Appendix E Noise Technical Report

Noise Technical Report

Final

South Glendale Community Plan

City of Glendale

August 2017

City of Glendale
Planning Division
633 E Broadway #103
Glendale, CA 91206

FINAL

Quality information

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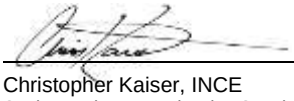	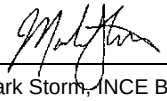	
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1. Introduction and Objectives

This technical report evaluates potential noise impacts attributed to the proposed South Glendale Community Plan (SGCP) for the community of South Glendale, located south of State Route 134 (SR-134) in Glendale, California (City). This plan serves as long-range guide to development with a focus on the distribution and arrangement of land, roadway and transit networks, and preservation and enhancement of natural open space, historic resources, and cultural resources through the next 25 years. The City intends to rely on the SGCP and associated discretionary actions in their effort to establish neighborhoods, centers, and corridors that the City desires to either maintain, enhance, or transform.

An increase in medium and high-density residential land uses within the SGCP areas would result in the introduction of noise-sensitive receptors in areas that may not have previously been considered noise sensitive. The policies proposed by the plan intend to reflect or enhance applicable noise guidelines in the existing General Plan with a community-specific approach.

Existing noise sources characterizing the SGCP area are dominated by vehicular traffic noise from highways and local roadways, with lesser contributions from passenger rail operation, aircraft overflights, HVAC unit operation, sounds associated with commercial and industrial operations, and intermittent sound sources typical of urban/suburban communities including but not limited to human speech, vehicle idling, car horns, landscaping activity, and amplified music and speech from audio systems in vehicles and homes.

1.1 Community Plan Areas, Goals, and Policies

The SGCP area encompasses roughly 4.6 square miles of land, approximately bounded on the north by SR-134, on the west by the Southern California Regional Rail Authority railroad corridor, variably on the south by several streets, and on the east by State Route 2 (SR-2). The primary goals, recommendations, and objectives of the SGCP include establishment of transit-oriented residential and commercial developments and pedestrian, bicycle, and transit mobility improvements. The community plan area to Maintain, Enhance and Transform are indicated in Figure 4.2-1.

Future development plans for specific projects within the SGCP are not identified or analyzed as part of this technical noise report. However, it is assumed that any such project-specific development plans would undergo a project specific environmental review to identify potential noise and vibration impacts associated with their construction and operation.

2. Fundamentals of Noise and Vibration

2.1 Noise

Noise is generally defined as unwanted or objectionable sound. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance and, in the extreme, hearing impairment. The unit of measurement used to describe a noise level is the decibel (dB); decibels are measured on a logarithmic scale that quantifies sound amplitude in a manner similar to the Richter scale used for earthquake magnitudes. Thus, a doubling of the energy of a noise source, such as doubling of traffic volume, would increase the noise level by 3 dB; a halving of the energy would result in a 3-dB decrease.

Human Perception of Noise

The human ear is not equally sensitive to all frequencies within the sound spectrum. Therefore, a method called “A-weighting” is used to filter noise frequencies that are less audible to the human ear. The A scale approximates the frequency response of the average young ear when listening to most ordinary everyday sounds. When people make relative judgments of the loudness or annoyance of a sound, their judgments correlate well with the A-scale levels of those sounds. Therefore, the “A-weighted” noise scale is used for measurements and standards involving the human perception of noise. In this report, all noise levels are A-weighted and “dBA” is understood to identify the A-weighted decibel. Table 2.1-1 Typical Noise Levels provides typical noise levels associated with common activities.

Human perception of noise has no simple correlation with acoustical energy. The perception of noise is not linear in terms of dBA or in terms of acoustical energy. Two noise sources do not sound twice as loud as one source. It is widely accepted that the average healthy ear can barely perceive changes of 3 dBA (increase or decrease); that a change of 5 dBA is readily perceptible; and that an increase (or decrease) of 10 dBA sounds about twice (or half) as loud (Caltrans 2011).

Averaging Noise Levels

In addition to noise levels at any given moment, the duration and averaging of noise over time is also important for the assessment of potential noise disturbance. Noise levels varying over time are averaged over a period of time, usually hour(s), expressed as dBA L_{eq}. For example, L_{eq} (3h) would be a 3-hour equivalent average noise level. When no period is specified, a 1-hour average is assumed (L_{eq} (1h) or L_{eq}).

Table 2.1-1
Typical Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
-	110	Rock Band
Jet Fly-over at 300 m (1,000 ft)	100	-
Gas Lawn Mower at 1 m (3 ft)	90	-
Diesel Truck at 15 m (50 ft), at 80 km/hr (50 mph)	80	Food Blender at 1 m (3 ft) Garbage Disposal at 1 m (3 ft)
Noisy Urban Area, Daytime Gas Lawn Mower, 30 m (100 ft)	70	Vacuum Cleaner at 3 m (10 ft)
Commercial Area Heavy Traffic at 90 m (300 ft)	60	Normal Speech at 1 m (3 ft)
Quiet Urban Daytime	50	Large Business Office Dishwasher in Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	30	Library
Quiet Rural Nighttime	20	Bedroom at Night, Concert Hall (Background)
-	10	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

Source: Caltrans 2011
Notes: m = meters, ft = feet
km/hr = kilometers per hour
mph = miles per hour

The time of day of noise is also an important factor to consider when assessing potential community noise impacts, as noise levels that may be acceptable during the daytime hours may create disturbance during evening or nighttime hours, when people are typically at home and sleeping. The Community Noise Equivalent Level (CNEL) is a descriptor used to characterize average noise levels over a 24-hour period, calculated from hourly L_{eq} values, with 5 dBA added to the hourly L_{eq} levels occurring between 7:00 p.m. and 10:00 p.m. and 10 dBA added to the hourly L_{eq} levels occurring between 10:00 p.m. and 7:00 a.m., to reflect the greater disturbance potential from evening and nighttime noise, respectively. The day/night average sound level (L_{dn}) is the same as the CNEL, except the evening period is included in the daytime period.

Noise Attenuation

From the source to the receiver, noise changes both in level and frequency spectrum. The most obvious change is the decrease in noise as the distance from the source increases. The manner in which noise reduces with distance depends on the following important factors: ground absorption, atmospheric effects and refraction, shielding by natural and man-made features, noise barriers, diffraction, and reflection. For a point noise source, such as stationary construction equipment, the attenuation rate or drop-off in noise level would be at least -6 dBA for each doubling of unobstructed distance between source and the receiver, and could improve to a rate of -7.5 dBA depending on the

acoustic characteristics of the ground surface over which the sound travels between the source and a receiver. For a linear noise source, such as vehicles traveling on a roadway, the attenuation rate or drop-off in noise level would be approximately -3 dBA for each doubling of unobstructed distance between source and the receiver and could improve up to a rate of -4.5 dBA depending on the acoustic characteristics of the ground surface.

A large object in the path between a noise source and a receiver can significantly attenuate noise levels at that receiver. The amount of attenuation provided by this “shielding” depends on the size of the object and the frequencies of the noise levels. Natural terrain features, such as hills and dense woods, as well as man-made features, such as buildings and walls, can significantly alter noise levels. Walls or berms are often specifically used to reduce noise at one or more receptors with respect to identified substantial sound sources of concern.

Noise Sensitive Receptors

Some land uses are considered more sensitive to noise than others due to the types of activities involved, such as sleeping, reading, talking, or convalescing. Noise-sensitive receptors are generally considered places where humans are engaged in activities, or occupying land uses, that may be subject to the stress or significant interference from noise. Typically, land uses associated with noise-sensitive human receptors include residential dwellings, hotels/motels, hospitals, nursing homes, educational facilities, libraries and recreational facilities, many of which are represented in the SGCP area.

In addition to human receptors, protected animal species and their habitats, e.g., bird species protected under the Migratory Bird Treaty Act, may be considered noise sensitive receptors during their breeding season if they are present in the study area. Temporary, indirect impacts could potentially arise from construction-generated noise resulting in destruction and/or avoidance of habitat by wildlife.

2.2 Vibration

In addition to noise, some construction and transportation activities can generate substantial ground vibration, which can be interpreted as energy transmitted in waves through the soil mass. These energy waves generally dissipate with distance from the vibration source, with propagation distances determined by frequency, frictional losses, and soil types and strata. When groundborne vibrations reach receiving structures, the energy can be transmitted to the foundation of the buildings which in turn may result in vibration of the building structure to varying degrees.

Typical outdoor sources of perceptible groundborne vibration are construction equipment, traffic on rough (i.e., unpaved or uneven) roads and some rail activity. Some construction activity can also result in varying degrees of groundborne vibration, depending on the type of equipment, methods employed, distance between source and receptor, duration, number of perceived vibration events, and local geology.

One major concern with regard to construction vibration is potential building damage, which is assessed in terms of peak particle velocity (PPV) and typically in units of inches per second (in/sec). In addition to structural damage, the groundborne vibration may also induce human annoyance. Human annoyance thresholds are typically much lower than building damage thresholds, both of which are discussed in Section 3.1.3.

3. Noise Analysis Overview

3.1 Regulatory Overview and Impact Criteria

3.1.1 California Code of Regulations

Title 24, Part 2, Chapter 12, Section 1207 covers sound transmission regulations that are applicable to all new construction in the state of California. Section 1207.4 stipulates that interior noise levels generated by exterior noise sources shall not exceed 45 dB CNEL or L_{dn} within a habitable room (whichever noise metric is utilized in the noise element of the local general plan). The City of Glendale General Plan relies upon the CNEL metric for compliance assessment and thus, interior noise levels within habitable spaces as a result from exterior noise sources cannot exceed 45 dBA CNEL. Section 1207.5 directs the reader to the California Green Building Standards Code, Chapter 5, Division 5.5 for additional sound transmission requirements.

3.1.2 California Green (CalGreen) Environmental Comfort

Title 24, Part 11, Section 5.507 specifies environmental comfort with regard to noise exposure for non-residential buildings. The subsections therein provide means of acoustical controls through which building assembly and component requirements are used to assess exterior noise issues. Section 5.507.4 stipulates two compliance approaches. The prescriptive method is utilized when occupied structures are planned with a 65 CNEL contour of an airport, railroad, highway traffic, or industrial noise source. In this case, the wall and roof-ceiling assemblies are required to achieve a composite sound transmission class (STC) rating of at least 50, or a composite outdoor-indoor transmission class (OITC) rating of not less than 40. Additionally, exterior windows are required to be rated with a minimum STC of 40, or OITC of 30. The performance method does not require specific STC and OITC ratings; however, it requires that the interior noise environment attributable to outdoor noise sources not exceed an hourly L_{eq} of 50 dBA. This could be done by means of building envelope construction and/or exterior features such as noise walls or berms. The performance method requires an acoustical analysis documenting compliance with the interior sound level limits, prepared and approved by the architect or engineer of record.

3.1.3 California Department of Transportation (Caltrans) - Vibration

The Caltrans Transportation and Construction Vibration Guidance Manual (Caltrans 2013) (Caltrans Manual) provides guidance for the analysis of vibratory impacts generated by transportation and construction projects. As discussed in the following Section, the City of Glendale relies on human perception to determine violations. The Caltrans Manual identifies the following for “distinctly perceptible” vibration perceptions:

- 0.25 peak particle velocity (PPV) in inches per second (in/sec) for transient sources (sources that induce a single vibratory event, such as blasting); and
- 0.04 PPV in in/sec for continuous or frequent sources (such as pile driving equipment and other construction activities that generate multiple vibration-intensive events across a given period).

Caltrans also has a policy regarding highway noise, but this generally applies to highway capacity improvement projects and therefore would not apply to the SGCP project.

3.1.4 City of Glendale Municipal Code

The City regulates noise through the City’s Municipal Code (GMC), Chapter 8.36 Noise Control, Articles I and II. The following sections of the Ordinance provide sound level limits between adjacent properties, noise insulation standards, and construction noise limits (but typically not public roadways which are generally considered to be part of the ambient noise environment).

The City of Glendale regulates noise limits by assessing the offending noise sources influence on the existing ambient noise environment. In order to assess noise with this approach, the City provides a list of presumed ambient noise levels applicable to varying zone types and times of day which are used to address compliance. This levels, reported in Section 8.36.040 Presumed Noise Standards are listed in Table 3.1-1 below.

Table 3.1-1
Glendale Municipal Code – Presumed Noise Standards

Zone	Location	Time Period	5-Minute Average Sound Level (dBA)
Residential (Single Family and Duplex) and Cemetery	Exterior	Daytime Nighttime	55 45
Residential (Multifamily, Hotels, Motels, and Transient Lodging)	Exterior	Anytime	60
Central Business District and Commercial	Exterior	Anytime	65
Industrial	Exterior	Anytime	70
Residential (All Residential Zones)	Interior	Daytime	55
		Nighttime	45

Source: Glendale Municipal Code, 1995

A specific definition of daytime periods is not provided in the GMC; however, nighttime periods are defined in Section 8.36.020 as between 10 p.m. and 7 a.m.

As discussed in Section 8.63.030 Decibel Measurement Criteria and Section 8.36.050 Minimum and Maximum Ambient Noise Levels, measured noise exterior or interior levels measured while the offending noise source is active, is compared with these presumed noise standards, as applicable to the receiving land use type. Section 8.36.050 continues to elaborate on the various conditions that affect impact assessment by providing the following assessment scenarios:

- If ambient noise levels measured at the receiver while the offending noise source is inactive are below the applicable presumed noise standard, the resulting 5-minute (or more) Leq of this measurement constitutes the actual ambient noise standard at the receiver, and violations would occur if acoustic contribution from the offending noise source elevated the measured ambient noise level by more than 5 dBA.
- If ambient noise levels measured at the receiver while the offending noise source is inactive are at or above the applicable presumed noise standard, the resulting 5-minute (or more) Leq of this measurement constitutes the actual ambient noise standard at the receiver, and violations would occur if acoustic contribution from the offending noise source elevated the measured ambient noise level by more than 5 dBA. However, the measured ambient noise levels may not exceed the presumed noise standard by 5 dBA. By way of example, if the presumed standard is 45 dBA and the measured ambient is 48 dBA, the resulting violation threshold would be 53 dBA (48 dBA + 5 dBA). However, if the measured ambient was 57 dBA, the resulting violation threshold would be capped at 55 dBA (45 dBA [presumed standard] + 5 dBA [allowable increase due to elevated measured ambient] + 5 dBA [increase leading to violation]).
- In cases where the assessment location occurs at the boundary line between two zones, the arithmetic average of both land use presumed noise standards is used.

Section 8.36.080 Construction on Buildings, Structures and Projects regulates noise produced by construction activities when occurring within 500-feet of any residential land use. Construction activities within this distance are prohibited between the hours of 7 p.m. and 7 a.m. and all day on Sundays and holidays outlined in Chapter 3.08 of the GMC, unless a permit has been granted beforehand from the building official. Permits are not required to perform emergency construction work.

Section 8.36.140 Proposed Development Project allows the City's director of community development or the building official to require an acoustic analysis as a condition of approval as a part of the building permit process or other approval procedures either has reason to believe that a new development project, addition, modification, or any other changes thereto would not conform with the permitted noise level standards.

Section 8.36.210 Vibration prohibits the operation or permission of operation of any device that creates vibration in excess of the perception threshold of an individual at or beyond the source property boundary if the source is located on private property, or if it exceeds the perception threshold of an individual at one hundred and fifty feet from the source within a public space or public right-of-way.

Section 8.36.290 Exemptions contains a list of activities that are exempted from the provisions of Chapter 8.36 of the GMC. List item "K" exempts any activity, operation, or noise which cannot feasibly be brought into compliance when it is technically infeasible to do so. The party responsible for the exceedance is also responsible to prove that compliance cannot not be achieved despite use of mufflers, shields, sound barriers, and/or any other noise reduction device or techniques during the operation of the offending equipment.

3.1.5 City of Glendale General Plan

The Noise Element of the City's General Plan (City of Glendale 2007) provides a comprehensive program for noise management during the planning process. The General Plan outlines goals and policies to achieve and maintain land uses that are compatible with environmental noise levels.

The City uses the Noise/Land Use Compatibility Table shown below in Table 3.1-2 for evaluating land use noise compatibility for proposed developments.

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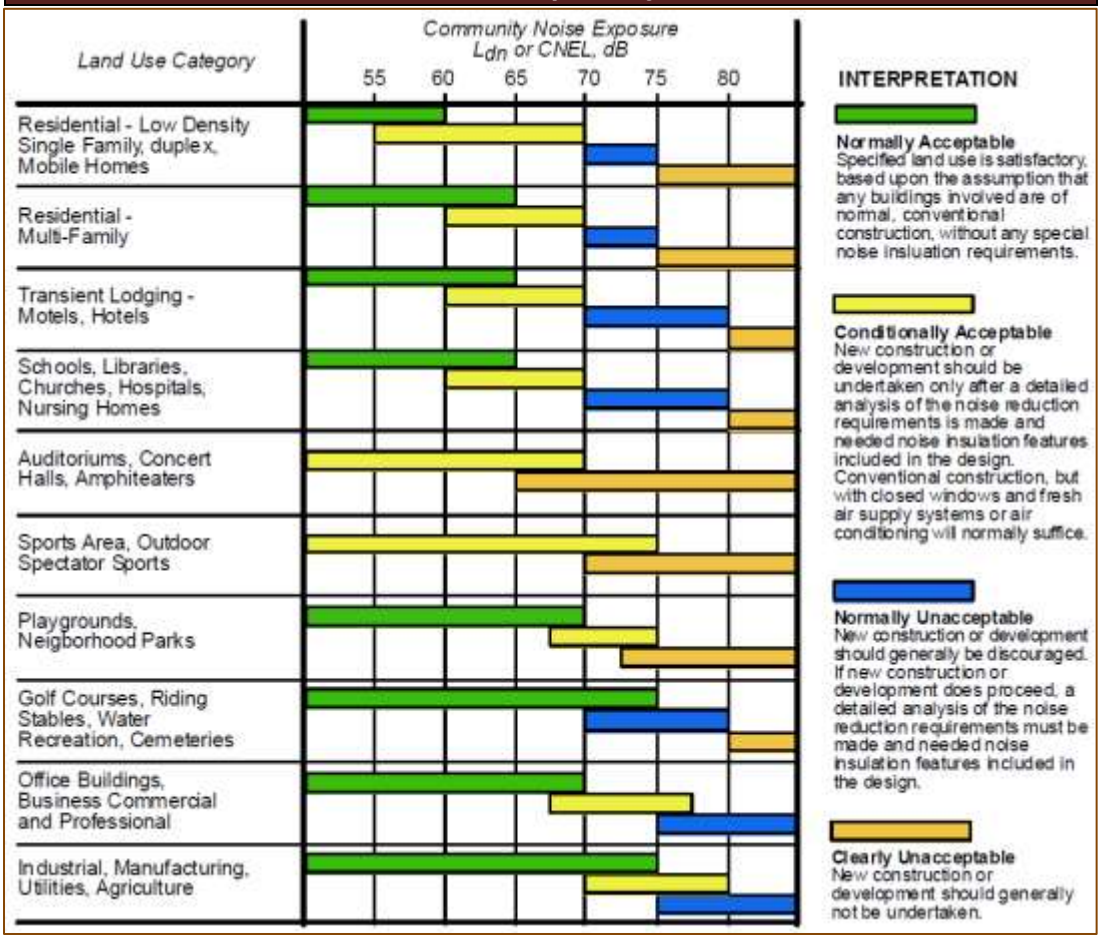
Table 3.1-2
Land Use Noise Compatibility Guidelines



Source: City of Glendale 2007

As Table 3.1-2 indicates, the City's exterior "acceptable" noise level standard for residential uses (single and multiple dwelling units) is 60 dBA L_{dn}/CNEL or less for low density residential (single family, duplex, mobile homes) and 65 dBA L_{dn}/CNEL for Multi-family residential, hotel/motels, schools, libraries, churches and hospitals. "Conditionally Acceptable" noise exposures for land use indicates that standard construction methods will attenuate exterior noise to an acceptable indoor noise level and people can carry out outdoor activities with minimal noise interference. Residential land uses with exterior noise levels of up to 70 dBA L_{dn}/CNEL would require a detailed analysis of the noise reduction requirements and subsequent implementation of necessary noise insulation features in the development design to achieve the City interior noise standard of 45 dBA CNEL. For "normally unacceptable" land uses, new construction and development is discouraged, however, it may be allowed provided that a detailed analysis of the noise reduction requirements is made and subsequent implementation of necessary noise insulation features are included in the design to achieve interior noise standards.

For residential land uses, the "clearly unacceptable" noise level standard is greater than 75 dBA L_{dn}/CNEL, and new construction should generally not be undertaken. Outdoor activities would be exposed to severe and unacceptable noise interference, and structures would require extensive mitigation techniques to make the indoor environment acceptable.

General Plan Policy 3.1 ensures that the aforementioned acoustic studies would be prepared by a qualified consultant who would propose conditionals of approval or mitigation measures in order to achieve compliance with the interior and exterior noise standards when future development is proposed in areas exposed to levels greater than 65 dBA CNEL. General Plan Policy 3.2 restates the City's commitment to enforcing interior noise level standards stipulated by the California Building Code (Title 24, Part 2, Chapter 12, Section 1207).

3.2 Thresholds of Significance

The City of Glendale determines impacts related to noise and vibration using the State California Environmental Quality Act (CEQA). Per CEQA Guidelines Appendix G (as listed for Noise), the Project would be considered as having a significant impact if it resulted in:

- Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies
- Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, exposure of people residing or working in the project area to excessive noise levels
- For a project within the vicinity of a private airstrip, exposure of people residing or working in the project area to excessive noise levels

4. Existing Conditions

4.1 Existing Land Use and Zoning

South Glendale is a highly-developed area with mixture of land uses including single-family and multi-family residential, industrial, commercial retail, office space, and a transportation center. Residential uses comprise the majority of developed land in the SGCP area and are generally located throughout the vicinity.

4.2 Existing Noise Levels

Ambient noise levels were measured within the SGCP area to characterize the existing sound environments and assist in determining constraints and opportunities.

4.2.1 Baseline Ambient Noise Survey

After a preliminary review of online aerial imagery, the draft community plan, and input from City staff, multiple field noise survey location candidates were identified in the SGCP area for short-term (ST) Sound Pressure Level (SPL) measurements. ST measurements were conducted on July 18th, 2017. As depicted in Figure 4.2-1, a total of 8 measurement locations took place within the SGCP area. All ST measurements were conducted in the attendance of the sound level meter (SLM) operator, who made simultaneous documentation of observations (e.g., perceived sound sources and environmental conditions).

4.2.1.1 Instrumentation

The ST measurements were conducted using a Larson-Davis (LD) Model LxT (serial number [SN] 4485) SLM, rated by the American National Standards Institute (ANSI) as Type 1 per IEC 61672-1:2013, ANSI S1.4, and ANSI S1.43. The SLM microphone was fitted with standard 3.5-inch diameter spherical-shaped open-cell foam windscreen and positioned roughly 5 feet above grade. The microphone was also placed at least 10 feet from any vertical acoustically reflecting surfaces. The SLM was set using slow time-response and the A-weighting scale. SLM calibration was field-checked before and after each measurement period with an L/D Model CAL200 (SN 5768) acoustic calibrator. Where not already described, sound level measurements performed for this field survey were conducted in accordance with applicable portions of International Organization for Standardization (ISO) (1996 parts 1, 2, and 3.) standards. A Kestrel Model 3500 (SN 2058303) handheld anemometer was used to determine average wind speed, temperature, barometric pressure, and relative humidity before each round of community measurements.

Measurement ST1 was conducted in the southeastern parking lot of the Larry Zarian Transportation Center, approximately 130 feet from the nearest railroad track,180 feet from Gardena Avenue edge of pavement (EOP), and 35 feet from the abutting parcel to the southeast. The primary noise source at this location was vehicular traffic on Glendale Avenue. Additional noise sources included train horn soundings, train pass-bys, speech from Larry Zarian Transportation Center visitors, fixed-wing aircraft flyovers, and HVAC operation to the southeast.

Measurement ST2 was conducted in a retail development parking lot on the northeast corner of the South Central Avenue and West Windsor Road intersection. The primary noise source at this location was vehicular traffic on South Central Avenue. Additional noise sources included distant train horn soundings, HVAC, and speech from parking lot activities.

Measurement ST3 was conducted in front of a large warehouse facility located at 4484 San Fernando Road, approximately 30 feet from the San Fernando Road EOP and 140 feet from the nearest railroad track. The primary source of noise at this location was vehicular traffic from San Fernando Road. Additional sources included occasional mechanical noise emanating from within the open-door warehouse facility.

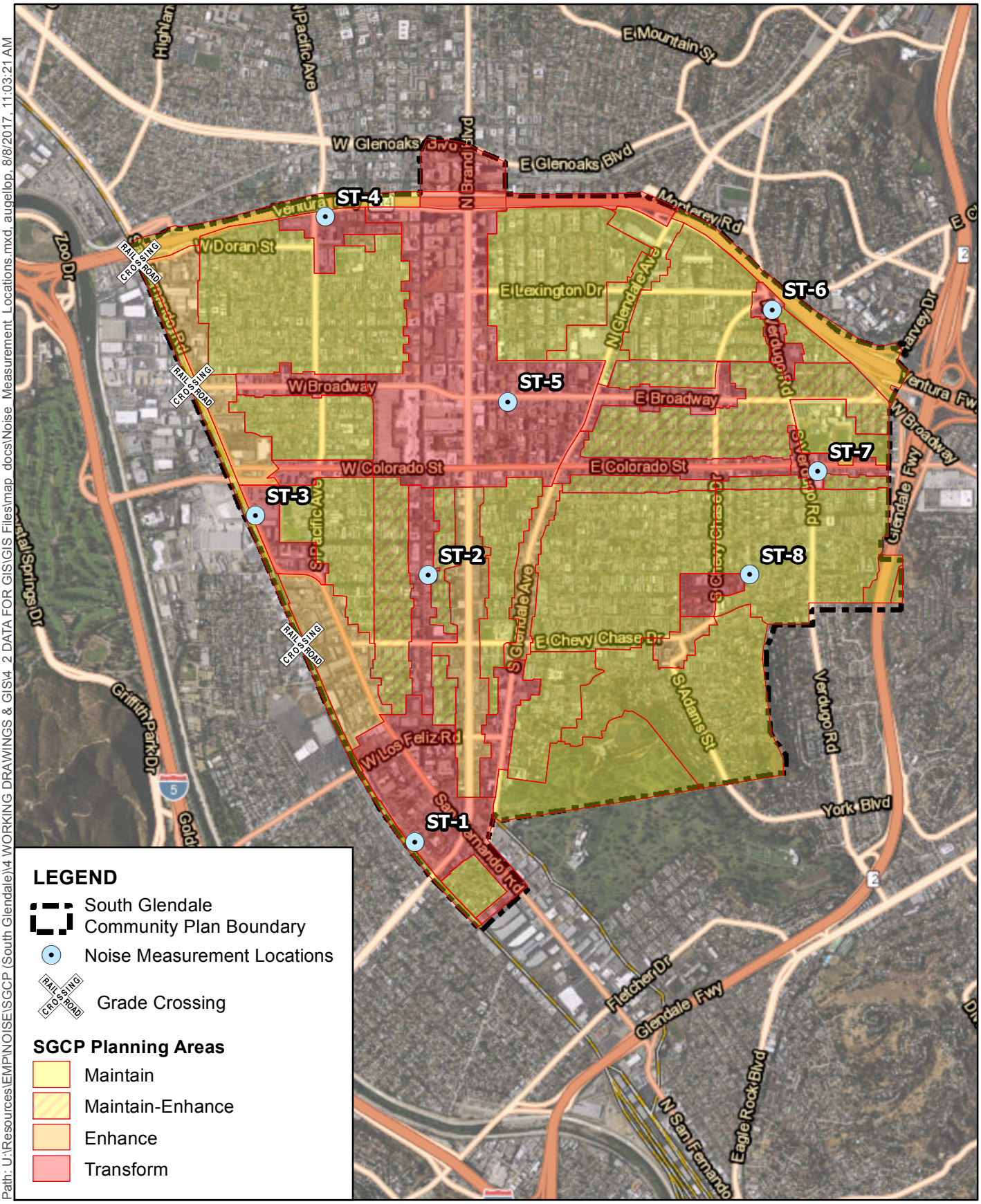
Measurement ST4 was conducted in the large parking area located on the northeast corner of the Pioneer Drive and North Pacific Avenue intersection, immediately south of the SR-134 mainline and westbound (WB) SR-134 on-ramp from North Pacific Avenue. The measurement was located approximately 100 feet south of the aforementioned on-ramp EOP and 180 feet west of the North Pacific Avenue EOP. An existing noise barrier along the SR-134 WB ramp begins approximately 245 feet from the North Pacific Avenue EOP, thus, this measurement location is representative of unmitigated traffic noise levels currently experienced by this currently non-noise sensitive land use. The primary source of noise at this location was highway traffic on SR-134. Additional noise sources included traffic noise contributions from North Pacific Avenue and intermittent fixed-wing aircraft flyovers.

Measurement ST5 was conducted in a parking area on the southeast corner of the South Louise Street and East Broadway intersection, located approximately 18 feet from the EOP of South Louise Street and 85 feet from the East Broadway EOP. The primary noise source at this location was vehicular traffic from East Broadway and South Louise Street. Additional noise sources included dogs barking, radio-communications from construction workers north of the measurement location, and speech from parking lot activities.

Measurement ST6 was conducted in a parking area associated with 320 North Verdugo Avenue, approximately 40 feet from the EOP of North Verdugo Avenue and 158 feet from the EOP of North Chevy Chase Drive. The primary noise source at this location was vehicular traffic from North Verdugo Road. Additional noise sources included traffic from SR-2 and North Chevy Chase Drive, rustling leaves, and birdcalls.

Measurement ST7 was conducted within a parking lot associated with 1416 East Colorado St on the southeast corner of the intersection of Colorado Street and South Verdugo Road, approximately 90 feet from the EOP of Colorado Street and 190 feet from the EOP of Verdugo Road. The primary noise source at this location was traffic on Colorado Street and South Verdugo Road. Additional noise sources included typical parking lot sounds associated with the adjacent grocery store including speech, grocery cart rolling, and vehicle doors and trunks being shut.

Measurement ST8 was conducted at the Windsor Mini Park at the southeast corner of Porter Street and East Windsor Road, approximately 20 feet from the EOP of East Windsor Road and 90 feet from the EOP of Porter Street. The primary noise sources at this location were operating HVAC systems at the apartments on Winsor Road. Additional noise sources included intermittent traffic on East Windsor Road and Porter Street, rustling leaves, birdcalls, children playing, and dogs barking.



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Source: City of Glendale 2017; Esri, HERE, DeLorme,© OpenStreetMap contributors; DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, IGN, and the GIS User Community

2,500 0 2,500 Feet

Scale: 1:30,000 1 in = 2,500 feet

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FIGURE 4.2-1
NOISE MEASUREMENT LOCATIONS AND SGCP PLANNING AREAS

SOUTH GLENDALE COMMUNITY PLAN

Results from the short-term measurement survey are provided below in Table 4.2-1. ST measurements durations were 15-minutes, thus, the 15-minute average Leq level is presented as the primary noise level metric. The presented data is not intended for compliance assessment with City's zone-specific 24-hour CNEL compatibility thresholds, but rather to provide insight into existing neighborhood-specific daytime noise levels and the character of the existing noise sources listed in the detailed descriptions.

Table 4.2-1
Existing Community Noise Measurement Results

Meas. ID	Date	Start Time (hh:mm)	Duration (Minutes)	L_{eq}	L_{min}	L_{max}	L_{10}	L_{50}	L_{90}
ST1	7/18/17	09:23	15	60.7	45.3	78.3	57.8	53.1	51.2
ST2	7/18/17	10:09	15	57.5	50.0	72.8	59.5	55.8	52.7
ST3	7/18/17	10:41	15	70.2	53.0	82.3	73.5	68.8	60.2
ST4	7/18/17	11:11	15	64.7	60.2	77.1	66.4	63.3	61.9
ST5	7/18/17	12:04	15	59.4	50.5	73.7	61.3	58.2	54.8
ST6	7/18/17	15:17	15	66.3	54.1	88.2	66.3	60.3	56.9
ST7	7/18/17	14:44	15	60.0	55.0	74.0	61.2	58.7	57.3
ST8	7/18/17	14:16	15	54.7	46.9	69.3	56.2	50.9	49.1

4.2.2 Existing Traffic Noise

Vehicles traveling on SR-134 and SR-2 dominate the existing ambient environment around the northern and eastern boundary of the SGCP area, further supplemented by arterial roadways such as San Fernando Road and Colorado Street. As shown in Table 4.2-1, measured existing noise levels in the SGCP area ranged from 55 to 70 dBA. Since the field observations made during these measurements listed vehicular traffic noise as the primary noise source, these levels are considered representative of existing traffic noise contributions at the eight discrete measurement locations. The majority of noise sensitive receivers located adjacent to the SR-2 and SR-134 right-of-way are currently benefitting from existing traffic noise barriers constructed in varying heights and points along the freeways.

4.2.3 Existing Rail Traffic Noise

Railway noise is generated from the rail traffic on the rail corridor that outlines the western boundary of the SGCP area. This corridor consists of freight operations and regional passenger rail operations (Amtrak and Metrolink). Noise associated with these operations includes locomotive engines, wheel-to-rail and switch noise, horn sounding, station approach and disembark bell sounding, emergency signaling devices, and stationary bells associated with the at-grade crossings at Chevy Chase Drive, West Broadway, and Doran Street. Also located within this corridor is the Larry Zarian Transportation Center, which serves as a stop for Metrolink commuter and Amtrak passenger trains on the corridor, with exception of certain express rail services. Passenger rail movements occur through the SGCP area multiple times per hour between 5 a.m. and 11 p.m. every day. Freight trains also operate along the corridor daily. Rail traffic noise levels greater than or equal to 60 dBA L_{dn} (metric used by the Federal Railroad Administration [FRA]), extend into the SGCP area from the railroad alignment at a distance of approximately 180 feet. Within a 700-foot distance of the three at-grade crossings, noise levels generated by horn soundings will extend the 60 dBA L_{dn} distance to approximately 1060 feet.

4.2.4 Existing Aircraft Noise

The SGCP area experiences regular audible aircraft overflights from small propeller aircraft, jet aircrafts, and intermittently from helicopters. The nearest public or private airport, Hollywood Burbank Airport, is located approximately 5.1 miles northwest of the study area. The Los Angeles County Airport Land Use Plan (Los Angeles 1991) does not include the SGCP area within any airport's Planning Boundary/Airport Influence Area. While aircraft are occasionally audible it is unlikely that they are making quantifiable contribution to the CNEL level in the SGCP area.

4.2.5 Existing Stationary Noise

Ambient noise levels throughout the SGCP areas are typically dominated by surface transportation sources, but local stationary noise sources may also contribute to ambient noise levels in some locations. Stationary noise sources in the SGCP area are generally characterized by the specific land uses. Existing residential areas experience noise sources from stationary noise sources typical of an urban environment, including HVAC operation from nearby residential and non-residential land uses, landscaping, dogs barking, vehicle idling, children playing, and operating entertainment systems with loudspeakers.

5. Noise Analysis Methodology

5.1 Surface Transportation

5.1.1 Roadway Traffic

Existing and future traffic noise levels were predicted using the FHWA Traffic Noise Model (TNM) Version 2.5, the most recent version approved by the FHWA at the time of this analysis. This screening-level noise analysis considered the following TNM input parameters: traffic mix, vehicle speed, traffic volume, and roadway-specific paved width. While the model has the capability to account for roadway gradients, and shielding effects from terrain and buildings/barriers, this analysis assumed flat topography throughout SGCP area and omitted existing structures that may offer additional shielding to noise sensitive land uses. However, it is noted that highway noise barriers do exist on many of the sections of SR-134 that are adjacent to residential neighborhoods in the SGCP area, so predicted noise contours in these areas would be particularly conservative (residential receptors located immediately behind freeway noise barriers typically receive a 5 to 10 dBA noise reduction).

Existing (2017) and future (2040) traffic volumes for the local roadways were provided by consulting firm Fehr & Peers in conjunction with their South Glendale Community Plan Transportation Analysis Report (Fehr & Peers 2017). The heavy truck and medium truck mixes for local roadways were determined by traffic observations made during the existing ambient noise measurement survey. On these local roadways, modeled truck percentages ranged from 2-3%. The truck mixes for freeways were calculated from traffic quantities on aerial imagery, resulting in a 3% medium and heavy truck mix for SR-134, and 4% medium truck and 1% heavy truck ratio on SR-2.

Traffic counts provided by Fehr & Peers included existing and future traffic volumes at an hourly resolution, allowing for precise calculation of specific traffic volumes across the daytime, evening, and nighttime time periods. Using an array of modeled receiver locations at varying distances from the edge-of-pavement of each modeled roadway in TNM, L_{eq} values were calculated at pertinent distances and subsequent converted into CNEL values for report tables and for use in the generation of figures displaying isopleths or contour buffers of applicable CNEL values. Attachment C displays detailed traffic information used for modeling all roadway segments, including speed limits, roadway paved widths, existing and future time period-specific ADTs, and truck traffic percentage mixes.

5.1.2 Rail Noise

Noise generated by railroad operations was modeled following recommendations in the FTA-recommended Noise Impact Assessment Spreadsheet (Harris Miller Miller & Hanson, Inc. 2007). Input parameters used in these analyses included train type, frequency of pass-bys during daytime (7 a.m. – 10 p.m.) and nighttime (10 p.m. and 7 a.m.) hours, speed of travel, and total number of rail cars. The Noise Impact Assessment Spreadsheet has a calculation output of a day-night noise levels (L_{dn}), although this is calculated differently from CNEL values. L_{dn} values are typically always within 1 dBA of CNEL values; thus, this analysis considers the L_{dn} output of the Impact Assessment Spreadsheet to be analogous to the CNEL values required for land use planning and noise assessment.

Both passenger and freight rail speeds through the SGCP area were modeled to be traveling at speeds of 30 miles per hour (mph) through the majority of the area, with exception for rail segments near the Larry Zarian Transportation Center, where modeled passenger rail speeds were reduced to 15 mph. Passenger trains were modeled with a single locomotive engine, while freight trains were assumed to have an average of three. Input parameters for daytime/nighttime pass-by frequencies were obtained from published Amtrak and Metrolink timetables, details from which are shown below in Table 5.1-1.

Freight train schedules are not standardized or publicly available. Thus, this analysis used assumptions made in the Technical Appendix to the City of Glendale Noise Element of the General Plan (Mestre Greve Associates 2005), which, from discussions with Union Pacific representatives and on-site observations, estimated an average of 10 freight train pass-bys each day. With no additional available information on specific schedules, this study interprets "each day" to mean during daytime hours; However, this study assumes that at least one freight train will operate along this track between the nighttime hours of 10 p.m. and 7 a.m., to provide for a worst case analysis.

Table 5.1-1
Passenger Rail Operations Assumptions

Train Service	Typical Locomotives / Cars Per Train	Quantity per Time Frame		Modeled Speed (mph)
		Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)	
Metrolink	1 / 5	56	7	30 / 15
Amtrak	1 / 6	12	0	30
Freight	3 / 80	9	1	30

Sources: Metrolink 2017, Amtrak 2017

Due to the presence of roadway grade crossings, train horn sounding was modeled at grade crossings as required by the Code of Federal Regulations (CFR) 49 CFR Part 222 Use of Locomotive Horns at Public Highway-Rail Grade Crossings. As stipulated in 49 CFR Part 222, when trains are traveling below 60 miles-per-hour, locomotive horns are required to be sounded no sooner than 15 seconds and no later than 20 seconds before the locomotive enters the crossing. Thus, at a modeled speed of 30 miles-per-hour at the crossings, or 44 feet-per-second, train horn soundings were modeled to occur at the 17-second approach mark, or, approximately 750 feet from either side of the grade crossing.

Additional details regarding input parameters for the Impact Assessment Spreadsheet are included in Attachment B.

6. Future Noise Environment and Impacts

6.1 Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies

6.1.1 Vehicular Noise

The vehicular traffic from adjacent freeways is the dominant noise source affecting land use compatibility within the SGCP area. The distances to the 60 dBA, 65 dBA, 70 dBA, and 75 dBA CNEL noise contours attributed to traffic volumes attributed to growth and implementation of the community plan are shown in Table 6.1-1. Distances to the roadway noise contours are based on an assumed hard, flat site, with no intervening barriers or obstructions. Existing and Future year noise contours for the proposed SGCP area are shown graphically, together with contributions from predicted existing and future rail noise, in Figures 6.1-1 and 6.1-2, respectively.

Table 6.1-1
Future Vehicle Traffic Noise CNEL Contour Distances for the South Glendale Community Plan Area

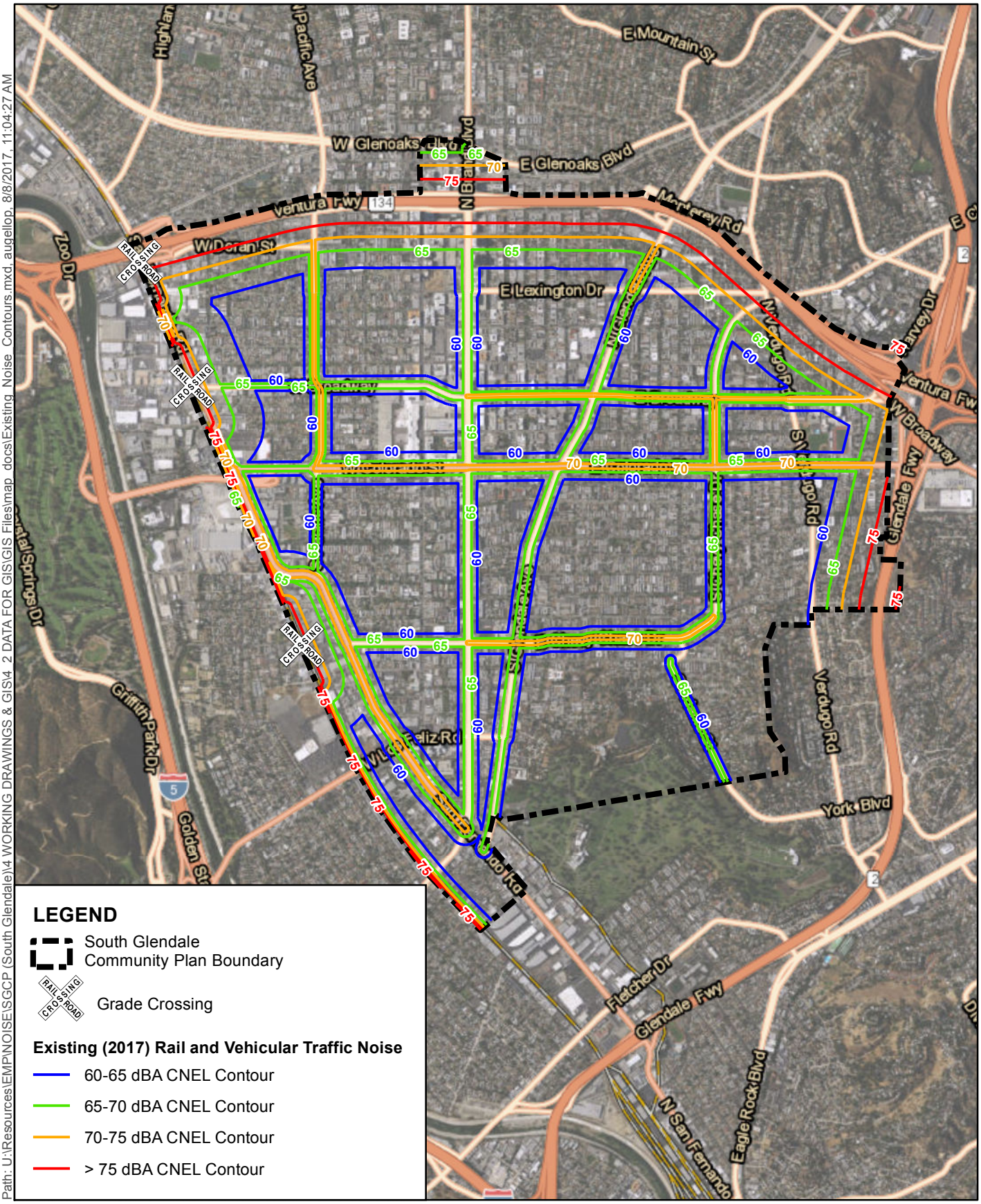
Roadway	Modeled Roadway Segment	Distance to Predicted dBA CNEL (Approximate Feet from Roadway Edge of Pavement)			
		75	70	65	60
Brand Boulevard	North of Lexington Drive	<1	<1	53	190
	North of Broadway	<1	<1	42	168
	North of Colorado St	<1	<1	46	176
	North of Chevy Chase Drive	<1	<1	36	155
	North of Los Feliz Road	<1	<1	42	169
	North of San Fernando Road	<1	<1	43	174
Broadway	East of San Fernando Road	<1	<1	20	97
	East of Pacific Avenue	<1	4	51	160
	East of Brand Boulevard	<1	4	53	163
	East of Glendale Avenue	<1	9	66	182
	East of Verdugo Road	<1	17	88	206
Chevy Chase Drive	East of San Fernando Road	<1	3	50	159
	East of Brand Boulevard	<1	14	81	198
	East of Glendale Avenue	<1	14	81	199
	North of Acacia Avenue	<1	<1	16	91
	North of Colorado St	<1	<1	40	150
	North of Broadway	<1	<1	30	126
Colorado Street	East of San Fernando Road	<1	<1	31	127
	East of Pacific Avenue	<1	25	121	279
	East of Brand Boulevard	<1	23	110	246
	East of Glendale Avenue	<1	19	100	237
	East of Verdugo Road	<1	17	93	231
Glendale Avenue	North of Lexington Drive	<1	10	83	236
	North of Broadway	<1	2	60	196
	North of Colorado St	<1	4	64	206
	North of Chevy Chase Drive	<1	2	53	178
	North of Los Feliz Road	<1	5	62	194
	North of San Fernando Road	<1	4	52	163
Pacific Avenue	North of Lexington Drive	<1	12	75	192
	North of Broadway	<1	7	59	173
	North of Colorado St	<1	9	65	181
	North of San Fernando Road	<1	<1	18	91
San Fernando Road	North of Broadway	<1	14	88	225
	North of Colorado St	<1	12	83	220
	North of Chevy Chase Drive	6	44	119	197
	North of Los Feliz Road	<1	24	115	265
	East of Brand Boulevard	<1	38	148	296
York Boulevard / South Adams Street	East of Verdugo Road	<1	<1	19	86
Freeways					
State Route 134	At Pacific Avenue	358	613	865	1211
	At Central Avenue / Brand Blvd	361	614	864	1214
	At Glendale Avenue	380	627	883	1239
State Route 2	At York Boulevard / Delevan	264	594	870	1212

At any specific noise sensitive land use, the actual existing noise levels would depend upon not only the current source noise level, but also the nature of the path of sound from the source to the receptor. In many cases, structures, ground topography, and other obstacles obstruct the direct line of sight from receptor to the traffic noise sources, which could significantly reduce noise exposure at discrete receptor locations.

Shown in Figure 6.1-1 and 6.1-2, are existing and future combined traffic and rail noise levels contours within the proposed SGCP area (more information on rail noise predictions Section 6.1.2). In several areas it appears that existing and proposed residential use areas would, in cases of residences close to the freeways and major roadways, exceed the General Plan Noise Element “conditionally acceptable” thresholds for residential land uses (70 dBA CNEL) for both existing and future conditions. Noise levels greater than 75 dBA CNEL are considered “clearly unacceptable” for residential land uses, but may be allowed under certain conditions for land uses such as business commercial, industrial, and other non-noise-sensitive land uses. Land uses located adjacent to SR-134 and SR-2 have the potential to be exposed to noise levels greater than 75 dBA CNEL in areas where existing noise barriers are not currently constructed. Broader mitigation for proposed development, such as additional noise barriers adjacent to freeways and roadways, can reduce exterior noise to levels compliant with General Plan Noise Element guidelines.

In the SGCP area, future noise levels for residential land uses would be “clearly unacceptable” (i.e., greater than 75 dBA CNEL) at areas located within approximately 358 to 380 feet from the SR-134 EOP and 264 feet from the SR-2 EOP, and normally unacceptable (i.e., greater than 70 dBA CNEL) at areas located within approximately 613 to 637 feet from the SR-134 EOP and 594 feet from the SR-2 EOP. These areas are currently developed; however, the proposed SGCP and associated discretionary actions would result in changes to the land use in these areas, including the introduction of new sensitive land uses. The development of new noise-sensitive land uses proposed in the SGCP may subject receptors to noise levels that exceed General Plan guidelines in vicinities not shielded by existing highway noise barriers. The plan proposes to transform neighborhoods within these areas, such as those located in the immediate vicinity of the freeways in the Tropico, Pacific Edison Center, Pacific Avenue Gateway, Downtown, Verdugo Road, and East Colorado Gateway areas, all have potential to experience CNEL levels greater than 75 dBA. Per Table 2 of the General Plan Noise Element, any future residential use in areas experiencing noise levels above 65 dBA CNEL would be required to meet exterior and interior noise standards applicable to the proposed land use category by means of both exterior and interior noise attenuation measures.

Policies in the proposed SGCP, General Plan, and California Building Code would reduce traffic noise exposure because they set standards for the siting of noise sensitive land uses. Noise Element Policy 3.1 requires a noise study prepared by qualified consultants for new land use, as described in the Land Use column of Table 2 of the Noise Element in areas where the existing or future noise levels exceed or would exceed the “acceptable” noise level thresholds. Site-specific exterior noise analyses that demonstrate that the project would not place sensitive receptors in locations where the exterior existing or future noise levels would exceed the noise compatibility guidelines of the General Plan would be required as part of future discretionary proposals. Site-specific interior noise studies demonstrating compliance with the interior noise compatibility guidelines of the General Plan would also be required for land uses located in areas where exterior noise levels exceed the noise and land use compatibility thresholds as defined in the General Plan, and Noise Element Policy 3.2 requires continued enforcement of California Building Code (Title 24 Compliance Reports) to demonstrate that the building envelope acoustic performance results in interior noise levels of 45 dBA CNEL or less. With this framework, exterior traffic noise impacts associated with new development requiring discretionary approvals and interior traffic noise impacts for both ministerial and discretionary projects would be less than significant.



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Source: Esri, HERE, DeLorme,© OpenStreetMap contributors; DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, IGN, and the GIS User Community

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Scale: 1:30,000 1 in = 2,500 feet

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FIGURE 6.1-1
EXISTING (2017) RAIL AND VEHICULAR TRAFFIC NOISE CONTOURS

SOUTH GLENDALE COMMUNITY PLAN

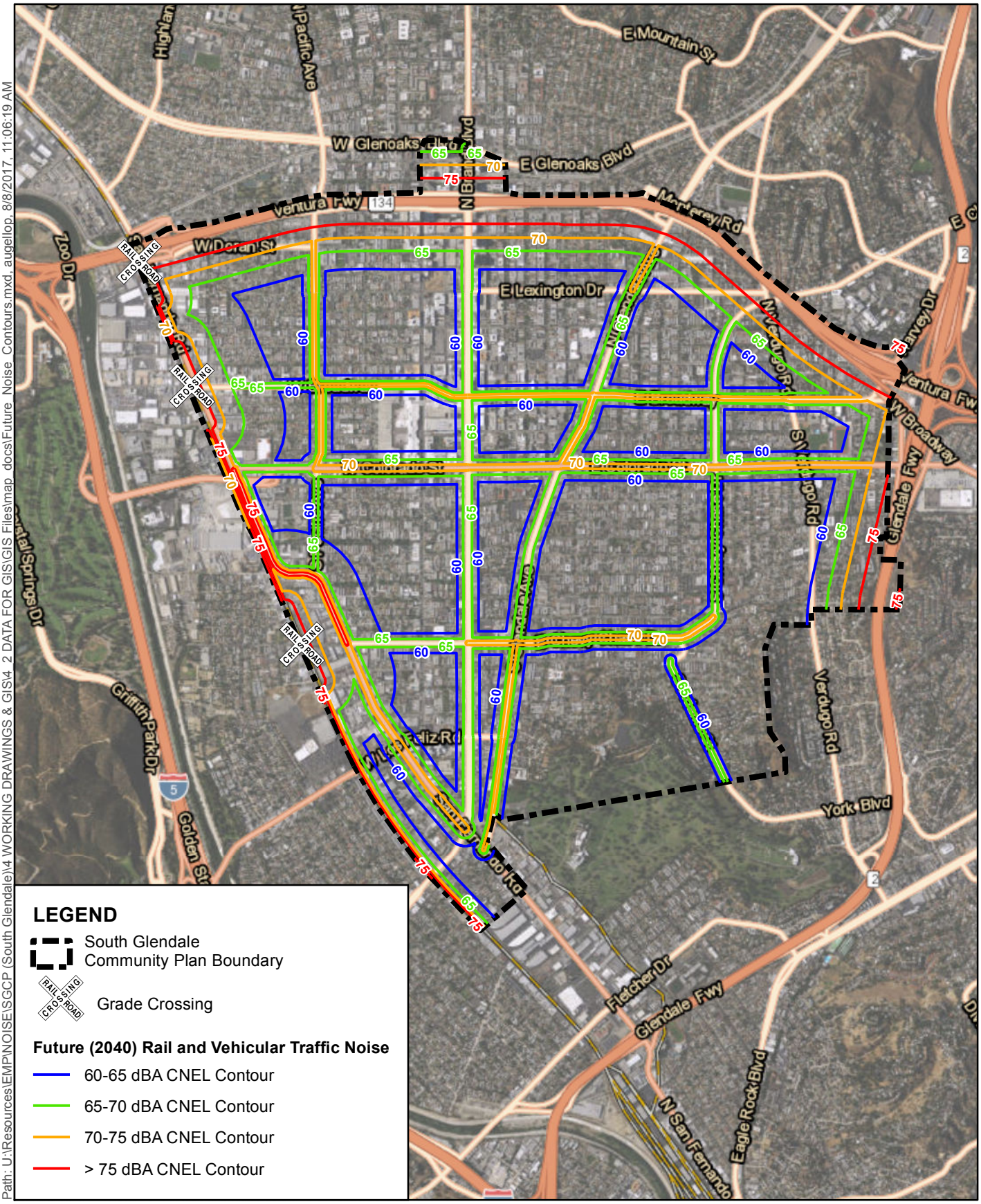

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FIGURE 6.1-2
FUTURE (2040) RAIL AND VEHICULAR TRAFFIC NOISE CONTOURS

SOUTH GLENDALE COMMUNITY PLAN

6.1.2 Rail Noise

Railway noise is generated from the rail traffic along the SGCP area western boundary, consisting of freight trains and passenger rail (Amtrak and Metrolink). The corridor contains a total of three at-grade crossings located at Chevy Chase Drive, Broadway, and Doran Street. Predicted noise levels in proximity to these grade crossings assumed the occurrence of train horn soundings as outlined in Section 5.1.2. Additionally, modeled passenger train speeds were reduced to 15 mph in the vicinity of the Larry Zarian Transportation Center to reflect the slowing and stopping of passenger trains at the station.

Prediction model results shown in Table 6.1-2 provide 60 dBA Ldn noise contour distances that are calculated assuming flat-site conditions and no intervening existing buildings or barriers that would provide noise attenuation, which would represent a conservative, worst-case analysis.

Detailed FTA model runs showing modeled input parameters and detailed results are included in Attachment B.

Table 6.1-2
Distance of Predicted Existing 60 dBA (L_{dn}) Noise Levels from Rail Center Alignment

Source	Rail Section Scenario		
	Typical, No Slowing, No Horn Sounding	Transit Center Vicinity, With Slowing, No Horn Sounding	Grade Crossing, No Slowing, With Horn Sounding
Metrolink Passenger Rail	120 feet	190 feet	880 feet
Amtrak Passenger Rail	30 feet	47 feet	218 feet
Freight Rail	87 feet	87 feet	280 feet
Aggregate of Rail Sources	180 feet	245 feet	1060 feet

The California High-Speed Rail Authority is currently studying use of the current railroad right-of-way on the western border of the SGCP area as a portion of the planned Burbank to Los Angeles Project Section of their planned California High Speed Rail service, although final designs and the date that service will begin are still under development. The section that borders the SGCP (along the existing rail corridor), if it is built, would be constructed either at-grade or on an elevated viaduct to avoid existing grade-crossings, and eliminating horn sounding requirements. The combined acoustical effect of higher train speeds train speeds and number of trains (which would increase rail noise exposure), the elimination of required train horn sounding at grade crossing for all train types (which would lower rail noise exposure), and ultimate changes in the vertical and horizontal alignment of the future rail lines in this area (acoustical effect unknown), are not know at this time. However, the elimination of horn sounding at the three grade crossings adjacent to the SGCP area, would, by itself, result in a substantial noise reduction in the areas within several hundred feet of the grade crossings. It is assumed that future operation of the Burbank to Los Angeles Project Section would implement appropriate mitigation measures to avoid noise-related impacts, and thus, is not expected to extend future CNEL contributions from the railroad right-of-way. However, the increase in quantity in existing rail services along the railroad right-of-way may have a much greater influence on future CNEL levels.

As reported in the Technical Appendix to the City of Glendale Noise Element of the General Plan (Mestre Greve Associates 2005), Metrolink representatives were noted stating that train operations by the year 2030 will increase to ninety-six (96) trains per day, a growth in trip quantity of approximate 34%. It was also assumed within the same document that freight rail usage would increase by 33% from ten (10) trains per day to fifteen (15) trains per day. The document also stated that Amtrak did not imply that any plans were made for changes in its service through the corridor. As shown in Table 6.1-3, the aggregate operation of future rail uses extend the 60 dBA L_{dn} a notable distance into the SGCP area.

Table 6.1-3
Distance of Predicted Future 60 dBA (L_{dn}) Noise Levels from Rail Center Alignment

Source	Rail Section Scenario		
	Typical, No Slowing, No Horn Sounding	Transit Center Vicinity, With Slowing, No Horn Sounding	Grade Crossing, No Slowing, With Horn Sounding
Metrolink Passenger Rail	160 feet	254 feet	1170 feet
Amtrak Passenger Rail	30 feet	47 feet	218 feet
Freight Rail	128 feet	113 feet	370 feet
Aggregate of Rail Sources	235 feet	320 feet	1460 feet

The railroad corridor is lined with varying land use types, primarily comprised of commercial retail, storage warehouses and yards, and parking lots. One segment of railway abuts the residential neighborhood of single family and multi-family homes between Glendale Boulevard and Tyburn Street. Similar to vehicular noise levels generated by vehicular traffic noise, future rail operation noise levels within the proposed SGCP area at existing and proposed residential use areas would, in cases of proposed single-family and multi-family residences close to the rail alignment, exceed the General Plan Noise Element thresholds and standards.

6.1.3 Municipal Code Compliance

Proposed mixed-use areas would contain residential, commercial, and industrially permitted developments. Where residential uses are located in proximity to commercial or industrial sites, noise sensitive receptors are likely to be exposed to additional noise aside from traffic noise contributions found throughout the SGCP area. These noise sensitive receptors could be exposed to noise due to operations traffic, truck idling, loading and unloading operations, mechanical equipment such as HVAC units and air handlers, trash-hauling activities, and customer/employee use of commercial facilities.

While noise-sensitive residential land uses would be exposed to noise associated with the operation of commercial uses, policies are in place to control noise and reduce noise impacts between various land uses. Noise policies, as contained in the General Plan Noise Element, the proposed SGCP, and regulations in the GMC are in place to control and reduce noise levels from various land uses to levels below impact thresholds by zone. These include the requirement for noise studies for certain new developments, limits on hours of operation for various noise-generating activities, and standards for the compatibility of land use types. In addition, enforcement of the federal, state, and local noise regulations would control impacts. Given implementation of these policies and enforcement of the Noise Control chapter of the GMC, impacts would be less than significant.

6.2 Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels

6.2.1 Commercial Uses

Commercial and industrial operations often utilize equipment or conduct processes which may generate vibration to land uses in close proximity to the source. Vibrations generated by such operations are generally regulated from an occupational health and safety perspective, the effect of which would reduce the exposure of employees to excessive vibration and as a result, also reduce the exposure of abutting land uses. Vibrations from operations typically of low amplitude and attenuate sharply as they traverse through the surrounding soil. The proposed land uses within the SGCP and associated discretionary actions includes retail facilities, restaurants, and office spaces that would not require heavy mechanical equipment or heavy truck deliveries, both of which could generate atypical levels of vibration. Additional proposed land uses, such as residential developments and civic uses do not typically generate any notable vibration. Thus, operational vibration impacts associated with the implementation of the proposed SGCP and associated discretionary actions implementation would be less than significant.

6.2.2 Construction Activities

Construction activities can generate groundborne vibration of varying degrees based on the construction activity and equipment being used. Groundborne vibration and noise associated with construction activities would only occur temporarily during groundbreaking activities such as demolition, pile driving or caisson drilling, and excavation for underground levels, and vibratory pile driving could be used to stabilize the walls of excavated areas. However, non-pile driving or foundation work construction phases that have the highest potential of producing vibration would be intermittent and only occur for short periods of time. The Caltrans Transportation and Construction Vibration Guidance Manual (Caltrans 2013) identifies potential vibration damage thresholds for various structure types and human receptors as measured by PPV, in inches per second. By use of administrative controls, such as scheduling vibration-intensive construction activities to hours with the least potential to affect nearby sensitive receptors, perceptible vibration can be kept to a minimum and, as such, would result in a less than significant impact.

Pile driving has the potential to generate the highest groundborne vibration levels and is the primary concern human perception. As discussed in Section 3.1.3, pile driving or other intermittent or continuous vibratory construction can result in distinct human perception at a vibratory level of .04 PPV in/sec. human receptors experience “strongly perceptible” vibration at 0.1 PPV in/sec. The construction of future land uses as a result of the implementation of the proposed SGCP and associated discretionary actions would have the potential to result in a significant impact related to vibration associated with construction.

6.3 A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project

Existing stationary noise sources identified within the community plan area were typical of a developed mixed-use neighborhood, including HVAC units in operation and noise associated with commercial uses such as automotive mechanic shops. Although the SGCP proposes the development of land uses which may ultimately generate noise during operations, operational noise levels would be required to comply with the GMC and General Plan guidelines.

Noise from vehicular traffic is the prominent source of noise in the SGCP area and has greater potential to affect existing noise-sensitive receivers if annual average daily traffic volumes increase substantially. The freeways generating the greatest noise levels affecting the SGCP area are SR-2 and SR-134. The streets generating the greatest noise levels within the area are Chevy Chase Drive, Colorado Avenue, and Glendale Avenue. Vehicular traffic volumes on roadways in the community plan area would generally increase due to the future development proposed by the SGCP and associated discretionary actions, however, some roadway volumes will decrease. Table 6.1-4 summarizes the existing and future traffic noise levels along various roadway segments in the SGCP area. Roadway noise is reported in this table as the dBA CNEL at 50 feet from the roadway EOP.

Table 6.1-4
Increases in Ambient Noise for the South Glendale Community Plan Area

Roadway	Roadway Segment	Predicted Ambient Noise Level (dBA, CNEL @ 50 Feet from EOP)		
		Existing (2017)	Future (2040)	Change in dB
Brand Boulevard	North of Lexington Drive	65	65	0
	North of Broadway	64	65	1
	North of Colorado St	65	65	0
	North of Chevy Chase Drive	63	64	1
	North of Los Feliz Road	64	65	1
	North of San Fernando Road	64	65	1
Broadway	East of San Fernando Road	61	63	1
	East of Pacific Avenue	64	65	1
	East of Brand Boulevard	65	65	0
	East of Glendale Avenue	65	66	1

Table 6.1-4
Increases in Ambient Noise for the South Glendale Community Plan Area

Roadway	Roadway Segment	Predicted Ambient Noise Level (dBA, CNEL @ 50 Feet from EOP)		
		Existing (2017)	Future (2040)	Change in dB
	East of Verdugo Road	67	67	0
Chevy Chase Drive	East of San Fernando Road	65	65	0
	East of Brand Boulevard	66	67	2
	East of Glendale Avenue	66	67	0
	North of Acacia Avenue	64	62	-2
	North of Colorado St	66	64	-1
	North of Broadway	64	64	0
Colorado Street	East of San Fernando Road	63	64	1
	East of Pacific Avenue	68	68	1
	East of Brand Boulevard	67	68	1
	East of Glendale Avenue	67	68	1
	East of Verdugo Road	67	68	1
Glendale Avenue	North of Lexington Drive	67	67	-1
	North of Broadway	65	66	0
	North of Colorado St	65	66	1
	North of Chevy Chase Drive	64	65	1
	North of Los Feliz Road	65	66	1
	North of San Fernando Road	64	65	2
Pacific Avenue	North of Lexington Drive	66	66	0
	North of Broadway	65	66	0
	North of Colorado St	65	66	0
	North of San Fernando Road	62	62	0
	North of Broadway	66	67	1
San Fernando Road	North of Colorado St	66	67	1
	North of Chevy Chase Drive	69	70	1
	North of Los Feliz Road	67	68	1
	East of Brand Boulevard	68	69	1
	East of Verdugo Road	62	62	0
York Boulevard / South Adams Street	North of Lexington Drive	65	65	0
Freeways				

Table 6.1-4
Increases in Ambient Noise for the South Glendale Community Plan Area

Roadway	Roadway Segment	Predicted Ambient Noise Level (dBA, CNEL @ 50 Feet from EOP)		
		Existing (2017)	Future (2040)	Change in dB
State Route 134	At Pacific Avenue	83	83	0
	At Central Avenue / Brand Boulevard	83	83	0
	At Glendale Avenue	83	83	0
State Route 2	At York Boulevard / Delevan Street	81	81	0

CNEL = Community Noise Equivalent Level; dBA = A-weighted decibel; EOP = edge of pavement
Bold = 2040 noise level would exceed the established exterior compatibility level for the surrounding land use and noise levels would increase by 3 dB or more, or future noise levels would be below 65 dBA CNEL but ambient noise levels would increase by more than 5 dBA over existing noise levels.

As shown in Table 6.1-4, no roadway segments that are generating existing noise levels greater than 65 dBA CNEL are predicted to generate an increase in noise levels greater than 2 dBA in the future condition. Additionally, no roadway segments currently generate noise levels lower than 65 dBA CNEL that are predicted to increase in by more than 5 dBA over existing ambient noise levels, thus, ambient noise level increases at existing noise sensitive land uses would be less than significant.

6.4 A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project

6.4.1 Construction Noise

Although no specific construction or development is proposed under the proposed SGCP and associated discretionary actions at this time, construction noise could occur as future development occurs. Due to the highly-developed nature of land uses within SGCP area, there is a high likelihood that construction activities would take place adjacent to noise sensitive land uses.

It is assumed that any future construction projects within the SGCP and in proximity to noise sensitive area (especially single and multi-family residential land uses) related to the SGCP or not, would be required to conduct separate environmental review to ensure that the project is in compliance with the City of Glendale Municipal Code, particularly Section 8.36.080 for construction noise and apply any required noise mitigation elements. Mitigation requirement would be project specific, but could include such measures as temporary noise wall or curtains, use of quieter equipment and construction procedures, and restrictions on nighttime construction.

6.5 Projects located within an airport land use plan

The nearest public or private airport, Hollywood Burbank Airport, is located approximately 5.1 miles northwest of the study area. The Los Angeles County Airport Land Use Plan (Los Angeles 1991) does not include the SGCP area within any airport's Planning Boundary/Airport Influence Area. While aircraft overflights may sometime be audible in the SGCP area these would not be considered a dominant noise source and would have little impact on existing or future CNEL noise levels.

6.6 Project within the vicinity of a private airstrip

No private airstrips are known to exist within several miles of the SGCP, so this will not create any impacts.

7. Summary of Predicted Impacts and Mitigation

The following is a summary of impacts for each significance threshold addressed in Section 7. For significant impacts, program-level mitigation is identified where feasible, and the subsequent mitigation framework identifies measures to be applied to future development projects within the SGCP area to reduce noise impacts when and where they occur.

7.1 Increase in Ambient Noise Levels

As indicated in Table 6.1-4, increases in ambient noise for the SGCP area as a result of increases in surface transportation is expected to range from -2 to + 2 dBA CNEL, which would be expected to be less than noticeable, and less that significant, so no specific SGCP-wide impacts are expected nor is mitigation required associated with increases in ambient noise levels.

7.2 Exposure to Existing and Future Transportation Noise

7.2.1 Vehicle Traffic Noise Exposure

While SGCP-related increases in traffic are not expected to result in significant noise increases, there may be areas where noise sensitive land uses are already in excess of local guidelines for existing conditions, such as the Land Use Noise Compatibility Guidelines from the City's General Plan Noise Element, presented in Table 3.1-2 of this report. This may be especially true for residential properties along busy arterial corridors and control access highways. However, since this represents no significant change from the existing condition, noise mitigation would not be required for existing developments.

7.2.2 Rail Noise Exposure

Similar to vehicle traffic noise exposure, noise exposure from rail activity on the existing rail line would not see a significant increase (2 dBA or less); but, some areas near the rail line, and especially near the grade crossings at Chevy Chase, West Broadway, and Doran, are already above Noise Compatibility Guidelines. However, since this is an existing condition with no significant increase, no noise mitigation would be required at this time.

Extra attention should be paid to the on-going future development of the rail line for the planned California High Speed Rail Project which is expected to share the rail corridor bordering the SGCP area in the future. The design plans and timing for high speed rail in this area are still under development, but the future implementation of the project (if and when it actually goes into operation) may have an impact on noise levels in the SGCP. At the least, it is expected that the at-grade crossings will be replaced with grade separations for both new and existing rail traffic, eliminating the need for horn soundings, and thereby reducing horn noise. It is also possible that other rail noise mitigation elements such as noise walls may also be installed as part of that project.

7.3 General Plan Compliance

As noted above, noise levels for existing conditions, dominated by surface transportation sources, may already exceed land use compatibility guidelines at several existing noise sensitive developments in the SGCP, particularly near arterial and controlled access roadways and near rail lines. Generally, it would not be required to provide noise mitigation to areas impacted under existing conditions. However, any new development of noise sensitive land uses within the SGCP area (whether associated with SGCP projects or not) would likely require a detailed noise analysis as part of the planning stage, complete with recommended noise mitigation measures to insure compliance with guidelines. The recommended mitigation elements, if required, would be project-specific but could include the some or all of the following:

- Increase setback of dwelling units from area roadways or rail lines.
- Use of developer-installed noise walls to protect exterior use areas.
- Use of upgraded acoustical doors and windows dwelling units to reduce interior noise.
- Use of air conditioning or ventilation systems to enable windows to remain closed.
- Use of parking areas or garage structures to act as acoustical buffers or barriers against highway or rail noise.

It is expected that the acoustical analysis would be conducted by an experienced acoustical engineer as part of the project approval process, should a study be deemed necessary during the environmental review process associated with future development projects.

7.4 Municipal Code Compliance

The municipal code for noise and vibration is addressed under Municipal Code Chapter 8.36 Noise Control and described in detail in Section 3.1.4 of this report. This would apply primarily to temporary noise and vibration from construction activities as well as on-going building operations, such as building air conditioning/ventilation systems and any other noise producing elements. Normally the analysis and required mitigation of construction and building noise would be determined as part of a required project-specific noise analysis.

7.4.1 Construction and Vibration

Construction noise is address under Code section 8.36.0808 and primarily prohibits construction activity within 500 feet of a residential zone during nighttime periods, weekends and certain holidays. Therefore, the primary mitigation element would be to avoid construction activity during those periods.

Code Section 8.36.210 addresses vibration, stating that any vibration level should not exceed the vibration perception threshold beyond the property line. Perceptible vibration would normally only be expected under certain construction processes, such as pile driving and some demolition activities. Possible mitigation elements would include using alternative pile driving processes, such as vibratory or pre-augured pile. In some cases of particularly sensitive neighbors, vibration sensitive land uses, or older fragile buildings, vibration monitoring may also be required.

7.4.2 Operation

Noise from regular building operations would be regulated by the noise level standards in Code Section 8.36.040, including 45 dBA nighttime and 55 dBA daytime limits in a residential zone, and would primarily be analyzed for building HVAC, but could also include sounds from other exposed or externally vented equipment, transformers, pool pumps and filtration equipment, outdoor entertainment systems or any other noise producing equipment or activities. If these levels attributed to proposed project building operations were determined to exceed applicable thresholds, noise mitigation options could include some or all of the following:

- Specify quieter equipment.
- Use acoustical panels or enclosures around exposed noise producing equipment.
- Relocate noise-producing equipment into an acoustically-isolated space.
- Relocate noise-producing equipment to be further from noise-sensitive property boundaries.
- Apply appropriate silencers, mufflers, baffles or other noise reducing modifications to noisy equipment.

8. References

California Department of Transportation (Caltrans)

2011 Traffic Noise Analysis Protocol for New Highway Construction, Reconstruction, and Retrofit Barrier Projects, California Department of Transportation, May 2011.

2013 Transportation and Construction Vibration Guidance Manual. Division of Environmental Analysis. September 2013.

California High Speed Rail Authority (CHRA)

2017 Burbank to Los Angeles Section, June 2017 Update: http://www.hsr.ca.gov/Programs/Statewide_Rail_Modernization/Project_Sections/burbank_losangeles_update_june_2017.html.

City of Glendale

2007 City of Glendale General Plan Noise Element, May 2007.

1991 City of Glendale Municipal Code, Chapter 8.36 Noise Control.

Federal Transit Administration (FTA)

2006 Transit Noise and Vibration Impact Assessment FTA-VA-90-1003-06. Office of Planning and Environment. May 2006.

Fehr & Peers

2017 South Glendale Community Plan Draft Transportation Analysis Report, July 2017.

Attachment A – Field Measurement Data

Measurement ID	Date	Time	Duration (hh:mm)	LA_{eq}	L_{min}	L_{max}	L_{10}	L_{50}	L_{90}
ST-1	2017-07-18	09:23:00	00:01	50.4	46.1	55.1	52.6	50.1	46.6
	2017-07-18	09:24:00	00:01	51.0	45.5	58.8	55.2	47.4	45.8
	2017-07-18	09:25:00	00:01	48.8	45.3	59.2	51.3	46.6	45.6
	2017-07-18	09:26:00	00:01	49.8	45.3	56.7	53.1	46.3	45.5
	2017-07-18	09:27:00	00:01	56.7	49.3	68.0	60.2	52.8	50.4
	2017-07-18	09:28:00	00:01	68.3	55.9	75.8	73.4	63.7	57.2
	2017-07-18	09:29:00	00:01	68.7	53.2	78.3	74.6	58.2	53.7
	2017-07-18	09:30:00	00:01	59.5	53.6	67.4	64.4	56.7	54.5
	2017-07-18	09:31:00	00:01	53.8	53.0	54.5	54.2	53.8	53.2
	2017-07-18	09:32:00	00:01	56.1	53.5	59.0	58.3	55.2	54.2
	2017-07-18	09:33:00	00:01	53.6	51.6	56.0	55.1	53.9	52.0
	2017-07-18	09:34:00	00:01	52.7	51.8	54.3	53.3	52.6	52.1
	2017-07-18	09:35:00	00:01	52.9	52.1	54.2	53.6	52.8	52.4
	2017-07-18	09:36:00	00:01	53.3	52.2	56.5	53.8	53.0	52.5
	2017-07-18	09:37:00	00:01	53.2	52.2	56.3	53.8	53.1	52.6
ST-2	2017-07-18	10:09:00	00:01	60.3	51.9	67.3	63.5	59.4	52.5
	2017-07-18	10:10:00	00:01	56.2	51.1	63.1	57.8	55.6	52.1
	2017-07-18	10:11:00	00:01	58.7	53.5	64.8	62.9	56.5	54.3
	2017-07-18	10:12:00	00:01	60.0	52.5	72.8	59.1	56.1	53.5
	2017-07-18	10:13:00	00:01	58.2	51.2	67.4	60.7	55.2	51.8
	2017-07-18	10:14:00	00:01	56.2	51.8	61.1	59.2	55.4	53.3
	2017-07-18	10:15:00	00:01	55.0	50.3	58.6	57.5	54.3	50.6
	2017-07-18	10:16:00	00:01	56.6	50.0	62.2	60.3	55.0	51.3
	2017-07-18	10:17:00	00:01	57.4	52.2	65.7	59.2	55.1	54.0
	2017-07-18	10:18:00	00:01	57.9	54.0	64.8	60.0	57.0	54.3
	2017-07-18	10:19:00	00:01	54.3	51.1	57.9	56.6	53.7	51.5
	2017-07-18	10:20:00	00:01	56.6	51.5	63.0	59.5	55.3	52.1
	2017-07-18	10:21:00	00:01	57.4	52.6	61.3	59.3	57.4	53.5
	2017-07-18	10:22:00	00:01	54.8	52.2	58.9	57.3	54.0	52.5
	2017-07-18	10:23:00	00:01	57.3	52.0	60.2	59.7	57.5	53.2
ST-3	2017-07-18	10:41:00	00:01	70.1	58.3	75.7	74.0	67.6	60.7
	2017-07-18	10:42:00	00:01	71.4	57.5	76.5	74.7	71.3	59.6
	2017-07-18	10:43:00	00:01	70.5	55.2	75.2	73.5	70.2	59.1
	2017-07-18	10:44:00	00:01	68.4	55.2	74.9	72.2	67.1	56.6
	2017-07-18	10:45:00	00:01	70.7	59.9	75.8	73.8	69.6	65.1
	2017-07-18	10:46:00	00:01	69.0	60.5	77.5	72.2	67.2	62.1
	2017-07-18	10:47:00	00:01	71.7	65.6	75.9	74.7	70.5	67.2
	2017-07-18	10:48:00	00:01	68.7	55.2	76.6	72.8	66.6	56.6
	2017-07-18	10:49:00	00:01	70.8	54.8	77.1	74.7	69.4	55.8
	2017-07-18	10:50:00	00:01	69.9	60.4	75.9	74.2	68.4	62.4
	2017-07-18	10:51:00	00:01	69.7	53.9	74.8	72.8	69.5	57.0
	2017-07-18	10:52:00	00:01	70.7	57.5	76.2	74.2	69.6	61.8
	2017-07-18	10:53:00	00:01	67.7	53.0	72.7	71.4	67.4	55.3
	2017-07-18	10:54:00	00:01	68.6	57.6	74.3	70.9	68.4	62.9
	2017-07-18	10:55:00	00:01	72.8	57.7	82.3	75.9	69.3	61.1
ST-4	2017-07-18	11:11:00	00:01	63.0	61.3	64.5	63.8	62.9	62.1
	2017-07-18	11:12:00	00:01	64.6	61.5	67.1	66.3	64.3	62.2
	2017-07-18	11:13:00	00:01	69.0	62.5	77.1	74.3	65.3	63.1
	2017-07-18	11:14:00	00:01	62.9	60.7	65.5	64.7	62.4	61.5
	2017-07-18	11:15:00	00:01	62.7	60.6	66.1	65.1	61.9	61.2
	2017-07-18	11:16:00	00:01	62.6	60.2	65.0	64.0	62.3	60.8
	2017-07-18	11:17:00	00:01	62.8	60.4	65.2	64.1	62.5	60.8
	2017-07-18	11:18:00	00:01	64.6	60.8	68.0	67.1	63.9	61.9
	2017-07-18	11:19:00	00:01	63.1	60.8	65.2	64.4	63.2	61.3
	2017-07-18	11:20:00	00:01	64.5	61.0	71.7	68.2	62.7	61.6
	2017-07-18	11:21:00	00:01	65.8	61.0	72.6	68.8	64.1	62.4
	2017-07-18	11:22:00	00:01	63.6	61.4	66.4	64.8	63.4	61.7
	2017-07-18	11:23:00	00:01	66.2	62.7	74.6	66.0	64.0	63.3
	2017-07-18	11:24:00	00:01	65.4	61.9	72.1	69.7	64.0	62.5
	2017-07-18	11:25:00	00:01	63.2	61.5	65.4	64.7	63.0	62.3

Measurement ID	Date	Time	Duration (hh:mm)	LA_{eq}	L_{min}	L_{max}	L_{10}	L_{50}	L_{90}
ST-5	2017-07-18	12:04:00	00:01	58.8	51.5	64.4	62.1	57.6	52.0
	2017-07-18	12:05:00	00:01	57.5	53.3	62.2	59.6	57.2	54.2
	2017-07-18	12:06:00	00:01	60.2	53.0	73.7	59.4	57.9	55.1
	2017-07-18	12:07:00	00:01	57.6	53.3	61.8	60.3	57.0	54.6
	2017-07-18	12:08:00	00:01	57.6	51.6	61.9	61.0	56.4	52.7
	2017-07-18	12:09:00	00:01	57.5	52.6	62.6	60.2	56.6	54.1
	2017-07-18	12:10:00	00:01	57.8	51.7	63.8	61.1	56.7	52.9
	2017-07-18	12:11:00	00:01	57.1	50.6	61.5	59.6	57.2	51.9
	2017-07-18	12:12:00	00:01	56.6	50.5	68.0	58.7	54.9	52.3
	2017-07-18	12:13:00	00:01	60.5	55.8	67.8	62.2	60.1	56.7
	2017-07-18	12:14:00	00:01	60.8	58.2	65.0	62.4	60.3	59.3
	2017-07-18	12:15:00	00:01	61.7	57.9	66.0	63.6	61.0	58.6
	2017-07-18	12:16:00	00:01	60.6	55.8	66.2	63.1	59.6	57.7
	2017-07-18	12:17:00	00:01	61.1	54.5	67.7	64.2	60.5	55.0
	2017-07-18	12:18:00	00:01	60.1	54.9	65.5	61.7	60.0	55.3
ST-6	2017-07-18	15:17:00	00:01	64.6	57.5	70.0	67.9	63.5	59.2
	2017-07-18	15:18:00	00:01	60.0	55.6	64.0	62.2	59.6	56.5
	2017-07-18	15:19:00	00:01	59.8	54.9	65.9	62.7	59.1	55.8
	2017-07-18	15:20:00	00:01	62.4	54.2	68.4	66.6	58.0	55.3
	2017-07-18	15:21:00	00:01	63.6	55.4	72.5	66.9	61.8	56.9
	2017-07-18	15:22:00	00:01	75.9	55.4	88.2	77.8	61.2	56.4
	2017-07-18	15:23:00	00:01	65.9	56.0	75.2	70.4	61.0	58.5
	2017-07-18	15:24:00	00:01	60.6	54.6	66.2	64.0	59.7	55.9
	2017-07-18	15:25:00	00:01	61.4	55.2	67.9	65.6	58.8	55.9
	2017-07-18	15:26:00	00:01	61.9	55.3	68.0	64.8	61.3	56.9
	2017-07-18	15:27:00	00:01	62.1	55.4	68.0	64.9	61.3	57.4
	2017-07-18	15:28:00	00:01	59.5	54.1	66.3	62.3	57.9	55.2
	2017-07-18	15:29:00	00:01	62.1	55.6	68.6	65.7	61.1	56.6
	2017-07-18	15:30:00	00:01	61.8	57.4	65.8	63.9	60.8	58.3
	2017-07-18	15:31:00	00:01	64.9	56.1	74.5	69.4	60.1	58.0
ST-7	2017-07-18	14:44:00	00:01	59.7	57.7	62.1	61.3	59.1	58.4
	2017-07-18	14:45:00	00:01	60.4	58.0	67.4	62.1	59.5	58.4
	2017-07-18	14:46:00	00:01	59.6	57.7	61.8	60.8	59.3	58.2
	2017-07-18	14:47:00	00:01	58.9	56.9	62.2	60.2	58.8	57.2
	2017-07-18	14:48:00	00:01	59.7	57.8	68.9	60.3	58.7	58.1
	2017-07-18	14:49:00	00:01	62.9	57.0	74.0	65.2	58.5	57.7
	2017-07-18	14:50:00	00:01	60.3	57.6	67.0	62.6	59.2	58.1
	2017-07-18	14:51:00	00:01	58.2	55.0	60.5	59.6	58.3	56.2
	2017-07-18	14:52:00	00:01	58.7	55.4	63.4	60.6	58.5	56.0
	2017-07-18	14:53:00	00:01	62.0	55.6	73.5	60.9	58.4	56.5
	2017-07-18	14:54:00	00:01	56.9	55.5	70.5	58.0	56.6	55.9
	2017-07-18	14:55:00	00:01	60.9	55.4	70.0	64.9	57.8	55.9
	2017-07-18	14:56:00	00:01	60.8	58.6	65.2	61.8	60.1	59.4
	2017-07-18	14:57:00	00:01	59.1	55.6	62.2	60.7	58.9	56.1
	2017-07-18	14:58:00	00:01	58.9	56.9	66.5	59.7	58.2	57.2
ST-8	2017-07-18	14:16:00	00:01	62.0	51.9	69.3	67.0	55.6	52.7
	2017-07-18	14:17:00	00:01	53.7	48.9	63.0	55.0	51.5	49.8
	2017-07-18	14:18:00	00:01	51.5	48.2	59.2	54.0	50.1	48.8
	2017-07-18	14:19:00	00:01	53.3	48.5	61.3	55.6	51.5	50.0
	2017-07-18	14:20:00	00:01	51.6	47.6	59.2	54.1	49.6	48.9
	2017-07-18	14:21:00	00:01	54.8	48.3	63.1	60.7	50.4	49.1
	2017-07-18	14:22:00	00:01	51.3	47.2	58.3	53.9	48.7	47.6
	2017-07-18	14:23:00	00:01	48.1	46.9	50.8	48.7	47.9	47.5
	2017-07-18	14:24:00	00:01	55.4	48.2	61.3	59.5	51.7	48.5
	2017-07-18	14:25:00	00:01	52.5	48.1	60.0	57.0	50.2	48.5
	2017-07-18	14:26:00	00:01	54.2	47.2	60.4	57.6	52.3	48.3
	2017-07-18	14:27:00	00:01	51.5	47.7	60.1	53.1	49.5	48.0
	2017-07-18	14:28:00	00:01	50.7	47.6	57.6	52.5	49.4	48.1
	2017-07-18	14:29:00	00:01	53.9	47.6	62.2	56.3	51.2	48.4
	2017-07-18	14:30:00	00:01	55.2	52.2	61.8	57.3	54.1	52.6

Attachment B – Rail Operations Input Data and FTA Calculation

Timetable Breakdown - Quantity Per Period (Existing Condition)

Operator / Line	Day	Evening	Night
Metrolink Ventura County	27	2	4
Metrolink Antelope Valley	24	3	3
Amtrak Pacific Surfliner	8	2	0
Amtrak Starlight	1	1	0
Freight (GP Appendix - "10")	8	1	1

Existing - by Rail Service

Scenario	Service	Loco	Day Hourly	Night Hourly	Speed
Typical, No Horn, No Slowing	Metrolink	1	4.67	0.58	30
	Amtrak	1	1.00	0.00	30
	Freight	3	0.75	0.08	30
	Freight - Rail Car	80 Cars	0.75	0.08	30
Transit Center, No Horn, With Slowing	Metrolink	1	4.67	0.58	15
	Amtrak	1	1.00	0.00	15
	Freight	3	0.75	0.08	30
	Freight - Rail Car	80 Cars	0.75	0.08	30
Grade Crossing, With Horn, No Slowing	Metrolink	1	4.67	0.58	30
	Metrolink Horn	-	2.34	0.29	30
	Amtrak	1	1.00	0.00	30
	Amtrak Horn	-	0.50	0.00	30
	Freight	3	0.75	0.08	30
	Freight - Rail Car	80 Cars	0.75	0.08	30
	Freight Horn	-	0.38	0.04	30

Existing - Aggregate

Scenario	Service	Loco	Day Hourly	Night Hourly	Speed
Typical, No Horn, No Slowing	Passenger	1	5.67	0.58	30
	Freight	3	0.75	0.08	30
	Freight - Rail Car	80 Cars	0.75	0.08	30
Transit Center, No Horn, With Slowing	Passenger	1	5.67	0.58	15
	Freight	3	0.75	0.08	30
	Freight - Rail Car	80 Cars	0.75	0.08	30
Grade Crossing, With Horn, No Slowing	Passenger	1	4.67	0.58	30
	Freight	3	0.75	0.08	30
	Freight - Rail Car	80 Cars	0.75	0.08	30
	Horn	-	3.09	0.37	30

Future - by Rail Service

Scenario	Service	Loco	Day Hourly	Night Hourly	Speed
Typical, No Horn, No Slowing	Metrolink	1	7.11	0.89	30
	Amtrak	1	1.00	0.00	30
	Freight	3	1.13	0.13	30
	Freight - Rail Car	80 Cars	1.13	0.13	30
Transit Center, No Horn, With Slowing	Metrolink	1	7.11	0.89	15
	Amtrak	1	1.00	0.00	15
	Freight	3	1.13	0.13	30
	Freight - Rail Car	80 Cars	1.13	0.13	30
Grade Crossing, With Horn, No Slowing	Metrolink	1	7.11	0.89	30
	Metrolink Horn	-	3.56	0.45	30
	Amtrak	1	1.00	0.00	30
	Amtrak Horn	-	0.50	0.00	30
	Freight	3	1.13	0.13	30
	Freight - Rail Car	80 Cars	1.13	0.13	30
	Freight Horn	-	0.56	0.06	30

Future - Aggregate

Scenario	Service	Loco	Day Hourly	Night Hourly	Speed
Typical, No Horn, No Slowing	Passenger	1	8.11	0.89	30
	Freight	3	1.13	0.13	30
	Freight - Rail Car	80 Cars	1.13	0.13	30
Transit Center, No Horn, With Slowing	Passenger	1	8.11	0.89	15
	Freight	3	1.13	0.13	30
	Freight - Rail Car	80 Cars	1.13	0.13	30
Grade Crossing, With Horn, No Slowing	Passenger	1	8.11	0.89	30
	Freight	3	1.13	0.13	30
	Freight - Rail Car	80 Cars	1.13	0.13	30
	Horn	-	5.18	0.57	30

Federal Transit Administration
Noise Impact Assessment Spreadsheet

version: 7/3/2007

Project:	South Glendale CP

Noise Source Parameters	
Number of Noise Sources:	3

Noise Source Parameters		Source 1
	Source Type:	Fixed Guideway
	Specific Source:	Diesel Electric Locomotive
Daytime hrs	Avg. Number of Locos/train	1
	Speed (mph)	30
	Avg. Number of Events/hr	5.67
Nighttime hrs	Avg. Number of Locos/train	1
	Speed (mph)	30
	Avg. Number of Events/hr	0.58
Distance	Distance from Source to Receiver (ft)	180
	Number of Intervening Rows of Buildings	0
Adjustments		No
		No
		No
		No

Source 1 Results

Leq(day):	57.8 dBA
Leq(night):	47.9 dBA
Ldn:	57.8 dBA

Noise Source Parameters		Source 2
	Source Type:	Fixed Guideway
	Specific Source:	Diesel Electric Locomotive
Daytime hrs	Avg. Number of Locos/train	3
	Speed (mph)	30
	Avg. Number of Events/hr	0.75
Nighttime hrs	Avg. Number of Locos/train	3
	Speed (mph)	30
	Avg. Number of Events/hr	0.08
Distance	Distance from Source to Receiver (ft)	180
	Number of Intervening Rows of Buildings	
Adjustments		No
		No
		No
		No

Source 2 Results

Leq(day):	53.8 dBA
Leq(night):	44.1 dBA
Ldn:	53.9 dBA
Incremental Ldn (Src 1-2):	59.3 dBA

Noise Source Parameters		Source 3
	Source Type:	Fixed Guideway
	Specific Source:	Rail Car
Daytime hrs	Avg. Number of Rail Cars/train	80
	Speed	30
	Avg. Number of Events/hr	0.75
Nighttime hrs	Avg. Number of Rail Cars/train	80
	Speed	30
	Avg. Number of Events/hr	0.08
Distance	Distance from Source to Receiver (ft)	180
	Number of Intervening Rows of Buildings	
Adjustments	Noise Barrier?	No
	Jointed Track?	No
	Embedded Track?	No
	Aerial Structure?	No

Source 3 Results

Leq(day):	51.4 dBA
Leq(night):	41.7 dBA
Ldn:	51.5 dBA
Incremental Ldn (Src 1-3):	60.0 dBA

Federal Transit Administration
Noise Impact Assessment Spreadsheet

version: 7/3/2007

Project:	South Glendale CP

Noise Source Parameters	
Number of Noise Sources:	3

Noise Source Parameters		Source 1
	Source Type:	Fixed Guideway
	Specific Source:	Diesel Electric Locomotive
Daytime hrs	Avg. Number of Locos/train	1
	Speed (mph)	30
	Avg. Number of Events/hr	8.11
Nighttime hrs	Avg. Number of Locos/train	1
	Speed (mph)	30
	Avg. Number of Events/hr	0.89
Distance	Distance from Source to Receiver (ft)	235
	Number of Intervening Rows of Buildings	0
Adjustments		No
		No
		No
		No

Source 1 Results

Leq(day): 57.6 dBA
Leq(night): 48.0 dBA
Ldn: 57.8 dBA

Noise Source Parameters		Source 2
	Source Type:	Fixed Guideway
	Specific Source:	Diesel Electric Locomotive
Daytime hrs	Avg. Number of Locos/train	3
	Speed (mph)	30
	Avg. Number of Events/hr	1.13
Nighttime hrs	Avg. Number of Locos/train	3
	Speed (mph)	30
	Avg. Number of Events/hr	0.13
Distance	Distance from Source to Receiver (ft)	235
	Number of Intervening Rows of Buildings	
Adjustments		No
		No
		No
		No

Source 2 Results

Leq(day): 53.8 dBA
Leq(night): 44.4 dBA
Ldn: 54.1 dBA
Incremental Ldn (Src 1-2): 59.3 dBA

Noise Source Parameters		Source 3
	Source Type:	Fixed Guideway
	Specific Source:	Rail Car
Daytime hrs	Avg. Number of Rail Cars/train	80
	Speed	30
	Avg. Number of Events/hr	1.13
Nighttime hrs	Avg. Number of Rail Cars/train	80
	Speed	30
	Avg. Number of Events/hr	0.13
Distance	Distance from Source to Receiver (ft)	235
	Number of Intervening Rows of Buildings	
Adjustments	Noise Barrier?	No
	Jointed Track?	No
	Embedded Track?	No
	Aerial Structure?	No

Source 3 Results

Leq(day): 51.4 dBA
Leq(night): 42.1 dBA
Ldn: 51.7 dBA
Incremental Ldn (Src 1-3): 60.0 dBA

Attachment C – Traffic Data and TNM Input

	AM												PM											
SEGMENT	**12**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Broadway e/o San Fernando Rd	45	21	12	11	34	80	189	344	415	430	430	495	611	561	560	568	601	723	595	427	293	204	146	73
Broadway e/o Pacific Ave	61	42	31	18	49	82	234	505	771	767	762	916	1,028	968	1,030	1,001	1,057	1,229	1,067	869	689	542	335	166
Broadway e/o Brand Blvd	90	70	49	34	60	117	346	735	1,080	1,080	1,146	1,054	1,004	977	1,050	998	1,132	1,299	1,205	1,124	755	638	304	158
Broadway e/o Glendale Ave	86	58	34	33	47	105	266	635	898	909	860	887	1,001	1,076	1,030	1,111	1,155	1,230	1,106	962	800	622	400	198
Broadway w/o Chevy Chase Dr	133	59	56	35	60	136	324	815	971	845	797	861	904	993	965	1,137	1,000	1,219	1,092	890	690	604	377	213
Broadway e/o Verdugo Rd	159	97	63	52	96	241	648	1,437	1,424	1,141	965	996	1,075	1,124	1,275	1,428	1,314	1,457	1,462	1,292	982	843	616	347
Colorado St e/o San Fernando Rd	65	43	35	24	56	130	308	643	620	563	558	609	637	640	698	647	692	760	591	481	368	323	212	179
Colorado St e/o Pacific Ave	253	154	102	69	151	364	584	1,247	1,550	1,549	1,603	1,737	1,813	1,472	1,903	1,770	1,854	1,750	2,041	1,884	1,516	1,288	923	557
Colorado St e/o Brand Blvd	257	124	81	58	105	270	486	1,142	1,315	1,188	1,344	1,440	1,570	1,550	1,579	1,621	1,686	1,832	1,722	1,488	1,222	1,078	751	450
Colorado St e/o Glendale Ave	236	104	75	62	67	155	406	884	1,128	1,086	1,270	1,411	1,533	1,507	1,578	1,610	1,633	1,745	1,669	1,460	1,250	1,108	752	419
Colorado St w/o Chevy Chase Dr	250	113	81	69	93	196	478	969	1,201	1,122	1,244	1,315	1,491	1,509	1,501	1,622	1,684	1,745	1,650	1,539	1,213	1,057	790	443
Colorado St e/o Verdugo Rd	196	114	55	73	109	280	611	1,151	1,301	1,127	1,208	1,307	1,434	1,361	1,464	1,726	1,625	1,787	1,678	1,510	1,037	922	620	343
Chevy Chase Dr e/o San Fernando Rd	103	63	35	41	51	166	424	837	1,011	747	778	876	933	940	910	1,048	1,068	1,055	977	798	622	453	334	213
Chevy Chase Dr e/o Brand Blvd	135	77	37	43	78	226	491	1,125	1,312	1,130	1,136	1,169	1,219	1,262	1,305	1,336	1,393	1,452	1,379	1,067	875	635	486	298
Chevy Chase Dr e/o Glendale Ave	168	70	58	64	81	200	552	1,167	1,282	1,078	1,092	1,214	1,186	1,316	1,278	1,395	1,467	1,598	1,546	1,155	926	736	501	341
Chevy Chase Dr w/o Adams St	134	62	50	31	52	135	430	1,127	1,143	919	807	893	978	931	1,051	1,184	1,155	1,254	1,163	906	669	540	413	208
Chevy Chase Dr n/o Acacia Ave	88	45	28	37	45	89	324	933	1,013	713	688	740	768	759	865	929	927	910	930	769	529	478	316	183
Chevy Chase Dr n/o Colorado St	143	78	45	49	57	126	416	1,179	1,266	1,011	1,016	1,066	1,194	1,174	1,174	1,446	1,388	1,606	1,394	1,153	859	756	481	270
Chevy Chase Dr n/o Broadway	96	49	31	29	34	77	261	839	872	677	651	659	755	774	905	1,025	954	1,001	978	858	674	523	331	161
Los Feliz Rd e/o San Fernando Rd	234	134	96	68	92	200	555	1,017	1,201	1,130	1,304	1,400	1,469	1,508	1,531	1,606	1,620	1,649	1,735	1,394	1,102	848	598	410
Los Feliz Rd e/o Brand Blvd	127	56	46	42	37	92	282	536	793	672	724	803	887	898	921	990	958	1,000	985	758	591	437	313	241
San Fernando Rd n/o Broadway	124	55	44	46	93	285	680	1,396	1,583	1,389	1,478	1,489	1,525	1,727	1,741	1,627	1,719	1,805	1,725	1,167	935	681	547	288
San Fernando Rd n/o Colorado St	196	108	59	48	65	149	406	789	822	903	1,022	1,390	1,574	1,719	1,700	1,783	1,962	2,000	1,707	1,097	739	650	474	344
San Fernando Rd n/o Chevy Chase Dr	220	99	69	69	126	370	950	1,799	1,958	1,616	1,618	1,704	1,778	1,822	1,861	2,084	2,115	2,122	1,866	1,394	1,061	790	582	383
San Fernando Rd n/o Los Feliz Rd	179	106	72	57	130	325	744	1,442	1,686	1,391	1,579	1,544	1,579	1,707	1,697	1,719	1,752	1,875	1,759	1,417	1,030	726	536	302
San Fernando Rd e/o Brand Blvd	305	200	137	144	203	420	877	1,542	1,688	1,790	1,785	1,844	1,954	1,918	1,940	2,075	2,163	2,189	2,050	1,645	1,319	1,101	867	622
Pacific Ave n/o Glenoaks Blvd	259	134	77	68	81	252	721	1,476	1,393	1,360	1,390	1,272	1,462	1,462	1,648	1,563	1,613	1,641	1,589	1,497	1,231	997	762	436
Pacific Ave n/o Lexington Dr	216	131	74	58	86	214	653	1,479	1,637	1,475	1,346	1,377	1,580	1,605	1,743	1,764	1,854	1,992	1,694	1,511	1,332	1,038	733	442
Pacific Ave n/o Broadway	163	109	62	49	66	170	541	1,207	1,343	1,204	1,157	1,195	1,366	1,387	1,452	1,442	1,528	1,676	1,474	1,267	1,077	850	571	348
Pacific Ave n/o Colorado St	184	97	76	66	99	240	689	1,660	1,791	1,464	1,370	1,320	1,471	1,667	1,595	1,606	1,698	1,923	1,812	1,369	1,046	853	590	394
Pacific Ave n/o San Fernando Rd	88	55	24	29	44	109	308	688	773	730	608	663	683	733	706	757	799	814	719	592	481	349	285	163
Brand Blvd n/o Glenoaks Blvd	149	55	43	30	50	173	374	830	1,024	986	979	1,061	1,072	1,103	1,066	1,205	1,124	1,276	1,252	1,091	860	657	459	269

	AM													PM										
SEGMENT	**12**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Brand Blvd n/o Lexington Dr	212	90	85	45	103	239	576	1,039	1,288	1,366	1,459	1,664	1,822	1,792	1,725	1,666	1,635	1,711	1,785	1,606	1,373	1,139	859	441
Brand Blvd n/o Broadway	170	86	62	35	71	180	429	845	1,005	1,102	1,175	1,372	1,422	1,373	1,444	1,368	1,403	1,543	1,435	1,373	1,141	967	620	296
Brand Blvd n/o Colorado St	209	86	50	42	69	160	445	917	1,051	1,173	1,155	1,405	1,583	1,686	1,559	1,673	1,780	1,879	1,697	1,530	1,276	1,109	718	342
Brand Blvd n/o Chevy Chase Dr	146	88	49	41	71	151	486	1,385	1,429	1,278	1,315	1,368	1,447	1,525	1,621	1,697	1,621	1,740	1,496	1,180	844	691	405	213
Brand Blvd n/o Los Feliz Rd	142	85	63	36	57	171	627	1,451	1,790	1,489	1,333	1,410	1,544	1,529	1,652	1,703	1,817	1,925	1,712	1,262	882	727	483	259
Brand Blvd n/o San Fernando Rd	156	93	58	53	68	174	566	1,143	1,366	1,141	1,142	1,166	1,277	1,342	1,370	1,506	1,694	1,846	1,642	1,333	957	741	564	336
Glendale Ave n/o Monterey Rd	142	94	38	43	62	225	764	1,790	2,156	1,757	1,786	1,628	1,879	1,827	1,731	2,045	1,948	2,062	2,079	1,562	1,266	1,163	728	314
Glendale Ave n/o Lexington Dr	257	150	90	69	135	331	858	1,949	2,082	1,937	2,042	2,266	2,509	2,463	2,340	2,421	2,344	2,576	2,496	2,206	1,669	1,473	848	514
Glendale Ave n/o Broadway	190	100	65	48	64	173	499	1,243	1,441	1,350	1,589	1,723	1,849	1,939	1,871	1,887	1,852	1,877	1,882	1,526	1,339	1,018	643	337
Glendale Ave n/o Colorado St	186	98	55	42	60	145	414	1,055	1,208	1,146	1,387	1,399	1,643	1,685	1,579	1,617	1,667	1,774	1,617	1,417	1,166	887	631	304
Glendale Ave n/o Chevy Chase Dr	166	86	59	44	66	165	459	1,033	1,140	1,070	1,179	1,251	1,343	1,377	1,377	1,395	1,385	1,572	1,429	1,150	848	644	458	304
Glendale Ave n/o Los Feliz Rd	176	106	70	81	103	253	731	1,382	1,620	1,319	1,266	1,368	1,508	1,461	1,449	1,564	1,655	1,926	1,781	1,335	993	739	519	380
Glendale Ave n/o San Fernando Rd	152	76	60	62	113	260	492	967	979	791	782	793	808	777	933	822	970	1,085	986	769	627	499	352	231
York Blvd e/o Verdugo Rd	79	61	32	30	45	142	492	1,190	1,169	915	603	609	617	632	779	801	843	969	906	690	534	413	326	157
SR 134 WB AT PACIFIC	960	580	484	521	1,226	3,629	7,063	8,500	8,406	7,685	6,687	6,235	6,356	6,183	6,488	6,853	7,025	7,127	6,402	5,170	4,258	3,954	2,860	1,706
SR 134 EB AT PACIFIC	1,026	596	429	390	602	1,439	3,437	5,915	5,882	5,164	5,099	5,208	5,662	6,055	6,567	7,066	7,281	7,313	7,414	6,378	4,676	3,842	3,049	1,922
SR 134 WB AT CENTRAL	836	512	437	477	1,151	3,465	6,685	8,411	8,498	7,653	6,279	5,617	5,596	5,367	5,632	5,932	5,972	6,230	5,427	4,320	3,584	3,349	2,435	1,453
SR 134 EB AT BRAND	1,123	655	464	416	655	1,588	3,816	6,709	6,679	5,876	5,738	5,870	6,371	6,831	7,503	8,122	8,456	8,565	8,575	7,128	5,294	4,305	3,420	2,145
SR 134 WB AT GLENDALE	875	525	439	493	1,257	3,829	7,362	9,458	9,110	8,461	7,007	6,279	6,176	5,997	6,212	6,596	6,652	7,057	6,204	4,824	3,827	3,451	2,528	1,528
SR 134 EB AT GLENDALE	1,191	727	535	484	729	1,727	4,032	6,921	6,911	6,156	5,997	6,336	6,827	7,335	8,019	8,759	9,023	9,069	8,983	7,602	5,637	4,674	3,647	2,280
SR 2 WB N/O YORK BLVD	673	507	473	508	882	2,519	5,661	5,472	4,862	4,881	4,111	3,634	3,679	3,646	3,780	4,570	4,732	5,005	4,337	3,299	2,555	2,294	1,714	1,098
SR 2 EB N/O YORK BLVD	854	466	366	306	486	1,137	2,561	4,420	4,453	3,546	3,313	3,340	3,566	3,977	4,795	6,092	7,346	7,847	7,335	5,395	3,608	3,030	2,607	1,562
SR 2 WB AT YORK BLVD / DELEVAN	1,231	1,051	1,017	1,067	1,492	3,131	5,543	5,149	4,837	4,980	4,495	4,140	4,277	4,042	4,149	4,684	4,714	5,010	4,500	3,668	3,019	2,783	2,231	1,620
SR 2 EB AT YORK BLVD / DELEVAN	1,240	959	881	832	900	1,274	2,293	3,639	3,653	2,973	2,892	2,994	3,331	3,621	4,401	5,911	7,267	7,789	7,246	5,137	3,392	2,940	2,657	1,782
SR 2 WB AT SAN FERNANDO RD	518	482	484	502	816	2,780	6,010	5,145	5,137	5,292	4,475	3,887	3,894	3,745	3,846	4,420	4,505	4,928	4,478	3,220	2,548	2,323	1,698	981
SR 2 EB AT SAN FERNANDO RD	802	448	351	262	345	844	2,017	3,345	3,360	2,740	2,736	2,851	3,155	3,511	4,267	5,505	6,711	7,320	6,943	5,296	3,661	3,082	2,745	1,553

Roadway Segment	Details		Hourly	Period	Type	Volume	Speed
Brand Blvd n/o Lexington Dr	Road Width:	**90**	1,578	Day	Auto	**1515**	**30**
	Road Y Coord:	**45**			MT	**32**	**30**
	Mix				HT	**32**	**30**
	MT	2%	1,372	Evening	Auto	**1317**	**30**
	HT	2%			MT	**27**	**30**
					HT	**27**	**30**
			294	Night	Auto	**282**	**30**
					MT	**6**	**30**
					HT	**6**	**30**
		Fut:	1,652	Day	Auto	**1586**	**30**
					MT	**33**	**30**
					HT	**33**	**30**
			1,436	Evening	Auto	**1378**	**30**
					MT	**29**	**30**
					HT	**29**	**30**
			308	Night	Auto	**296**	**30**
					MT	**6**	**30**
					HT	**6**	**30**
Brand Blvd n/o Broadway	Road Width:	**90**	1,290	Day	Auto	**1238**	**30**
	Road Y Coord:	**45**			MT	**26**	**30**
	Mix				HT	**26**	**30**
	MT	2%	1,159	Evening	Auto	**1113**	**30**
	HT	2%			MT	**23**	**30**
					HT	**23**	**30**
			216	Night	Auto	**208**	**30**
					MT	**4**	**30**
					HT	**4**	**30**
		Fut:	1,438	Day	Auto	**1380**	**30**
					MT	**29**	**30**
					HT	**29**	**30**
			1,293	Evening	Auto	**1241**	**30**
					MT	**26**	**30**
					HT	**26**	**30**
			241	Night	Auto	**232**	**30**
					MT	**5**	**30**
					HT	**5**	**30**
Brand Blvd n/o Colorado St	Road Width:	**90**	1,464	Day	Auto	**1405**	**30**
	Road Y Coord:	**45**			MT	**29**	**30**
	Mix				HT	**29**	**30**
	MT	2%	1,305	Evening	Auto	**1253**	**30**
	HT	2%			MT	**26**	**30**
					HT	**26**	**30**
			236	Night	Auto	**226**	**30**
					MT	**5**	**30**
					HT	**5**	**30**
		Fut:	1,550	Day	Auto	**1488**	**30**
					MT	**31**	**30**
					HT	**31**	**30**
			1,383	Evening	Auto	**1327**	**30**
					MT	**28**	**30**
					HT	**28**	**30**
			250	Night	Auto	**240**	**30**
					MT	**5**	**30**
					HT	**5**	**30**

Roadway Segment	Details		Hourly	Period	Type	Volume	Speed
Brand Blvd n/o Chevy Chase Dr	Road Width:	**90**	1,494		Auto	**1435**	**30**
	Road Y Coord:	**45**		**Day**	MT	**30**	**30**
	Mix				HT	**30**	**30**
	MT	2%	906		Auto	**869**	**30**
	HT	2%		**Evening**	MT	**18**	**30**
					HT	**18**	**30**
			183		Auto	**176**	**30**
				Night	MT	**4**	**30**
					HT	**4**	**30**
		Fut:	1,803		Auto	**1731**	**30**
				Day	MT	**36**	**30**
					HT	**36**	**30**
			1,092		Auto	**1049**	**30**
				Evening	MT	**22**	**30**
					HT	**22**	**30**
			221		Auto	**212**	**30**
				Night	MT	**4**	**30**
					HT	**4**	**30**
Brand Blvd n/o Los Feliz Rd	Road Width:	**90**	1,610		Auto	**1545**	**30**
	Road Y Coord:	**45**		**Day**	MT	**32**	**30**
	Mix				HT	**32**	**30**
	MT	2%	955		Auto	**917**	**30**
	HT	2%		**Evening**	MT	**19**	**30**
					HT	**19**	**30**
			213		Auto	**205**	**30**
				Night	MT	**4**	**30**
					HT	**4**	**30**
		Fut:	1,930		Auto	**1853**	**30**
				Day	MT	**39**	**30**
					HT	**39**	**30**
			1,145		Auto	**1099**	**30**
				Evening	MT	**23**	**30**
					HT	**23**	**30**
			256		Auto	**245**	**30**
				Night	MT	**5**	**30**
					HT	**5**	**30**
Brand Blvd n/o San Fernando Rd	Road Width:	**100**	1,384		Auto	**1329**	**30**
	Road Y Coord:	**50**		**Day**	MT	**28**	**30**
	Mix				HT	**28**	**30**
	MT	2%	1,009		Auto	**968**	**30**
	HT	2%		**Evening**	MT	**20**	**30**
					HT	**20**	**30**
			229		Auto	**220**	**30**
				Night	MT	**5**	**30**
					HT	**5**	**30**
		Fut:	1,716		Auto	**1647**	**30**
				Day	MT	**34**	**30**
					HT	**34**	**30**
			1,250		Auto	**1200**	**30**
				Evening	MT	**25**	**30**
					HT	**25**	**30**
			284		Auto	**273**	**30**
				Night	MT	**6**	**30**
					HT	**6**	**30**

Roadway Segment	Details		Hourly	Period	Type	Volume	Speed
Broadway e/o San Fernando Rd	Road Width:	**50**	530		Auto	**509**	**35**
	Road Y Coord:	**25**		**Day**	MT	**11**	**35**
	Mix				HT	**11**	**35**
	MT	2%	309		Auto	**297**	**35**
	HT	2%		**Evening**	MT	**6**	**35**
					HT	**6**	**35**
			68		Auto	**65**	**35**
				Night	MT	**1**	**35**
					HT	**1**	**35**
		Fut:	651		Auto	**625**	**35**
				Day	MT	**13**	**35**
					HT	**13**	**35**
			380		Auto	**365**	**35**
				Evening	MT	**8**	**35**
					HT	**8**	**35**
			84		Auto	**80**	**35**
				Night	MT	**2**	**35**
					HT	**2**	**35**
Broadway e/o Pacific Ave	Road Width:	**50**	924		Auto	**887**	**35**
	Road Y Coord:	**25**		**Day**	MT	**18**	**35**
	Mix				HT	**18**	**35**
	MT	2%	699		Auto	**671**	**35**
	HT	2%		**Evening**	MT	**14**	**35**
					HT	**14**	**35**
			113		Auto	**108**	**35**
				Night	MT	**2**	**35**
					HT	**2**	**35**
		Fut:	1,054		Auto	**1012**	**35**
				Day	MT	**21**	**35**
					HT	**21**	**35**
			798		Auto	**766**	**35**
				Evening	MT	**16**	**35**
					HT	**16**	**35**
			129		Auto	**124**	**35**
				Night	MT	**3**	**35**
					HT	**3**	**35**
Broadway e/o Brand Blvd	Road Width:	**50**	1,063		Auto	**1020**	**35**
	Road Y Coord:	**25**		**Day**	MT	**21**	**35**
	Mix				HT	**21**	**35**
	MT	2%	839		Auto	**805**	**35**
	HT	2%		**Evening**	MT	**17**	**35**
					HT	**17**	**35**
			136		Auto	**131**	**35**
				Night	MT	**3**	**35**
					HT	**3**	**35**
		Fut:	1,050		Auto	**1008**	**35**
				Day	MT	**21**	**35**
					HT	**21**	**35**
			829		Auto	**795**	**35**
				Evening	MT	**17**	**35**
					HT	**17**	**35**
			135		Auto	**129**	**35**
				Night	MT	**3**	**35**
					HT	**3**	**35**

Roadway Segment	Details		Hourly	Period	Type	Volume	Speed
Broadway e/o Glendale Ave	Road Width:	**50**	991		Auto	**951**	**35**
	Road Y Coord:	**25**		**Day**	MT	**20**	**35**
	Mix				HT	**20**	**35**
	MT	2%	794		Auto	**762**	**35**
	HT	2%		**Evening**	MT	**16**	**35**
					HT	**16**	**35**
			136		Auto	**131**	**35**
				Night	MT	**3**	**35**
					HT	**3**	**35**
		Fut:	1,272		Auto	**1221**	**35**
				Day	MT	**25**	**35**
					HT	**25**	**35**
			1,020		Auto	**979**	**35**
				Evening	MT	**20**	**35**
					HT	**20**	**35**
			175		Auto	**168**	**35**
				Night	MT	**3**	**35**
					HT	**3**	**35**
Broadway e/o Verdugo Rd	Road Width:	**50**	1,256		Auto	**1206**	**35**
	Road Y Coord:	**25**		**Day**	MT	**25**	**35**
	Mix				HT	**25**	**35**
	MT	2%	1,037		Auto	**996**	**35**
	HT	2%		**Evening**	MT	**21**	**35**
					HT	**21**	**35**
			257		Auto	**247**	**35**
				Night	MT	**5**	**35**
					HT	**5**	**35**
		Fut:	1,397		Auto	**1341**	**35**
				Day	MT	**28**	**35**
					HT	**28**	**35**
			1,154		Auto	**1108**	**35**
				Evening	MT	**23**	**35**
					HT	**23**	**35**
			286		Auto	**275**	**35**
				Night	MT	**6**	**35**
					HT	**6**	**35**
Chevy Chase Dr e/o San Fernando Rd	Road Width:	**50**	933		Auto	**895**	**35**
	Road Y Coord:	**25**		**Day**	MT	**19**	**35**
	Mix				HT	**19**	**35**
	MT	2%	625		Auto	**600**	**35**
	HT	2%		**Evening**	MT	**13**	**35**
					HT	**13**	**35**
			159		Auto	**153**	**35**
				Night	MT	**3**	**35**
					HT	**3**	**35**
		Fut:	1,023		Auto	**982**	**35**
				Day	MT	**20**	**35**
					HT	**20**	**35**
			685		Auto	**658**	**35**
				Evening	MT	**14**	**35**
					HT	**14**	**35**
			174		Auto	**167**	**35**
				Night	MT	**3**	**35**
					HT	**3**	**35**

Roadway Segment	Details		Hourly	Period	Type	Volume	Speed
Chevy Chase Dr e/o Brand Blvd	Road Width:	**50**	1,270		Auto	**1220**	**35**
	Road Y Coord:	**25**		**Day**	MT	**25**	**35**
	Mix				HT	**25**	**35**
	MT	2%	860		Auto	**826**	**35**
	HT	2%		**Evening**	MT	**17**	**35**
					HT	**17**	**35**
			208		Auto	**200**	**35**
				Night	MT	**4**	**35**
					HT	**4**	**35**
		Fut:	1,515		Auto	**1455**	**35**
				Day	MT	**30**	**35**
					HT	**30**	**35**
			1,026		Auto	**985**	**35**
				Evening	MT	**21**	**35**
					HT	**21**	**35**
			248		Auto	**238**	**35**
				Night	MT	**5**	**35**
					HT	**5**	**35**
Chevy Chase Dr e/o Glendale Ave	Road Width:	**50**	1,303		Auto	**1251**	**35**
	Road Y Coord:	**25**		**Day**	MT	**26**	**35**
	Mix				HT	**26**	**35**
	MT	2%	940		Auto	**903**	**35**
	HT	2%		**Evening**	MT	**19**	**35**
					HT	**19**	**35**
			226		Auto	**217**	**35**
				Night	MT	**5**	**35**
					HT	**5**	**35**
		Fut:	1,456		Auto	**1398**	**35**
				Day	MT	**29**	**35**
					HT	**29**	**35**
			1,050		Auto	**1008**	**35**
				Evening	MT	**21**	**35**
					HT	**21**	**35**
			253		Auto	**243**	**35**
				Night	MT	**5**	**35**
					HT	**5**	**35**
Chevy Chase Dr n/o Acacia Ave	Road Width:	**60**	848		Auto	**814**	**35**
	Road Y Coord:	**30**		**Day**	MT	**17**	**35**
	Mix				HT	**17**	**35**
	MT	2%	592		Auto	**568**	**35**
	HT	2%		**Evening**	MT	**12**	**35**
					HT	**12**	**35**
			128		Auto	**123**	**35**
				Night	MT	**3**	**35**
					HT	**3**	**35**
		Fut:	569		Auto	**547**	**35**
				Day	MT	**11**	**35**
					HT	**11**	**35**
			397		Auto	**382**	**35**
				Evening	MT	**8**	**35**
					HT	**8**	**35**
			86		Auto	**83**	**35**
				Night	MT	**2**	**35**
					HT	**2**	**35**

Roadway Segment	Details		Hourly	Period	Type	Volume	Speed
Chevy Chase Dr n/o Colorado St	Road Width:	**60**	1,240		Auto	**1190**	**35**
	Road Y Coord:	**30**		**Day**	MT	**25**	**35**
	Mix				HT	**25**	**35**
	MT	2%	920		Auto	**884**	**35**
	HT	2%		**Evening**	MT	**18**	**35**
					HT	**18**	**35**
			185		Auto	**177**	**35**
				Night	MT	**4**	**35**
					HT	**4**	**35**
		Fut:	938		Auto	**900**	**35**
				Day	MT	**19**	**35**
					HT	**19**	**35**
			696		Auto	**668**	**35**
				Evening	MT	**14**	**35**
					HT	**14**	**35**
			140		Auto	**134**	**35**
				Night	MT	**3**	**35**
					HT	**3**	**35**
Chevy Chase Dr n/o Broadway	Road Width:	**60**	840		Auto	**806**	**35**
	Road Y Coord:	**30**		**Day**	MT	**17**	**35**
	Mix				HT	**17**	**35**
	MT	2%	684		Auto	**657**	**35**
	HT	2%		**Evening**	MT	**14**	**35**
					HT	**14**	**35**
			119		Auto	**114**	**35**
				Night	MT	**2**	**35**
					HT	**2**	**35**
		Fut:	757		Auto	**727**	**35**
				Day	MT	**15**	**35**
					HT	**15**	**35**
			617		Auto	**592**	**35**
				Evening	MT	**12**	**35**
					HT	**12**	**35**
			107		Auto	**103**	**35**
				Night	MT	**2**	**35**
					HT	**2**	**35**
Colorado St e/o San Fernando Rd	Road Width:	**60**	639		Auto	**614**	**35**
	Road Y Coord:	**30**		**Day**	MT	**13**	**35**
	Mix				HT	**13**	**35**
	MT	2%	391		Auto	**376**	**35**
	HT	2%		**Evening**	MT	**8**	**35**
					HT	**8**	**35**
			117		Auto	**112**	**35**
				Night	MT	**2**	**35**
					HT	**2**	**35**
		Fut:	788		Auto	**756**	**35**
				Day	MT	**16**	**35**
					HT	**16**	**35**
			482		Auto	**463**	**35**
				Evening	MT	**10**	**35**
					HT	**10**	**35**
			144		Auto	**139**	**35**
				Night	MT	**3**	**35**
					HT	**3**	**35**

Roadway Segment	Details		Hourly	Period	Type	Volume	Speed
Colorado St e/o Pacific Ave	Road Width:	**70**	1,689		Auto	**1621**	**35**
	Road Y Coord:	**35**		**Day**	MT	**34**	**35**
	Mix				HT	**34**	**35**
	MT	2%	1,561		Auto	**1498**	**35**
	HT	2%		**Evening**	MT	**31**	**35**
					HT	**31**	**35**
			350		Auto	**336**	**35**
				Night	MT	**7**	**35**
					HT	**7**	**35**
		Fut:	1,971		Auto	**1892**	**35**
				Day	MT	**39**	**35**
					HT	**39**	**35**
			1,822		Auto	**1749**	**35**
				Evening	MT	**36**	**35**
					HT	**36**	**35**
			409		Auto	**393**	**35**
				Night	MT	**8**	**35**
					HT	**8**	**35**
Colorado St e/o Brand Blvd	Road Width:	**60**	1,502		Auto	**1442**	**35**
	Road Y Coord:	**30**		**Day**	MT	**30**	**35**
	Mix				HT	**30**	**35**
	MT	2%	1,265		Auto	**1214**	**35**
	HT	2%		**Evening**	MT	**25**	**35**
					HT	**25**	**35**
			287		Auto	**276**	**35**
				Night	MT	**6**	**35**
					HT	**6**	**35**
		Fut:	1,846		Auto	**1772**	**35**
				Day	MT	**37**	**35**
					HT	**37**	**35**
			1,555		Auto	**1493**	**35**
				Evening	MT	**31**	**35**
					HT	**31**	**35**
			353		Auto	**339**	**35**
				Night	MT	**7**	**35**
					HT	**7**	**35**
Colorado St e/o Glendale Ave	Road Width:	**60**	1,418		Auto	**1361**	**35**
	Road Y Coord:	**30**		**Day**	MT	**28**	**35**
	Mix				HT	**28**	**35**
	MT	2%	1,270		Auto	**1219**	**35**
	HT	2%		**Evening**	MT	**25**	**35**
					HT	**25**	**35**
			252		Auto	**242**	**35**
				Night	MT	**5**	**35**
					HT	**5**	**35**
		Fut:	1,682		Auto	**1615**	**35**
				Day	MT	**34**	**35**
					HT	**34**	**35**
			1,506		Auto	**1446**	**35**
				Evening	MT	**30**	**35**
					HT	**30**	**35**
			299		Auto	**287**	**35**
				Night	MT	**6**	**35**
					HT	**6**	**35**

Roadway Segment	Details		Hourly	Period	Type	Volume	Speed
Colorado St e/o Verdugo Rd	Road Width:	**60**	1,428		Auto	**1371**	**35**
	Road Y Coord:	**30**		**Day**	MT	**29**	**35**
	Mix				HT	**29**	**35**
	MT	2%	1,154		Auto	**1108**	**35**
	HT	2%		**Evening**	MT	**23**	**35**
					HT	**23**	**35**
			266		Auto	**256**	**35**
				Night	MT	**5**	**35**
					HT	**5**	**35**
		Fut:	1,627		Auto	**1562**	**35**
				Day	MT	**33**	**35**
					HT	**33**	**35**
			1,315		Auto	**1262**	**35**
				Evening	MT	**26**	**35**
					HT	**26**	**35**
			303		Auto	**291**	**35**
				Night	MT	**6**	**35**
					HT	**6**	**35**
Glendale Ave n/o Lexington Dr	Road Width:	**70**	2,284		Auto	**2192**	**30**
	Road Y Coord:	**35**		**Day**	MT	**46**	**30**
	Mix				HT	**46**	**30**
	MT	2%	1,781		Auto	**1710**	**30**
	HT	2%		**Evening**	MT	**36**	**30**
					HT	**36**	**30**
			361		Auto	**347**	**30**
				Night	MT	**7**	**30**
					HT	**7**	**30**
		Fut:	2,328		Auto	**2235**	**30**
				Day	MT	**47**	**30**
					HT	**47**	**30**
			1,816		Auto	**1743**	**30**
				Evening	MT	**36**	**30**
					HT	**36**	**30**
			368		Auto	**353**	**30**
				Night	MT	**7**	**30**
					HT	**7**	**30**
Glendale Ave n/o Broadway	Road Width:	**70**	1,708		Auto	**1640**	**30**
	Road Y Coord:	**35**		**Day**	MT	**34**	**30**
	Mix				HT	**34**	**30**
	MT	2%	1,294		Auto	**1242**	**30**
	HT	2%		**Evening**	MT	**26**	**30**
					HT	**26**	**30**
			235		Auto	**226**	**30**
				Night	MT	**5**	**30**
					HT	**5**	**30**
		Fut:	1,889		Auto	**1813**	**30**
				Day	MT	**38**	**30**
					HT	**38**	**30**
			1,431		Auto	**1374**	**30**
				Evening	MT	**29**	**30**
					HT	**29**	**30**
			260		Auto	**250**	**30**
				Night	MT	**5**	**30**
					HT	**5**	**30**

Roadway Segment	Details		Hourly	Period	Type	Volume	Speed
Glendale Ave n/o Colorado St	Road Width:	**70**	1,483		Auto	**1423**	**30**
	Road Y Coord:	**35**		**Day**	MT	**30**	**30**
	Mix				HT	**30**	**30**
	MT	2%	1,158		Auto	**1111**	**30**
	HT	2%		**Evening**	MT	**23**	**30**
					HT	**23**	**30**
			215		Auto	**207**	**30**
				Night	MT	**4**	**30**
					HT	**4**	**30**
		Fut:	1,930		Auto	**1853**	**30**
				Day	MT	**39**	**30**
					HT	**39**	**30**
			1,507		Auto	**1447**	**30**
				Evening	MT	**30**	**30**
					HT	**30**	**30**
			280		Auto	**269**	**30**
				Night	MT	**6**	**30**
					HT	**6**	**30**
Glendale Ave n/o Chevy Chase Dr	Road Width:	**60**	1,296		Auto	**1244**	**30**
	Road Y Coord:	**30**		**Day**	MT	**26**	**30**
	Mix				HT	**26**	**30**
	MT	2%	881		Auto	**845**	**30**
	HT	2%		**Evening**	MT	**18**	**30**
					HT	**18**	**30**
			201		Auto	**193**	**30**
				Night	MT	**4**	**30**
					HT	**4**	**30**
		Fut:	1,659		Auto	**1592**	**30**
				Day	MT	**33**	**30**
					HT	**33**	**30**
			1,127		Auto	**1082**	**30**
				Evening	MT	**23**	**30**
					HT	**23**	**30**
			257		Auto	**247**	**30**
				Night	MT	**5**	**30**
					HT	**5**	**30**
Glendale Ave n/o Los Feliz Rd	Road Width:	**60**	1,526		Auto	**1465**	**30**
	Road Y Coord:	**30**		**Day**	MT	**31**	**30**
	Mix				HT	**31**	**30**
	MT	2%	1,023		Auto	**982**	**30**
	HT	2%		**Evening**	MT	**20**	**30**
					HT	**20**	**30**
			269		Auto	**258**	**30**
				Night	MT	**5**	**30**
					HT	**5**	**30**
		Fut:	1,808		Auto	**1736**	**30**
				Day	MT	**36**	**30**
					HT	**36**	**30**
			1,212		Auto	**1164**	**30**
				Evening	MT	**24**	**30**
					HT	**24**	**30**
			319		Auto	**306**	**30**
				Night	MT	**6**	**30**
					HT	**6**	**30**

Roadway Segment	Details		Hourly	Period	Type	Volume	Speed
Glendale Ave n/o San Fernando Rd	Road Width:	**50**	892		Auto	**856**	**30**
	Road Y Coord:	**25**		**Day**	MT	**18**	**30**
	Mix				HT	**18**	**30**
	MT	2%	632		Auto	**607**	**30**
	HT	2%		**Evening**	MT	**13**	**30**
					HT	**13**	**30**
			200		Auto	**192**	**30**
				Night	MT	**4**	**30**
					HT	**4**	**30**
		Fut:	1,288		Auto	**1237**	**30**
				Day	MT	**26**	**30**
					HT	**26**	**30**
			913		Auto	**877**	**30**
				Evening	MT	**18**	**30**
					HT	**18**	**30**
			289		Auto	**277**	**30**
				Night	MT	**6**	**30**
					HT	**6**	**30**
Pacific Ave n/o Lexington Dr	Road Width:	**50**	1,627		Auto	**1562**	**30**
	Road Y Coord:	**25**		**Day**	MT	**33**	**30**
	Mix				HT	**33**	**30**
	MT	2%	1,292		Auto	**1240**	**30**
	HT	2%		**Evening**	MT	**26**	**30**
					HT	**26**	**30**
			289		Auto	**278**	**30**
				Night	MT	**6**	**30**
					HT	**6**	**30**
		Fut:	1,802		Auto	**1730**	**30**
				Day	MT	**36**	**30**
					HT	**36**	**30**
			1,431		Auto	**1374**	**30**
				Evening	MT	**29**	**30**
					HT	**29**	**30**
			320		Auto	**308**	**30**
				Night	MT	**6**	**30**
					HT	**6**	**30**
Pacific Ave n/o Broadway	Road Width:	**50**	1,369		Auto	**1314**	**30**
	Road Y Coord:	**25**		**Day**	MT	**27**	**30**
	Mix				HT	**27**	**30**
	MT	2%	1,064		Auto	**1022**	**30**
	HT	2%		**Evening**	MT	**21**	**30**
					HT	**21**	**30**
			231		Auto	**222**	**30**
				Night	MT	**5**	**30**
					HT	**5**	**30**
		Fut:	1,558		Auto	**1496**	**30**
				Day	MT	**31**	**30**
					HT	**31**	**30**
			1,212		Auto	**1163**	**30**
				Evening	MT	**24**	**30**
					HT	**24**	**30**
			263		Auto	**252**	**30**
				Night	MT	**5**	**30**
					HT	**5**	**30**

Roadway Segment	Details		Hourly	Period	Type	Volume	Speed
Pacific Ave n/o Colorado St	Road Width:	**50**	1,616		Auto	**1551**	**30**
	Road Y Coord:	**25**		**Day**	MT	**32**	**30**
	Mix				HT	**32**	**30**
	MT	2%	1,090		Auto	**1047**	**30**
	HT	2%		**Evening**	MT	**22**	**30**
					HT	**22**	**30**
			271		Auto	**260**	**30**
				Night	MT	**5**	**30**
					HT	**5**	**30**
		Fut:	1,764		Auto	**1694**	**30**
				Day	MT	**35**	**30**
					HT	**35**	**30**
			1,190		Auto	**1142**	**30**
				Evening	MT	**24**	**30**
					HT	**24**	**30**
			296		Auto	**284**	**30**
				Night	MT	**6**	**30**
					HT	**6**	**30**
Pacific Ave n/o San Fernando Rd	Road Width:	**50**	723		Auto	**694**	**30**
	Road Y Coord:	**25**		**Day**	MT	**14**	**30**
	Mix				HT	**14**	**30**
	MT	2%	474		Auto	**455**	**30**
	HT	2%		**Evening**	MT	**9**	**30**
					HT	**9**	**30**
			123		Auto	**118**	**30**
				Night	MT	**2**	**30**
					HT	**2**	**30**
		Fut:	742		Auto	**712**	**30**
				Day	MT	**15**	**30**
					HT	**15**	**30**
			487		Auto	**467**	**30**
				Evening	MT	**10**	**30**
					HT	**10**	**30**
			126		Auto	**121**	**30**
				Night	MT	**3**	**30**
					HT	**3**	**30**
San Fernando Rd n/o Broadway	Road Width:	**60**	1,597		Auto	**1524**	**35**
	Road Y Coord:	**30**		**Day**	MT	**24**	**35**
	Mix				HT	**49**	**35**
	MT	2%	926		Auto	**879**	**35**
	HT	3%		**Evening**	MT	**19**	**35**
					HT	**28**	**35**
			240		Auto	**229**	**35**
				Night	MT	**4**	**35**
					HT	**7**	**35**
		Fut:	1,743		Auto	**1663**	**35**
				Day	MT	**27**	**35**
					HT	**53**	**35**
			1,010		Auto	**964**	**35**
				Evening	MT	**15**	**35**
					HT	**31**	**35**
			262		Auto	**250**	**35**
				Night	MT	**4**	**35**
					HT	**8**	**35**

Roadway Segment	Details		Hourly	Period	Type	Volume	Speed
San Fernando Rd n/o Colorado St	Road Width:	**60**	1,447	Day	Auto	**1381**	**35**
	Road Y Coord:	**30**			MT	**22**	**35**
	Mix				HT	**44**	**35**
	MT	2%	828	Evening	Auto	**787**	**35**
	HT	3%			MT	**17**	**35**
					HT	**25**	**35**
			205	Night	Auto	**196**	**35**
					MT	**3**	**35**
					HT	**6**	**35**
		Fut:	1,701	Day	Auto	**1623**	**35**
					MT	**26**	**35**
					HT	**52**	**35**
			974	Evening	Auto	**929**	**35**
					MT	**15**	**35**
					HT	**30**	**35**
			241	Night	Auto	**230**	**35**
					MT	**4**	**35**
					HT	**7**	**35**
San Fernando Rd n/o Chevy Chase Dr	Road Width:	**28**	1,865	Day	Auto	**1779**	**35**
	Road Y Coord:	**14**			MT	**28**	**35**
	Mix				HT	**57**	**35**
	MT	2%	1,083	Evening	Auto	**1029**	**35**
	HT	3%			MT	**22**	**35**
					HT	**33**	**35**
			319	Night	Auto	**305**	**35**
					MT	**5**	**35**
					HT	**10**	**35**
		Fut:	2,356	Day	Auto	**2248**	**35**
					MT	**36**	**35**
					HT	**72**	**35**
			1,368	Evening	Auto	**1306**	**35**
					MT	**21**	**35**
					HT	**42**	**35**
			403	Night	Auto	**385**	**35**
					MT	**6**	**35**
					HT	**12**	**35**
San Fernando Rd n/o Los Feliz Rd	Road Width:	**65**	1,647	Day	Auto	**1572**	**35**
	Road Y Coord:	**32.5**			MT	**25**	**35**
	Mix				HT	**50**	**35**
	MT	2%	1,060	Evening	Auto	**1006**	**35**
	HT	3%			MT	**21**	**35**
					HT	**32**	**35**
			273	Night	Auto	**260**	**35**
					MT	**4**	**35**
					HT	**8**	**35**
		Fut:	2,166	Day	Auto	**2067**	**35**
					MT	**33**	**35**
					HT	**66**	**35**
			1,393	Evening	Auto	**1329**	**35**
					MT	**21**	**35**
					HT	**43**	**35**
			359	Night	Auto	**342**	**35**
					MT	**5**	**35**
					HT	**11**	**35**

Roadway Segment	Details		Hourly	Period	Type	Volume	Speed
San Fernando Rd e/o Brand Blvd	Road Width:	**65**	1,913	Day	Auto	**1825**	**35**
	Road Y Coord:	**32.5**			MT	**29**	**35**
	Mix				HT	**58**	**35**
	MT	2%	1,356	Evening	Auto	**1287**	**35**
	HT	3%			MT	**27**	**35**
					HT	**41**	**35**
			420	Night	Auto	**401**	**35**
					MT	**6**	**35**
					HT	**13**	**35**
		Fut:	2,441	Day	Auto	**2329**	**35**
					MT	**37**	**35**
					HT	**75**	**35**
			1,730	Evening	Auto	**1651**	**35**
					MT	**26**	**35**
					HT	**53**	**35**
			536	Night	Auto	**511**	**35**
					MT	**8**	**35**
					HT	**16**	**35**
York Blvd e/o Verdugo Rd	Road Width:	**35**	834	Day	Auto	**801**	**25**
	Road Y Coord:	**17.5**			MT	**17**	**25**
	Mix				HT	**17**	**25**
	MT	2%	544	Evening	Auto	**522**	**25**
	HT	2%			MT	**11**	**25**
					HT	**11**	**25**
			151	Night	Auto	**145**	**25**
					MT	**3**	**25**
					HT	**3**	**25**
		Fut:	885	Day	Auto	**850**	**25**
					MT	**18**	**25**
					HT	**18**	**25**
			578	Evening	Auto	**555**	**25**
					MT	**12**	**25**
					HT	**12**	**25**
			160	Night	Auto	**154**	**25**
					MT	**3**	**25**
					HT	**3**	**25**
SR 134 AT PACIFIC	Road Width:	**140**	13,220	Day	Auto	**12448**	**65**
	Road Y Coord:	**70**			MT	**427**	**65**
	Mix				HT	**346**	**65**
	MT	3%	9,498	Evening	Auto	**9060**	**65**
	HT	3%			MT	**190**	**65**
					HT	**248**	**65**
			3,518	Night	Auto	**3312**	**65**
					MT	**114**	**65**
					HT	**92**	**65**
		Fut:	14,091	Day	Auto	**13267**	**65**
					MT	**455**	**65**
					HT	**369**	**65**
			10,123	Evening	Auto	**9531**	**65**
					MT	**327**	**65**
					HT	**265**	**65**
			3,749	Night	Auto	**3530**	**65**
					MT	**121**	**65**
					HT	**98**	**65**

Roadway Segment	Details		Hourly	Period	Type	Volume	Speed
SR 134 AT CENTRAL/BRAND	Road Width:	**140**	13,488		Auto	**12700**	**65**
	Road Y Coord:	**70**		**Day**	MT	**436**	**65**
	Mix				HT	**353**	**65**
	MT	3%	9,258		Auto	**8831**	**65**
	HT	3%		**Evening**	MT	**185**	**65**
					HT	**242**	**65**
			3,552		Auto	**3344**	**65**
				Night	MT	**115**	**65**
					HT	**93**	**65**
		Fut:	14,468		Auto	**13622**	**65**
				Day	MT	**467**	**65**
					HT	**378**	**65**
			9,931		Auto	**9350**	**65**
				Evening	MT	**321**	**65**
					HT	**260**	**65**
			3,810		Auto	**3587**	**65**
				Night	MT	**123**	**65**
					HT	**100**	**65**
SR 134 AT GLENDALE	Road Width:	**140**	14,627		Auto	**13772**	**65**
	Road Y Coord:	**70**		**Day**	MT	**473**	**65**
	Mix				HT	**383**	**65**
	MT	3%	9,952		Auto	**9493**	**65**
	HT	3%		**Evening**	MT	**199**	**65**
					HT	**260**	**65**
			3,814		Auto	**3591**	**65**
				Night	MT	**123**	**65**
					HT	**100**	**65**
		Fut:	15,664		Auto	**14748**	**65**
				Day	MT	**506**	**65**
					HT	**410**	**65**
			10,658		Auto	**10035**	**65**
				Evening	MT	**344**	**65**
					HT	**279**	**65**
			4,084		Auto	**3845**	**65**
				Night	MT	**132**	**65**
					HT	**107**	**65**
SR 2 AT YORK BLVD / DELEVAN	Road Width:	**180**	9,226		Auto	**8829**	**65**
	Road Y Coord:	**90**		**Day**	MT	**351**	**65**
	Mix				HT	**46**	**65**
	MT	4%	6,992		Auto	**6817**	**65**
	HT	1%		**Evening**	MT	**140**	**65**
					HT	**35**	**65**
			3,456		Auto	**3307**	**65**
				Night	MT	**132**	**65**
					HT	**17**	**65**
		Fut:	9,470		Auto	**9062**	**65**
				Day	MT	**361**	**65**
					HT	**47**	**65**
			7,177		Auto	**6867**	**65**
				Evening	MT	**273**	**65**
					HT	**36**	**65**
			3,548		Auto	**3395**	**65**
				Night	MT	**135**	**65**
					HT	**18**	**65**