Direct impacts were determined by comparing existing average daily traffic volumes with the “existing plus project” condition at full build-out. Cumulative impacts were determined by comparing the “future with project” and existing “no project” conditions and determining the project’s contribution to the future cumulative noise levels.

5.1.1 Direct Off-site Traffic Noise

Table 7 summarizes the existing and the existing plus traffic noise levels along roadway segments in the project area. Roadway noise is measured in CNEL at 50 feet from the roadway centerline. The exterior incremental environmental noise impact standards for noise sensitive uses are shown in Table 2.

As shown in Table 7 the existing traffic noise level at 50 feet from the centerline of the segment of Lincoln Avenue between Escondido Boulevard and North Broadway is 56 CNEL and the project would result in a noise increase of 5 dB. There are residential uses and a school adjacent to this segment of Lincoln Avenue. This Lincoln Avenue increase in traffic noise would exceed the standards shown in Table 2, and impacts would be significant. Traffic noise increase adjacent to all other roadway segments in the study area would be less than significant.

**TABLE 7
EXISTING AND EXISTING PLUS PROJECT TRAFFIC NOISE LEVELS
(CNEL)**

Roadway	From	To	Existing Noise Level	Existing + Project Noise Level	Increase
Centre City Parkway	Country Club	Iris Lane	72	72	0
	Iris Lane	El Norte Parkway	72	73	1
Escondido Boulevard	El Norte Parkway	Decatur Way	64	65	1
	Decatur Way	Lincoln Avenue	65	66	1
	Lincoln Avenue	Mission Avenue	66	67	1
	Mission Avenue	Washington Avenue	67	68	1
North Broadway	El Norte Parkway	Lincoln Avenue	68	68	0
	Lincoln Avenue	SR-78/Lincoln Parkway	65	65	0
Fig Street	Lincoln Avenue	Mission Avenue	69	69	0
El Norte Parkway	Morning View Drive	Centre City Parkway	69	69	0
	Centre City Parkway	Escondido Boulevard	70	70	0
Lincoln Avenue	Escondido Boulevard	North Broadway	56	61	5
	North Broadway	Garrick Way	56	57	1
Lincoln Parkway/ Lincoln Avenue	North Broadway	Garrick Way	71	71	0
	Garrick Way	Fig Street	71	71	0
	Fig Street	Ash Street	69	70	1
	Ash Street	Harding Street	67	68	1
	Harding Street	Rose Street	67	67	0
	Rose Street	Midway Drive	65	65	0
Mission Avenue	Quince Street	Centre City Parkway	69	69	0
	Centre City Parkway	Escondido Boulevard	68	69	1

SOURCE: Attachment 2

5.1.2. Cumulative Off-site Traffic Noise

Similar to direct traffic noise impacts, a cumulative traffic noise impact occurs when a substantial noise level increase occurs. The project’s contribution to the future noise level is determined by comparing the future condition with the no project conditions. Project-related noise increases less than 2 dB are typically considered cumulatively less than significant.

Table 8 summarizes the future (Year 2035) and the future plus project traffic noise levels along roadway segments in the project area. Roadway noise is measured in CNEL at 50 feet from the roadway centerline.

As shown in Table 8, the future (without project) traffic noise level at 50 feet from the centerline of the segment of Lincoln Avenue between Escondido Boulevard and North Broadway is 57 CNEL and the project would result in a traffic noise increase of 4 dB. As discussed previously, there are residential uses and a school adjacent to this segment of Lincoln Avenue. This increase in noise would exceed the standards shown in Table 2, and traffic impacts would be cumulatively significant. Traffic noise increase adjacent to all other roadway segments in the study area would be less than significant.

**TABLE 8
FUTURE AND FUTURE PLUS PROJECT TRAFFIC NOISE LEVELS
(CNEL)**

Roadway	From	To	Existing Noise Level	Future Noise Level	Increase over Existing	Future + Project Noise Level	Project-Related Increase over Existing
Centre City Parkway	Country Club	Iris Lane	72	73	1	73	0
	Iris Lane	El Norte Parkway	72	74	2	74	0
Escondido Boulevard	El Norte Parkway	Decatur Way	64	67	3	67	0
	Decatur Way	Lincoln Avenue	65	66	1	67	1
	Lincoln Avenue	Mission Avenue	66	67	1	68	1
	Mission Avenue	Washington Avenue	67	68	1	68	0
North Broadway	El Norte Parkway	Lincoln Avenue	68	69	1	69	0
	Lincoln Avenue	SR-78/Lincoln Parkway	65	68	3	68	0
Fig Street	Lincoln Avenue	Mission Avenue	69	71	2	71	0
El Norte Parkway	Morning View Drive	Centre City Parkway	69	70	1	70	0
	Centre City Parkway	Escondido Boulevard	70	70	0	70	0
Lincoln Avenue	Escondido Boulevard	North Broadway	56	57	1	61	4
	North Broadway	Garrick Way	56	58	2	59	1
Lincoln Parkway/ Lincoln Avenue	North Broadway	Garrick Way	71	71	0	71	0
	Garrick Way	Fig Street	71	71	0	72	1
	Fig Street	Ash Street	69	71	2	71	0
	Ash Street	Harding Street	67	70	3	70	0
	Harding Street	Rose Street	67	69	2	69	0
	Rose Street	Midway Drive	65	68	3	68	0
Mission Avenue	Quince Street	Centre City Parkway	69	71	2	71	0
	Centre City Parkway	Escondido Boulevard	68	70	2	70	0

SOURCE: Attachment 2

5.2 On-site Generated Noise

The primary noise sources on-site would be HVAC equipment, the loading dock, trash compactor, and the drive-through. As shown in Figure 2, residential uses are located west and north of the project site, and a school is located north of the project site. Using the on-site noise source parameters discussed in Section 4.2, On-site Generated Noise, noise levels were modeled at a series of 18 receivers located at the adjacent property lines. Noise levels were modeled at first- and second-floor receivers for the multi-family residences to the west, and at first-floor receivers for the single-family residence to the west and the school to the north. Modeled noise levels took into account proposed grading and topography, existing and proposed buildings, and the 6-foot masonry wall located at the western property boundary that currently exists and is required as a part of the proposed project to screen commercial from residential uses.

Modeled receivers and the locations of the modeled on-site noise sources are shown in Figure 4. Future projected noise levels are summarized in Table 9.

**TABLE 9
ON-SITE GENERATED NOISE LEVELS**

Receiver	Zoning	Daytime Noise Level [dB(A) L _{eq}]			Nighttime Noise Level [dB(A) L _{eq}]		
		First-Floor	Second-Floor	Noise Ordinance Limit	First-Floor	Second-Floor	Noise Ordinance Limit
1	R-2-12	44	47	55	42	45	50
2	R-2-12	46	49	55	44	47	50
3	R-2-12	46	49	55	45	47	50
4	R-2-12	46	49	55	45	47	50
5	R-2-12	44	49	55	43	47	50
6	R-2-12	41	48	55	38	46	50
7	R-2-12	46	--	55	44	--	50
8	R-2-12	45	--	55	44	--	50
9	R-2-12	46	--	55	44	--	50
10	R-2-12	45	--	55	44	--	50
11	R-2-12	46	--	55	44	--	50
12	R-2-12	45	--	55	43	--	50
13	R-2-12	46	--	55	43	--	50
14	R-2-12	46	--	55	43	--	50
15	R-2-12	45	--	55	42	--	50
16	R-2-12	45	--	55	42	--	50
17	R-2-12	43	--	55	40	--	50
18	R-2-12	42	--	55	39	--	50

SOURCE: Attachment 3

The adjacent properties are zoned R-2-12, light multiple-family, and the applicable daytime and nighttime noise ordinance limits are 55 and 50 dB(A) L_{eq}, respectively. As shown, daytime noise levels would range up to 49 dB(A) L_{eq} at the multi-family residences to the west, 46 dB(A) L_{eq} at the single-family use to the west, and 46 dB(A) L_{eq} at the school to the north. Nighttime noise levels would range up to 47 dB(A) L_{eq} at the multi-family residences to the west, 44 dB(A) L_{eq} at the single-family residence to the west, and 43 dB(A) L_{eq} at the school to the north. These noise levels do not exceed the City's Noise Ordinance limits. Complete modeled results are contained in Attachment 3.

5.3 Construction Noise

Noise associated with the demolition, grading, building, and paving for the project will potentially result in short-term impacts to surrounding properties. A variety of noise-generating equipment would be used during the construction phase of the project and off-site roadway improvements, such as scrapers, backhoes, front-end loaders, and concrete saws, along with others. The exact number and pieces of construction equipment required are not known at this time. In the absence of specifics, it was assumed that the loudest noise levels would occur during grading activities. Although maximum noise levels may be 85 to 90 dB(A) L_{eq} at a distance of 50 feet during most construction activities, hourly average noise levels would be 82 dB(A) L_{eq} at 50 feet from the center of construction activity when assessing the loudest pieces of equipment working simultaneously.

The Noise Ordinance states, "No construction equipment or combination of equipment, regardless of age or date of acquisition, shall be operated so as to cause noise in excess of a one-hour average sound level limit of 75 dB at any time, unless a variance has been obtained in advance from the City Manager."

Construction noise generally can be treated as a point source and would attenuate at approximately 6 dB(A) for every doubling of distance. Construction activities, such as grading, generate the loudest noise levels. A grading noise level of 82 dB(A) L_{eq} at 50 feet would attenuate to approximately 75 dB(A) L_{eq} at 110 feet from the noise source.

Grading would occur over the entire site as well as adjacent to the site along North Broadway, and would not be situated at any one location for a long period of time. A majority of the construction activity would occur at the location of the two proposed buildings. Therefore, the acoustic center of the construction activity was assumed to be the center of the two building locations.

The center of the proposed market is approximately 150 feet from the nearest property line to the west and 175 feet from the adjacent northern property line. A construction noise level of 82 dB(A) L_{eq} at 50 feet would attenuate to approximately 72 dB(A) L_{eq} at 150 feet from the noise source and 71 dB(A) L_{eq} at 175 feet from the noise source. Noise levels from the market grading would not exceed 75 dB(A) L_{eq} . As grading noise would be the highest noise level generated in the construction phase and it would be less than 75 dB(A) L_{eq} , all other proposed market construction phase noise would also be less than 75 dB(A) L_{eq} and similarly less than significant.

The center of the proposed restaurant is approximately 160 feet from the nearest adjacent property line to the north and about 150 feet from the property line to the east. A construction noise level of 82 dB(A) L_{eq} at 50 feet would attenuate to approximately 72 dB(A) L_{eq} at 160 feet from the noise source. Thus, the restaurant and off-site roadway improvement construction noise levels are projected to be less than 75 dB(A) L_{eq} at the surrounding sensitive receptors. As grading noise would be the highest noise level generated in the restaurant construction phase and it would be less than 75 dB (A) L_{eq} , all other proposed restaurant construction phase noise would also be less than 75 db (A) L_{eq} and similarly less than significant.

Although the existing adjacent residences would be exposed to construction noise levels that could be heard above ambient conditions, the exposure would be short-term. Additionally, construction of the project would only occur between the hours of 7:00 A.M. and 6:00 P.M. on Monday through Friday and between the hours of 9:00 A.M. and 5:00 P.M. on Saturdays. Grading would be similarly limited, except on Saturdays when it would be limited to 10:00 A.M. and 5:00 P.M. Thus, the project would comply with local construction and grading noise regulations.

6.0 Conclusions

6.1 Vehicle Traffic Noise

The project would increase traffic volumes on local roadways and traffic. Noise level increases would be greatest nearest the project site, which would represent the greatest concentration of project-related traffic. As shown in Tables 7 and 8, the increases in traffic noise adjacent to the segment of Lincoln Avenue between Escondido Boulevard and North Broadway would exceed the exterior incremental environmental noise impact standards contained in the Community Protection Element of the General Plan. Thus, traffic noise impacts along this Lincoln Avenue segment would be significant. Because the significant noise impact is to existing sensitive receptors adjacent to Lincoln Avenue, there is no feasible mitigation. Thus, impacts would remain significant and unmitigated.

Noise increase adjacent to all other roadway segments in the study area would be less than significant.

6.2 On-site Generated Noise

The primary noise sources on-site would be mechanical equipment, the loading dock, trash compactor, and the drive-through. Residential uses are located west and northwest of the project site, and a school is located north of the project site. The adjacent properties are zoned R-2-12, (light multiple family), and the applicable daytime and nighttime noise ordinance limits are 55 and 50 dB(A) L_{eq} , respectively. As calculated in this analysis, the daytime noise levels generated on-site would result in noise levels up to 49 dB(A) L_{eq} at the multi-family residences to the west, 46 dB(A) L_{eq} at the single-family residence to the west, and 46 dB(A) L_{eq} at the school to the north. On-site generated nighttime noise levels would result in noise levels up to 47 dB(A) L_{eq} at the multi-family residences to the west, 44 dB(A) L_{eq} at the single-family residences to the west, and 43 dB(A) L_{eq} at the school to the north. These noise levels would not exceed the City's Noise Ordinance limits, and impacts would be less than significant.

6.3 Construction Noise

Noise due to construction of the project would not exceed the limits of the City's Noise Abatement and Control Ordinance. Additionally, construction of the project would only occur between the hours of 7:00 A.M. and 6:00 P.M. on Monday through Friday and between the hours of 9:00 A.M. and 5:00 P.M. on Saturdays. Grading would be similarly limited, except on Saturdays when it would be limited to 10:00 A.M. and 5:00 P.M. Thus, the project would comply with local construction and grading noise regulations. Construction noise impacts would be less than significant.

7.0 References Cited

California Department of Transportation (Caltrans)
2013 Technical Noise Supplement. November.

City of Escondido
2012 General Plan
n.d. Municipal Code (Includes Zoning Code and Noise Ordinance)

Federal Transit Administration (FTA)
2006 Transit Noise and Vibration Impact Assessment. July 1.

Michael Brandman Associates
2013 Final Environmental Impact Report – Foxglove Shopping Center Project. SCH No. 2011051031. City of Madera. February 1, 2013.

Navcon Engineering
2013 Sound Plan version 7.1, Library Sound Power Data, Parking lot.

RK Engineering Group
2014 Centerpointe 78 Traffic Impact Analysis, City of Escondido. August 28.

ATTACHMENTS

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ATTACHMENT 1
Noise Measurement Data

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7374 Centerpointe
Noise Measurements

Record #	Date	Time	Run Time	Duration	L _{Aeq}		
2	2014/09/16	12:14:00	00:01:00.0	60	57.3	538532.4197	32311945.18
3	2014/09/16	12:15:00	00:01:00.0	60	56.3	428885.8977	25733153.86
4	2014/09/16	12:16:00	00:01:00.0	60	58.7	736052.2517	44163135.1
5	2014/09/16	12:17:00	00:01:00.0	60	57.8	607075.6281	36424537.68
6	2014/09/16	12:18:00	00:01:00.0	60	56.6	461460.5696	27687634.17
7	2014/09/16	12:19:00	00:01:00.0	60	54.7	296344.7107	17780682.64
8	2014/09/16	12:20:00	00:01:00.0	60	57.3	536217.2043	32173032.26
9	2014/09/16	12:21:00	00:01:00.0	60	54.7	295970.8966	17758253.8
10	2014/09/16	12:22:00	00:01:00.0	60	56.0	400859.2108	24051552.65
11	2014/09/16	12:23:00	00:01:00.0	60	56.3	427354.638	25641278.28
12	2014/09/16	12:24:00	00:01:00.0	60	61.9	1540394.604	92423676.22
13	2014/09/16	12:25:00	00:01:00.0	60	57.4	549508.2444	32970494.67
14	2014/09/16	12:26:00	00:01:00.0	60	53.0	200509.2087	12030552.52
15	2014/09/16	12:27:00	00:01:00.0	60	51.6	143871.1986	8632271.915
16	2014/09/16	12:28:00	00:01:00.0	60	54.6	289988.8922	17399333.53
				sec	900	sum	7453025.575
				min	15		447181534.5

Leq 57.0

7374 Centerpointe
Noise Measurements

Record #	Date	Time	Run Time	Duration	LAeq		
2	2014/09/16	12:39:00	00:01:00.0	60	71.6	14615433.68	876926020.7
3	2014/09/16	12:40:00	00:01:00.0	60	71.0	12629458.64	757767518.6
4	2014/09/16	12:41:00	00:01:00.0	60	63.5	2229742.83	133784569.8
5	2014/09/16	12:42:00	00:01:00.0	60	67.5	5663137.396	339788243.8
6	2014/09/16	12:43:00	00:01:00.0	60	62.7	1848184.725	110891083.5
7	2014/09/16	12:44:00	00:01:00.0	60	61.7	1472112.169	88326730.13
8	2014/09/16	12:45:00	00:01:00.0	60	64.5	2847271.385	170836283.1
9	2014/09/16	12:46:00	00:01:00.0	60	68.4	6959917.071	417595024.3
10	2014/09/16	12:47:00	00:01:00.0	60	65.8	3845457.072	230727424.3
11	2014/09/16	12:48:00	00:01:00.0	60	65.0	3187229.901	191233794.1
12	2014/09/16	12:49:00	00:01:00.0	60	65.5	3508440.662	210506439.7
13	2014/09/16	12:50:00	00:01:00.0	60	63.1	2056911.646	123414698.8
14	2014/09/16	12:51:00	00:01:00.0	60	63.9	2459840.265	147590415.9
15	2014/09/16	12:52:00	00:01:00.0	60	65.3	3397157.816	203829469
16	2014/09/16	12:53:00	00:01:00.0	60	65.3	3422441.946	205346516.8
				sec	900	sum	70142737.21
				min	15		4208564232

Leq 66.7

7374 Centerpointe
Noise Measurements

Record #	Date	Time	Run Time	Duration	LAeq		
2	2014/09/16	12:57:00	00:01:00.0	60	64.7	2938129.84	176287790.4
3	2014/09/16	12:58:00	00:01:00.0	60	69.2	8235497.693	494129861.6
4	2014/09/16	12:59:00	00:01:00.0	60	72.8	18867157.81	1132029468
5	2014/09/16	13:00:00	00:01:00.0	60	69.0	8022333.083	481339985
6	2014/09/16	13:01:00	00:01:00.0	60	73.7	23674984.5	1420499070
7	2014/09/16	13:02:00	00:01:00.0	60	67.2	5302562.288	318153737.3
8	2014/09/16	13:03:00	00:01:00.0	60	68.2	6665101.426	399906085.6
9	2014/09/16	13:04:00	00:01:00.0	60	68.4	6976528.517	418591711
10	2014/09/16	13:05:00	00:01:00.0	60	68.9	7686442.856	461186571.4
11	2014/09/16	13:06:00	00:01:00.0	60	68.1	6389269.431	383356165.8
12	2014/09/16	13:07:00	00:01:00.0	60	71.7	14681336.55	880880193.2
13	2014/09/16	13:08:00	00:01:00.0	60	69.9	9801242.351	588074541.1
14	2014/09/16	13:09:00	00:01:00.0	60	65.8	3763547.326	225812839.6
15	2014/09/16	13:10:00	00:01:00.0	60	70.9	12439738.44	746384306.2
16	2014/09/16	13:11:00	00:01:00.0	60	68.0	6313687.037	378821222.2
			sec	900	sum	141757559.1	8505453549
			min	15			

Leq 69.8

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ATTACHMENT 2

FHWA Existing and Future (Year 2035) Vehicle Traffic Noise Contour Distance Calculations

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FHWA RD-77-108
Traffic Noise Prediction Model
Data Input Sheet

Project Name : Centerpointe
Project Number : 7374
Modeled Condition : Existing

Surface Refelction: CNEL
Assessment Metric: Hard
Peak ratio to ADT: 10.00
Traffic Desc. (Peak or ADT) : ADT

Segment	Roadway	From	To	Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	K-Factor
1	Centre City Parkway	Country Club	Iris Lane	11964	55	50	98.20	1.40	0.40	77.00	10.00	13.00	
2		Iris Lane	El Norte Parkway	14464	55	50	98.20	1.40	0.40	77.00	10.00	13.00	
3	Escondido Boulevard	El Norte Parkway	Decatur Way	7400	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
4		Decatur Way	Lincoln Avenue	9618	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
5		Lincoln Avenue	Mission Avenue	10424	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
6		Mission Avenue	Washington Avenue	15302	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
7	North Broadway	El Norte Parkway	Lincoln Avenue	17534	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
8		Lincoln Avenue	SR-78/Lincoln Parkway	20384	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
9	Fig Street	Lincoln Avenue	Mission Avenue	8980	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
10	El Norte Parkway	Morning View Drive	Centre City Parkway	21929	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
11		Centre City Parkway	Escondido Boulevard	25420	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
12	Lincoln Avenue	Escondido Boulevard	North Broadway	2556	25	50	98.20	1.40	0.40	77.00	10.00	13.00	
13		North Broadway	Garrick Way	2476	25	50	98.20	1.40	0.40	77.00	10.00	13.00	
14	Lincoln Parkway/Lincoln Avenue	North Broadway	Garrick Way	31930	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
15		Garrick Way	Fig Street	31589	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
16		Fig Street	Ash Street	24699	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
17		Ash Street	Harding Street	15314	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
18		Harding Street	Rose Street	12591	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
19		Rose Street	Midway Drive	9568	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
20	Mission Avenue	Quince Street	Centre City Parkway	20512	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
21		Centre City Parkway	Escondido Boulevard	19333	35	50	98.20	1.40	0.40	77.00	10.00	13.00	

Existing

FHWA RD-77-108
Traffic Noise Prediction Model
Predicted Noise Levels

Project Name : Centerpointe
Project Number : 7374
Modeled Condition : Existing
Assessment Metric: Hard

Segment	Roadway	Segment		Noise Levels, dBA Hard				Distance to Traffic Noise Level Contours, Feet					
		From	To	Auto	MT	HT	Total	75 dB	70 dB	65 dB	60 dB	55 dB	50 dB
1	Centre City Parkway	Country Club	Iris Lane	70.9	59.6	58.1	72	22	71	223	706	2,233	7,063
2		Iris Lane	El Norte Parkway	71.8	60.4	58.9	72	27	85	269	849	2,685	8,491
3	Escondido Boulevard	El Norte Parkway	Decatur Way	63.2	54.4	54.2	64	4	13	42	132	416	1,315
4		Decatur Way	Lincoln Avenue	64.3	55.6	55.3	65	5	17	54	169	536	1,694
5		Lincoln Avenue	Mission Avenue	64.7	55.9	55.7	66	6	19	59	186	587	1,858
6		Mission Avenue	Washington Avenue	66.4	57.6	57.3	67	9	27	87	275	869	2,748
7	North Broadway	El Norte Parkway	Lincoln Avenue	66.9	58.2	57.9	68	10	31	97	308	975	3,083
8		Rose Street	SR-78/Lincoln Parkway	64.3	55.5	55.3	65	5	17	54	169	536	1,694
9	Mission Avenue	Quince Street	Mission Avenue	67.6	58.9	58.6	69	11	36	115	362	1,145	3,622
10	El Norte Parkway	Morning View Drive	Centre City Parkway	67.9	59.1	58.9	69	12	39	123	388	1,227	3,881
11		Centre City Parkway	Escondido Boulevard	68.6	59.8	59.5	70	14	46	144	456	1,442	4,560
12	Lincoln Avenue	Escondido Boulevard	North Broadway	54.4	47.5	49.7	56	1	2	7	21	67	213
13		North Broadway	Garrick Way	54.2	47.4	49.6	56	1	2	6	20	64	204
14	Lincoln Parkway/Lincoln Avenue	North Broadway	Garrick Way	69.6	60.8	60.5	71	18	56	177	561	1,774	5,610
15		Garrick Way	Fig Street	69.5	60.7	60.5	71	18	56	177	561	1,774	5,610
16		Fig Street	Ash Street	68.4	59.7	59.4	69	14	44	138	435	1,377	4,355
17		Ash Street	Harding Street	66.4	57.6	57.3	67	9	27	87	275	869	2,748
18		Harding Street	Rose Street	65.5	56.7	56.5	67	7	22	71	223	706	2,233
19		Rose Street	Midway Drive	64.3	55.5	55.3	65	5	17	54	169	536	1,694
20	Mission Avenue	Quince Street	Centre City Parkway	67.6	58.9	58.6	69	11	36	115	362	1,145	3,622
21		Centre City Parkway	Escondido Boulevard	67.4	58.6	58.4	68	11	35	109	346	1,094	3,459

Existing

FHWA RD-77-108
Traffic Noise Prediction Model
Data Input Sheet

Project Name : Centerpointe
Project Number : 7374
Modeled Condition : Existing + Project

Surface Refelction: CNEL
Assessment Metric: Hard
Peak ratio to ADT: 10.00
Traffic Desc. (Peak or ADT) : ADT

Segment	Roadway	From	To	Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	K-Factor
1	Centre City Parkway	Country Club	Iris Lane	12500	55	50	98.20	1.40	0.40	77.00	10.00	13.00	
2		Iris Lane	El Norte Parkway	15065	55	50	98.20	1.40	0.40	77.00	10.00	13.00	
3	Escondido Boulevard	El Norte Parkway	Decatur Way	8935	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
4		Decatur Way	Lincoln Avenue	11180	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
5		Lincoln Avenue	Mission Avenue	12752	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
6		Mission Avenue	Washington Avenue	15947	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
7	North Broadway	El Norte Parkway	Lincoln Avenue	18290	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
8		Lincoln Avenue	SR-78/Lincoln Parkway	23478	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
9	Fig Street	Lincoln Avenue	Mission Avenue	9268	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
10	El Norte Parkway	Morning View Drive	Centre City Parkway	22745	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
11		Centre City Parkway	Escondido Boulevard	26837	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
12	Lincoln Avenue	Escondido Boulevard	North Broadway	7094	25	50	98.20	1.40	0.40	77.00	10.00	13.00	
13		North Broadway	Garrick Way	3164	25	50	98.20	1.40	0.40	77.00	10.00	13.00	
14	Lincoln Parkway/Lincoln Avenue	North Broadway	Garrick Way	32619	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
15		Garrick Way	Fig Street	32966	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
16		Fig Street	Ash Street	25608	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
17		Ash Street	Harding Street	15844	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
18		Harding Street	Rose Street	12961	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
19		Rose Street	Midway Drive	9768	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
20	Mission Avenue	Quince Street	Centre City Parkway	21201	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
21		Centre City Parkway	Escondido Boulevard	20452	35	50	98.20	1.40	0.40	77.00	10.00	13.00	

Existing + Project

FHWA RD-77-108
Traffic Noise Prediction Model
Predicted Noise Levels

Project Name : Centerpointe
Project Number : 7374
Modeled Condition : Existing + Project
Assessment Metric: Hard

Segment	Roadway	Segment		Noise Levels, dBA Hard				Distance to Traffic Noise Level Contours, Feet					
		From	To	Auto	MT	HT	Total	75 dB	70 dB	65 dB	60 dB	55 dB	50 dB
1	Centre City Parkway	Country Club	Iris Lane	71.1	59.8	58.3	72	23	72	229	723	2,285	7,227
2		Iris Lane	El Norte Parkway	71.9	60.6	59.1	73	28	89	281	889	2,812	8,891
3	Escondido Boulevard	El Norte Parkway	Decatur Way	64.0	55.3	55.0	65	5	16	50	158	500	1,581
4		Decatur Way	Lincoln Avenue	65.0	56.2	56.0	66	6	20	63	199	629	1,991
5		Lincoln Avenue	Mission Avenue	65.6	56.8	56.6	67	7	23	72	229	723	2,285
6		Mission Avenue	Washington Avenue	66.5	57.8	57.5	68	9	28	89	281	889	2,812
7	North Broadway	El Norte Parkway	Lincoln Avenue	67.1	58.4	58.1	68	10	32	102	323	1,021	3,228
8		Rose Street	SR-78/Lincoln Parkway	64.4	55.6	55.4	65	5	17	55	173	548	1,734
9	Mission Avenue	Quince Street	Mission Avenue	67.8	59.0	58.8	69	12	38	120	379	1,199	3,793
10	El Norte Parkway	Morning View Drive	Centre City Parkway	68.1	59.3	59.1	69	13	41	129	406	1,285	4,064
11		Centre City Parkway	Escondido Boulevard	68.8	60.0	59.8	70	15	48	151	477	1,510	4,775
12	Lincoln Avenue	Escondido Boulevard	North Broadway	58.8	52.0	54.2	61	2	6	19	59	186	587
13		North Broadway	Garrick Way	55.3	48.5	50.7	57	1	3	8	26	83	262
14	Lincoln Parkway/Lincoln Avenue	North Broadway	Garrick Way	69.6	60.9	60.6	71	18	57	182	574	1,815	5,741
15		Garrick Way	Fig Street	69.7	60.9	60.7	71	19	59	186	587	1,858	5,874
16		Fig Street	Ash Street	68.6	59.8	59.6	70	14	46	144	456	1,442	4,560
17		Ash Street	Harding Street	66.5	57.7	57.5	68	9	28	89	281	889	2,812
18		Harding Street	Rose Street	65.6	56.9	56.6	67	7	23	72	229	723	2,285
19		Rose Street	Midway Drive	64.4	55.6	55.4	65	5	17	55	173	548	1,734
20	Mission Avenue	Quince Street	Centre City Parkway	67.8	59.0	58.8	69	12	38	120	379	1,199	3,793
21		Centre City Parkway	Escondido Boulevard	67.6	58.8	58.6	69	11	36	115	362	1,145	3,622

Existing + Project

FHWA RD-77-108
Traffic Noise Prediction Model
Data Input Sheet

Project Name : Centerpointe
Project Number : 7374
Modeled Condition : 2035

Surface Refelction: CNEL
Assessment Metric: Hard
Peak ratio to ADT: 10.00
Traffic Desc. (Peak or ADT) : ADT

Segment	Roadway	From	To	Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	K-Factor
1	Centre City Parkway	Country Club	Iris Lane	15464	55	50	98.20	1.40	0.40	77.00	10.00	13.00	
2		Iris Lane	El Norte Parkway	21199	55	50	98.20	1.40	0.40	77.00	10.00	13.00	
3	Escondido Boulevard	El Norte Parkway	Decatur Way	12565	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
4		Decatur Way	Lincoln Avenue	11838	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
5		Lincoln Avenue	Mission Avenue	13872	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
6		Mission Avenue	Washington Avenue	16832	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
7	North Broadway	El Norte Parkway	Lincoln Avenue	22244	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
8		Lincoln Avenue	SR-78/Lincoln Parkway	20606	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
9	Fig Street	Lincoln Avenue	Mission Avenue	9812	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
10	El Norte Parkway	Morning View Drive	Centre City Parkway	28184	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
11		Centre City Parkway	Escondido Boulevard	25683	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
12	Lincoln Avenue	Escondido Boulevard	North Broadway	3262	25	50	98.20	1.40	0.40	77.00	10.00	13.00	
13		North Broadway	Garrick Way	4012	25	50	98.20	1.40	0.40	77.00	10.00	13.00	
14	Lincoln Parkway/Lincoln Avenue	North Broadway	Garrick Way	36811	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
15		Garrick Way	Fig Street	39023	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
16		Fig Street	Ash Street	37691	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
17		Ash Street	Harding Street	29570	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
18		Harding Street	Rose Street	23430	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
19		Rose Street	Midway Drive	17400	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
20	Mission Avenue	Quince Street	Centre City Parkway	33211	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
21		Centre City Parkway	Escondido Boulevard	29281	35	50	98.20	1.40	0.40	77.00	10.00	13.00	

FHWA RD-77-108
Traffic Noise Prediction Model
Predicted Noise Levels

Project Name : Centerpointe
Project Number : 7374
Modeled Condition : 2035
Assessment Metric: Hard

Segment	Roadway	Segment		Noise Levels, dBA Hard				Distance to Traffic Noise Level Contours, Feet					
		From	To	Auto	MT	HT	Total	75 dB	70 dB	65 dB	60 dB	55 dB	50 dB
1	Centre City Parkway	Country Club	Iris Lane	72.1	60.7	59.2	73	29	91	288	910	2,877	9,099
2		Iris Lane	El Norte Parkway	73.4	62.1	60.6	74	39	123	388	1,227	3,881	12,274
3	Escondido Boulevard	El Norte Parkway	Decatur Way	65.5	56.7	56.5	67	7	22	71	223	706	2,233
4		Decatur Way	Lincoln Avenue	65.2	56.5	56.2	66	7	21	66	208	659	2,084
5		Lincoln Avenue	Mission Avenue	65.9	57.2	56.9	67	8	24	77	245	774	2,449
6		Mission Avenue	Washington Avenue	66.8	58.0	57.8	68	10	30	95	301	953	3,013
7	North Broadway	El Norte Parkway	Lincoln Avenue	68.0	59.2	59.0	69	13	40	126	397	1,256	3,972
8		Rose Street	SR-78/Lincoln Parkway	66.9	58.1	57.9	68	10	31	97	308	975	3,083
9	Mission Avenue	Quince Street	Mission Avenue	69.7	61.0	60.7	71	19	59	186	587	1,858	5,874
10	El Norte Parkway	Morning View Drive	Centre City Parkway	69.0	60.2	60.0	70	16	50	158	500	1,581	5,000
11		Centre City Parkway	Escondido Boulevard	68.6	59.8	59.6	70	14	46	144	456	1,442	4,560
12	Lincoln Avenue	Escondido Boulevard	North Broadway	55.4	48.6	50.8	57	1	3	8	27	85	269
13		North Broadway	Garrick Way	56.3	49.5	51.7	58	1	3	10	33	104	330
14	Lincoln Parkway/Lincoln Avenue	North Broadway	Garrick Way	70.2	61.4	61.2	71	21	66	208	659	2,084	6,591
15		Garrick Way	Fig Street	70.4	61.7	61.4	71	22	69	218	690	2,183	6,902
16		Fig Street	Ash Street	70.3	61.5	61.3	71	21	67	213	674	2,133	6,745
17		Ash Street	Harding Street	69.2	60.4	60.2	70	17	52	166	524	1,656	5,236
18		Harding Street	Rose Street	68.2	59.4	59.2	69	13	42	132	416	1,315	4,159
19		Rose Street	Midway Drive	66.9	58.1	57.9	68	10	31	97	308	975	3,083
20	Mission Avenue	Quince Street	Centre City Parkway	69.7	61.0	60.7	71	19	59	186	587	1,858	5,874
21		Centre City Parkway	Escondido Boulevard	69.2	60.4	60.2	70	17	52	166	524	1,656	5,236

FHWA RD-77-108
Traffic Noise Prediction Model
Data Input Sheet

Project Name : Centerpointe
Project Number : 7374
Modeled Condition : 2035 + Project

Surface Refelction: CNEL
Assessment Metric: Hard
Peak ratio to ADT: 10.00
Traffic Desc. (Peak or ADT) : ADT

Segment	Roadway	From	To	Traffic Vol.	Speed (Mph)	Distance to CL	% Autos	%MT	% HT	Day %	Eve %	Night %	K-Factor
1	Centre City Parkway	Country Club	Iris Lane	16000	55	50	98.20	1.40	0.40	77.00	10.00	13.00	
2		Iris Lane	El Norte Parkway	21800	55	50	98.20	1.40	0.40	77.00	10.00	13.00	
3	Escondido Boulevard	El Norte Parkway	Decatur Way	14100	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
4		Decatur Way	Lincoln Avenue	13400	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
5		Lincoln Avenue	Mission Avenue	16200	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
6		Mission Avenue	Washington Avenue	17477	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
7	North Broadway	El Norte Parkway	Lincoln Avenue	23000	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
8		Lincoln Avenue	SR-78/Lincoln Parkway	23700	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
9	Fig Street	Lincoln Avenue	Mission Avenue	10100	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
10	El Norte Parkway	Morning View Drive	Centre City Parkway	29000	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
11		Centre City Parkway	Escondido Boulevard	27100	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
12	Lincoln Avenue	Escondido Boulevard	North Broadway	7800	25	50	98.20	1.40	0.40	77.00	10.00	13.00	
13		North Broadway	Garrick Way	4700	25	50	98.20	1.40	0.40	77.00	10.00	13.00	
14	Lincoln Parkway/Lincoln Avenue	North Broadway	Garrick Way	37500	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
15		Garrick Way	Fig Street	40400	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
16		Fig Street	Ash Street	38600	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
17		Ash Street	Harding Street	30100	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
18		Harding Street	Rose Street	23800	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
19		Rose Street	Midway Drive	17600	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
20	Mission Avenue	Quince Street	Centre City Parkway	33900	35	50	98.20	1.40	0.40	77.00	10.00	13.00	
21		Centre City Parkway	Escondido Boulevard	30400	35	50	98.20	1.40	0.40	77.00	10.00	13.00	

FHWA RD-77-108
Traffic Noise Prediction Model
Predicted Noise Levels

Project Name : Centerpoint
Project Number : 7374
Modeled Condition : 2035 + Project
Assessment Metric: Hard

Segment	Roadway	Segment		Noise Levels, dBA Hard				Distance to Traffic Noise Level Contours, Feet					
		From	To	Auto	MT	HT	Total	75 dB	70 dB	65 dB	60 dB	55 dB	50 dB
1	Centre City Parkway	Country Club	Iris Lane	72.2	60.8	59.3	73	29	93	294	931	2,944	9,310
2		Iris Lane	El Norte Parkway	73.5	62.2	60.7	74	41	129	406	1,285	4,064	12,852
3	Escondido Boulevard	El Norte Parkway	Decatur Way	66.0	57.2	57.0	67	8	25	79	251	792	2,506
4		Decatur Way	Lincoln Avenue	65.8	57.0	56.8	67	8	24	76	239	757	2,393
5		Lincoln Avenue	Mission Avenue	66.6	57.8	57.6	68	9	29	91	288	910	2,877
6		Mission Avenue	Washington Avenue	66.9	58.2	57.9	68	10	31	97	308	975	3,083
7	North Broadway	El Norte Parkway	Lincoln Avenue	68.1	59.4	59.1	69	13	41	129	406	1,285	4,064
8		Rose Street	SR-78/Lincoln Parkway	67.0	58.2	57.9	68	10	32	100	315	998	3,155
9	Mission Avenue	Quince Street	Mission Avenue	69.8	61.0	60.8	71	19	60	190	601	1,901	6,011
10	El Norte Parkway	Morning View Drive	Centre City Parkway	69.1	60.4	60.1	70	16	51	162	512	1,618	5,116
11		Centre City Parkway	Escondido Boulevard	68.8	60.1	59.8	70	15	48	151	477	1,510	4,775
12	Lincoln Avenue	Escondido Boulevard	North Broadway	59.2	52.4	54.6	61	2	6	20	64	204	644
13		North Broadway	Garrick Way	57.0	50.2	52.4	59	1	4	12	39	123	388
14	Lincoln Parkway/Lincoln Avenue	North Broadway	Garrick Way	70.2	61.5	61.2	71	21	66	208	659	2,084	6,591
15		Garrick Way	Fig Street	70.6	61.8	61.6	72	23	72	229	723	2,285	7,227
16		Fig Street	Ash Street	70.4	61.6	61.4	71	22	69	218	690	2,183	6,902
17		Ash Street	Harding Street	69.3	60.5	60.3	70	17	54	169	536	1,694	5,358
18		Harding Street	Rose Street	68.3	59.5	59.3	69	13	43	135	426	1,346	4,256
19		Rose Street	Midway Drive	67.0	58.2	57.9	68	10	32	100	315	998	3,155
20	Mission Avenue	Quince Street	Centre City Parkway	69.8	61.0	60.8	71	19	60	190	601	1,901	6,011
21		Centre City Parkway	Escondido Boulevard	69.3	60.6	60.3	70	17	54	169	536	1,694	5,358

ATTACHMENT 3
SoundPLAN – On-Site Generated Noise

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7374 Centerpointe
SoundPLAN - On-Site Generated Noise

Source name	Level				Reference	Corrections		
	Leq1 dB(A)	Leq2 dB(A)	Leq3 dB(A)	Lmax dB(A)		Kwall dB(A)	CI dB(A)	CT dB(A)
HVAC 1	92	89	-1000	0	Unit	0	0	0
HVAC 2	92	89	-1000	0	Unit	0	0	0
HVAC 3	92	89	-1000	0	Unit	0	0	0
HVAC 4	92	89	-1000	0	Unit	0	0	0
HVAC 5	92	89	-1000	0	Unit	0	0	0
HVAC 6	92	89	-1000	0	Unit	0	0	0
Trash Compactor	75.9	75.9	-1000	0	Unit	0	0	0
Drive Through	76.7	72.7	-1000	0	Unit	0	0	0
Delivery Truck	77.7	77.7	-1000	0	Unit	0	0	0

7374 Centerpointe
SoundPLAN - On-Site Generated Noise

No.	Receiver name	Building side	Floor	Limit	Level w/o NP	
				L(Aeq1h) dB(A)	Leq1 dB(A)	Leq2 dB(A)
1	1		1.FI	-	43.9	41.7
1	1		2.FI	-	46.6	44.5
2	2		1.FI	-	46.3	44.3
2	2		2.FI	-	48.9	46.9
3	3		1.FI	-	46.3	44.6
3	3		2.FI	-	48.8	46.9
4	4		1.FI	-	46.4	44.7
4	4		2.FI	-	48.7	46.8
5	5		1.FI	-	44.4	42.6
5	5		2.FI	-	48.7	46.7
6	6		1.FI	-	40.7	38.4
6	6		2.FI	-	48.5	46.4
7	7		1.FI	-	46.0	44.2
8	8		1.FI	-	45.4	43.6
9	9		1.FI	-	45.9	44.1
10	10		1.FI	-	45.3	43.9
11	11		1.FI	-	46.1	44.4
12	12		1.FI	-	45.1	42.7
13	13		1.FI	-	45.9	43.0
14	14		1.FI	-	46.3	43.3
15	15		1.FI	-	45.3	42.3
16	16		1.FI	-	44.6	41.6
17	17		1.FI	-	43.4	40.4
18	18		1.FI	-	41.9	38.9

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SoundPLAN - On-Site Generated Noise

Source name	Level w/o NP	
	Leq1	Leq2
1 1.FI	43.9	41.7
Delivery Truck	35.7	35.7
Drive Through	4.0	0.0
HVAC 1	38.8	35.8
HVAC 2	34.2	31.2
HVAC 3	35.3	32.3
HVAC 4	31.2	28.2
HVAC 5	32.0	29.0
HVAC 6	34.6	31.6
Trash Compactor	31.3	31.3
1 2.FI	46.6	44.5
Delivery Truck	39.7	39.7
Drive Through	9.1	5.1
HVAC 1	41.1	38.1
HVAC 2	36.8	33.8
HVAC 3	37.7	34.7
HVAC 4	34.1	31.1
HVAC 5	34.8	31.8
HVAC 6	36.9	33.9
Trash Compactor	33.2	33.2
2 1.FI	46.3	44.3
Delivery Truck	40.0	40.0
Drive Through	4.1	0.1
HVAC 1	40.3	37.3
HVAC 2	37.0	34.0
HVAC 3	38.3	35.3
HVAC 4	34.2	31.2
HVAC 5	35.0	32.0
HVAC 6	34.8	31.8
Trash Compactor	31.4	31.4
2 2.FI	48.9	46.9
Delivery Truck	42.7	42.7
Drive Through	7.1	3.1
HVAC 1	42.8	39.8
HVAC 2	39.5	36.5
HVAC 3	40.9	37.9
HVAC 4	37.1	34.1
HVAC 5	37.7	34.7
HVAC 6	37.2	34.2
Trash Compactor	33.2	33.2
3 1.FI	46.3	44.6
Delivery Truck	41.1	41.1
Drive Through	3.8	-0.2
HVAC 1	39.3	36.3
HVAC 2	34.7	31.7
HVAC 3	38.8	35.8
HVAC 4	34.2	31.2
HVAC 5	35.1	32.1
HVAC 6	35.4	32.4
Trash Compactor	31.6	31.6
3 2.FI	48.8	46.9
Delivery Truck	43.2	43.2

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SoundPLAN - On-Site Generated Noise

Drive Through	6.7	2.7
HVAC 1	41.9	38.9
HVAC 2	37.4	34.4
HVAC 3	41.2	38.2
HVAC 4	37.1	34.1
HVAC 5	37.8	34.8
HVAC 6	38.0	35.0
Trash Compactor	34.3	34.3
4 1.FI	46.4	44.7
Delivery Truck	41.4	41.4
Drive Through	4.0	0.0
HVAC 1	39.5	36.5
HVAC 2	34.8	31.8
HVAC 3	39.3	36.3
HVAC 4	34.6	31.6
HVAC 5	35.5	32.5
HVAC 6	33.3	30.3
Trash Compactor	30.5	30.5
4 2.FI	48.7	46.8
Delivery Truck	43.0	43.0
Drive Through	6.9	2.9
HVAC 1	42.0	39.0
HVAC 2	37.7	34.7
HVAC 3	41.7	38.7
HVAC 4	37.4	34.4
HVAC 5	38.3	35.3
HVAC 6	36.2	33.2
Trash Compactor	32.6	32.6
5 1.FI	44.4	42.6
Delivery Truck	39.1	39.1
Drive Through	4.0	0.0
HVAC 1	39.2	36.2
HVAC 2	34.7	31.7
HVAC 3	34.9	31.9
HVAC 4	30.0	27.0
HVAC 5	30.9	27.9
HVAC 6	33.2	30.2
Trash Compactor	28.9	28.9
5 2.FI	48.7	46.7
Delivery Truck	42.8	42.8
Drive Through	6.9	2.9
HVAC 1	41.8	38.8
HVAC 2	37.6	34.6
HVAC 3	41.9	38.9
HVAC 4	37.6	34.6
HVAC 5	38.4	35.4
HVAC 6	36.1	33.1
Trash Compactor	30.6	30.6
6 1.FI	40.7	38.4
Delivery Truck	33.5	33.5
Drive Through	3.2	-0.8
HVAC 1	34.1	31.1
HVAC 2	29.7	26.7
HVAC 3	34.8	31.8
HVAC 4	29.8	26.8

Contributions

7374 Centerpointe
SoundPLAN - On-Site Generated Noise

HVAC 5	31.0	28.0
HVAC 6	28.1	25.1
Trash Compactor	11.6	11.6
6 2.FI	48.5	46.4
Delivery Truck	42.0	42.0
Drive Through	7.1	3.1
HVAC 1	41.5	38.5
HVAC 2	37.7	34.7
HVAC 3	42.3	39.3
HVAC 4	37.7	34.7
HVAC 5	38.7	35.7
HVAC 6	36.2	33.2
Trash Compactor	18.3	18.3
7 1.FI	46.0	44.2
Delivery Truck	40.9	40.9
Drive Through	3.7	-0.3
HVAC 1	39.1	36.1
HVAC 2	34.4	31.4
HVAC 3	38.9	35.9
HVAC 4	34.2	31.2
HVAC 5	35.1	32.1
HVAC 6	33.0	30.0
Trash Compactor	29.2	29.2
8 1.FI	45.4	43.6
Delivery Truck	39.8	39.8
Drive Through	3.4	-0.6
HVAC 1	38.9	35.9
HVAC 2	34.1	31.1
HVAC 3	38.2	35.2
HVAC 4	33.8	30.8
HVAC 5	34.7	31.7
HVAC 6	33.8	30.8
Trash Compactor	29.0	29.0
9 1.FI	45.9	44.1
Delivery Truck	41.0	41.0
Drive Through	3.6	-0.4
HVAC 1	38.9	35.9
HVAC 2	34.3	31.3
HVAC 3	38.8	35.8
HVAC 4	34.1	31.1
HVAC 5	35.1	32.1
HVAC 6	32.8	29.8
Trash Compactor	25.3	25.3
10 1.FI	45.3	43.9
Delivery Truck	41.8	41.8
Drive Through	3.2	-0.8
HVAC 1	36.9	33.9
HVAC 2	32.1	29.1
HVAC 3	37.6	34.6
HVAC 4	32.3	29.3
HVAC 5	35.6	32.6
HVAC 6	30.4	27.4
Trash Compactor	18.3	18.3
11 1.FI	46.1	44.4
Delivery Truck	41.6	41.6

Contributions

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SoundPLAN - On-Site Generated Noise

Drive Through	3.4	-0.6
HVAC 1	38.6	35.6
HVAC 2	34.1	31.1
HVAC 3	39.3	36.3
HVAC 4	34.5	31.5
HVAC 5	35.7	32.7
HVAC 6	32.4	29.4
Trash Compactor	12.3	12.3
12 1.FI	45.1	42.7
Delivery Truck	37.0	37.0
Drive Through	10.9	6.9
HVAC 1	33.2	30.2
HVAC 2	32.5	29.5
HVAC 3	38.9	35.9
HVAC 4	37.0	34.0
HVAC 5	39.7	36.7
HVAC 6	30.5	27.5
Trash Compactor	8.9	8.9
13 1.FI	45.9	43.0
Delivery Truck	30.1	30.1
Drive Through	18.5	14.5
HVAC 1	33.7	30.7
HVAC 2	33.3	30.3
HVAC 3	39.9	36.9
HVAC 4	38.5	35.5
HVAC 5	41.9	38.9
HVAC 6	31.1	28.1
Trash Compactor	4.7	4.7
14 1.FI	46.3	43.3
Delivery Truck	22.8	22.8
Drive Through	20.1	16.1
HVAC 1	33.5	30.5
HVAC 2	34.3	31.3
HVAC 3	38.8	35.8
HVAC 4	40.0	37.0
HVAC 5	42.5	39.5
HVAC 6	32.0	29.0
Trash Compactor	3.7	3.7
15 1.FI	45.3	42.3
Delivery Truck	17.6	17.6
Drive Through	22.6	18.6
HVAC 1	32.5	29.5
HVAC 2	36.6	33.6
HVAC 3	36.5	33.5
HVAC 4	37.9	34.9
HVAC 5	39.7	36.7
HVAC 6	38.8	35.8
Trash Compactor	1.8	1.8
16 1.FI	44.6	41.6
Delivery Truck	14.6	14.6
Drive Through	25.6	21.6
HVAC 1	34.4	31.4
HVAC 2	37.1	34.1
HVAC 3	35.1	32.1
HVAC 4	37.6	34.6

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SoundPLAN - On-Site Generated Noise

HVAC 5	37.1	34.1
HVAC 6	38.1	35.1
Trash Compactor	0.0	0.0
17 1.FI	43.4	40.4
Delivery Truck	12.5	12.5
Drive Through	21.1	17.1
HVAC 1	34.0	31.0
HVAC 2	36.0	33.0
HVAC 3	34.2	31.2
HVAC 4	36.4	33.4
HVAC 5	35.5	32.5
HVAC 6	36.6	33.6
Trash Compactor	-1.4	-1.4
18 1.FI	41.9	38.9
Delivery Truck	10.8	10.8
Drive Through	18.4	14.4
HVAC 1	32.9	29.9
HVAC 2	34.4	31.4
HVAC 3	33.1	30.1
HVAC 4	34.7	31.7
HVAC 5	34.0	31.0
HVAC 6	34.9	31.9
Trash Compactor	-2.7	-2.7

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