NOISE

TECHNICAL REPORT

20401 VENTURA AVENUE SELF-STORAGE PROJECT

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NOISE TECHNICAL REPORT

Introduction

This technical report evaluates noise impacts from construction and operation of a Project at 20401 Ventura Boulevard in the City of Los Angeles (City). The analysis discusses applicable regulations and compares impacts to appropriate thresholds of significance. Noise measurements, calculation worksheets, and a map of noise receptors and measurement locations are included in the Technical Appendix to this analysis.

Project Description

The Project includes the demolition and removal of the existing remnant building foundation, parking areas, and 19 trees, from the Project Site and development of the site with a 158,317-square-foot mixed-use building, which would include a 156,917-square-foot climate-controlled storage for household goods with a 1,015-square-foot associated office, 1,400 square feet of neighborhood-serving commercial/retail, and associated parking lot.[1] The building would be three stories tall (a maximum building height of 37 feet 7½ inches) over two basement levels. The Project would include 22 vehicle parking spaces to be provided in a surface parking lot located in the eastern portion of the Project Site. Additionally, the Project would include 16 short-term bicycle parking spaces and 24 long-term bicycle parking spaces. A loading area would be located interior of the building, with additional loading areas located within the surface parking lot in the northeastern portion of the Project Site. The Project would include security fencing along the perimeter of the Project Site, a secure access gate limited to use by customers and employees, and 24-hour camera surveillance. Additionally, the entire building would be self-contained with access to the storage units restricted from the interior of the building. The 19 non-protected but significant trees on the Project Site would be removed and replaced in accordance with the City's tree replacement requirements. The Project would require the export of approximately 32,598 cubic yards of material during the demolition phase and 41,000 cubic yards of soil and material during the grading phase.

Fundamentals of Noise

Characteristics of Sound

Sound can be described in terms of its loudness (amplitude) and frequency (pitch). The standard unit of measurement for sound is the decibel (dB). Because the human ear is not equally sensitive to sound at all frequencies, the A-weighted scale (dBA) is used to reflect the normal hearing sensitivity range. On this scale, the range of human hearing extends from 3 to 140 dBA. Table 1 provides examples of A-weighted noise levels from common sources.

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1 *The gross square footage of the proposed building is 158,317 square feet; the net square footage is 146,012 square feet.*

Table 1
A-Weighted Decibel Scale

Typical A-Weighted Sound Levels	Sound Level (dBA L_{eq})
Near Jet Engine	130
Rock and Roll Band	110
Jet flyover at 1,000 feet	100
Power Motor	90
Food Blender	80
Living Room Music	70
Human Voice at 3 feet	60
Residential Air Conditioner at 50 feet	50
Bird Calls	40
Quiet Living Room	30
Average Whisper	20
Rustling Leaves	10

Source: Cowan, James P., Handbook of Environmental Acoustics, 1993.
These noise levels are approximations intended for general reference and informational use.

- Noise Definitions. This noise analysis discusses sound levels in terms of equivalent noise level (Leq), maximum noise level (Lmax) and the Community Noise Equivalent Level (CNEL).

    - Equivalent Noise Level (Leq): Leq represents the average noise level on an energy basis for a specific time period. Average noise level is based on the energy content (acoustic energy) of sound. For example, the Leq for one hour is the energy average noise level during that hour. Leq can be thought of as a continuous noise level of a certain period equivalent in energy content to a fluctuating noise level of that same period.

    - Maximum Noise Level (Lmax): Lmax represents the maximum instantaneous noise level measured during a given time period.

    - Community Noise Equivalent Level (CNEL): CNEL is an adjusted noise measurement scale of average sound level during a 24-hour period. Due to increased noise sensitivities during evening and night hours, human reaction to sound between 7:00 P.M. and 10:00 P.M. is as if it were actually 5 dBA higher than had it occurred between 7:00 A.M. and 7:00 P.M. From 10:00 P.M. to 7:00 A.M., humans perceive sound as if it were 10 dBA higher. To account for these sensitivities, CNEL figures are obtained by adding an additional 5 dBA to evening noise levels between 7:00 P.M. and 10:00 P.M. and 10 dBA to nighttime noise levels between 10:00 P.M. and 7:00 A.M. As such, 24-hour CNEL figures are always higher than their corresponding actual 24-hour averages.

Effects of Noise. The degree to which noise can impact an environment ranges from levels that interfere with speech and sleep to levels that can cause adverse health effects. Most human

response to noise is subjective. Factors that influence individual responses include the intensity, frequency, and pattern of noise; the amount of background noise present; and the nature of work or human activity exposed to intruding noise. According to the National Institute of Health (NIH), extended or repeated exposure to sounds at or above 85 dB can cause hearing loss. Sounds of 70 dBA or less, even after continuous exposure, are unlikely to cause hearing loss.[2] The World Health Organization (WHO) reports that adults should not be exposed to sudden "impulse" noise events of 140 dB or greater. For children, this limit is 120 dB.[3]

Exposure to elevated nighttime noise levels can disrupt sleep, leading to increased levels of fatigue and decreased work or school performance. For the preservation of healthy sleeping environments, the WHO recommends that continuous interior noise levels not exceed 30 dBA and that individual noise events of 45 dBA or higher be avoided.[4] Assuming a conservative exterior-to-interior sound reduction of 15 dBA, continuous exterior noise levels should therefore not exceed 45 dBA. Individual exterior events of 60 dBA or higher should also be limited. Some epidemiological studies have shown a weak association between long-term exposure to noise levels of 65 to 70 dBA and cardiovascular effects, including ischemic heart disease and hypertension. However, at this time, the relationship is largely inconclusive.

People with normal hearing sensitivity can recognize small changes in sound levels of approximately 3 dBA. Changes of at least 5 dBA can be readily noticeable while sound level increases of 10 dBA or greater are perceived as a doubling in loudness.[5] However, during the daytime, few people are highly annoyed by noise levels below 55 dBA Leq.[6]

Noise Attenuation. Noise levels decrease as the distance from noise sources to receivers increases. For each doubling of distance, noise from stationary sources can decrease by about 6 dBA over hard surfaces (e.g., reflective surfaces such as parking lots) and 7.5 dBA over soft surfaces (e.g., absorptive surfaces such as soft dirt and grass). For example, if a point source produces a noise level of 89 dBA at a reference distance of 50 feet over an asphalt surface, its noise level would be approximately 83 dBA at a distance of 100 feet, 77 dBA at 200 feet, etc. Noises generated by mobile sources such as roadways decrease by about 3 dBA over hard surfaces and 4.5 dBA over soft surfaces for each doubling of distance. It should be noted that because decibels are logarithmic units, they cannot be added or subtracted. For example, two cars each producing 60 dBA of noise would not produce a combined 120 dBA.

Noise is most audible when traveling by direct line of sight, an unobstructed visual path between noise source and receptor. Barriers that break the line of sight between sources and receivers, such as walls and buildings, can greatly reduce source noise levels by allowing noise to reach receivers by diffraction only. As a result, sound barriers can generally reduce noise levels by up

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2 *National Institute of Health, National Institute on Deafness and Other Communication, www.nidcd.nih.gov/health/noise-induced-hearing-loss.*

3 *World Health Organization, Guidelines for Community Noise, 1999.*

4 *Ibid.*

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

6 *World Health Organization, Guidelines for Community Noise, 1999.*

to 15 dBA.[7] The effectiveness of barriers can be greatly reduced when they are not high or long enough to completely break the line of sight from sources to receivers.

Regulatory Framework

Noise

Federal. No federal noise standards regulate environmental noise associated with short-term construction activities or long-term operations of development projects. As such, temporary and long-term noise impacts produced by the Project would be largely regulated or evaluated by State and City of Los Angeles standards designed to protect public well-being and health.

State. The State's 2017 General Plan Guidelines establish county and city standards for acceptable exterior noise levels based on land use. These standards are incorporated into land use planning processes to prevent or reduce noise and land use incompatibilities. Table 2 illustrates State compatibility considerations between land uses and exterior noise levels.

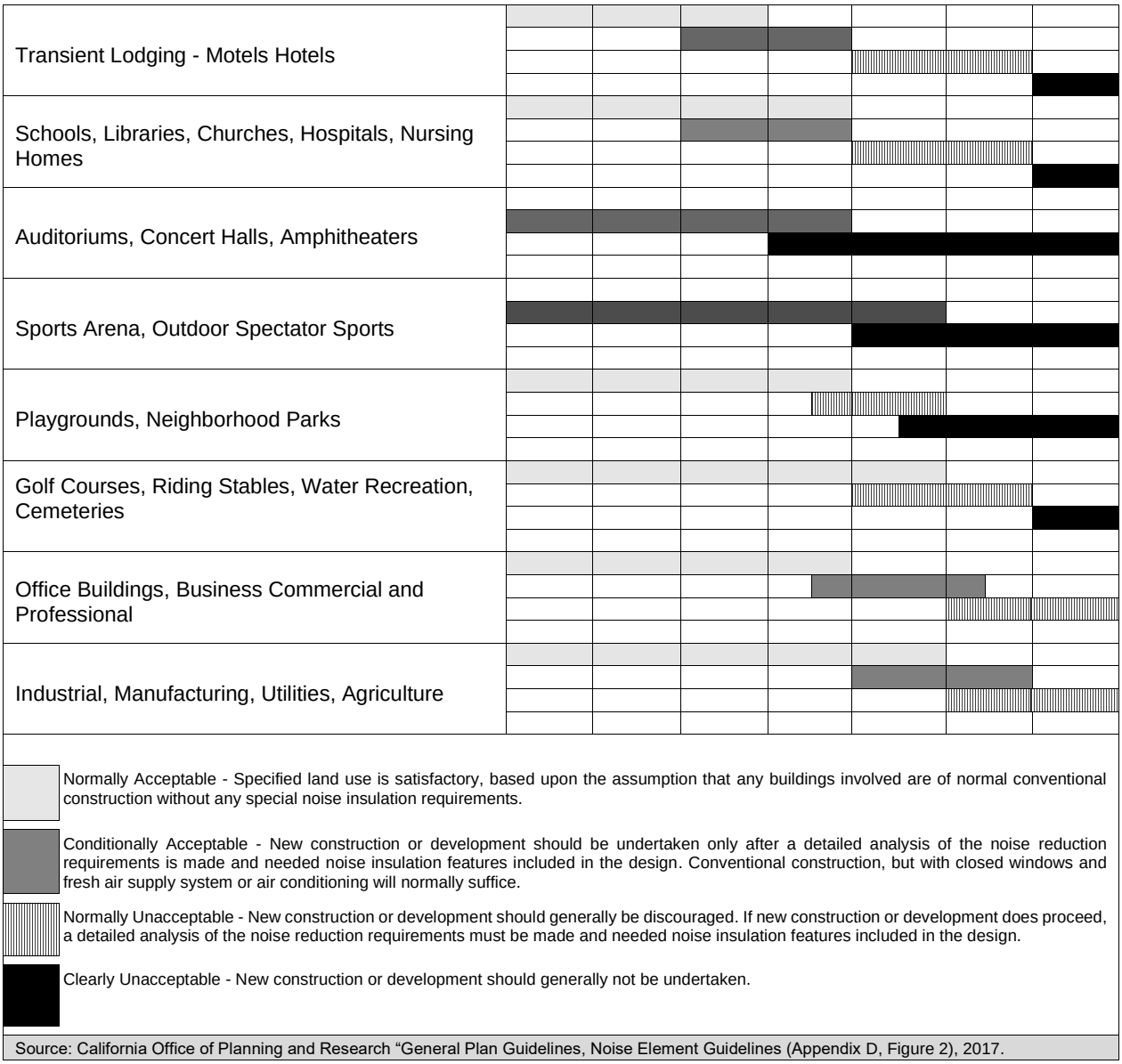
California Government Code Section 65302 also requires each county and city to prepare and adopt a comprehensive long-range general plan for its physical development. Section 65302(f) requires a noise element to be included in the general plan. This noise element must identify and appraise noise problems in the community, recognize Office of Noise Control guidelines, and analyze and quantify current and projected noise levels.

Los Angeles County Airport Land Use Commission Comprehensive Land Use Plan. In Los Angeles County, the Regional Planning Commission has the responsibility for acting as the Airport Land Use Commission and for coordinating the airport planning of public agencies within the County. The Airport Land Use Commission coordinates planning for the areas surrounding public-use airports. The Comprehensive Land Use Plan provides for the orderly expansion of Los Angeles County's public-use airports and the areas surrounding them. It is intended to provide for the adoption of land use measures that will minimize the public's exposure to excessive noise and safety hazards. In formulating the Comprehensive Land Use Plan, the Los Angeles County Airport Land Use Commission has established provisions for safety, noise insulation, and the regulation of building height within areas adjacent to each of the public airports in the County.

Table 2
State of California Noise/Land Use Compatibility Matrix

Land Use Category	Community Noise Exposure (dB, L_{dn} or CNEL)						
	55	60	65	70	75	80	
Residential - Low Density Single-Family, Duplex, Mobile Homes							
Residential - Multi-Family							

[7] *California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, September 2013.*



Source: California Office of Planning and Research "General Plan Guidelines, Noise Element Guidelines (Appendix D, Figure 2), 2017.

City of Los Angeles General Plan Noise Element. The City of Los Angeles General Plan includes a Noise Element that includes policies and standards to guide the control of noise to protect residents, workers, and visitors. Its primary goal is to regulate long-term noise impacts to preserve acceptable noise environments for all types of land uses. It includes programs applicable to construction projects that call for the protection of noise-sensitive uses and the use of best practices to minimize short-term noise impacts. However, the Noise Element contains no quantitative or other thresholds of significance for evaluating a project's noise impacts. Instead, it adopts the State's guidance on noise and land use compatibility, shown in Table 2, "to help guide determination of appropriate land use and mitigation measures vis-à-vis existing or anticipated ambient noise levels." It also includes the following objective and policy that are relevant to the Proposed Project:

Objective 2 (Non-airport): Reduce or eliminate non-airport related intrusive noise, especially relative to noise sensitive uses.

Policy 2.2: Enforce and/or implement applicable city, state, and federal regulations intended to mitigate proposed noise producing activities, reduce intrusive noise and alleviate noise that is deemed a public nuisance.

City of Los Angeles Municipal Code. The City of Los Angeles Municipal Code (LAMC) contains regulations that would regulate noise from the Project's temporary construction activities. Section 41.40(a) would prohibit construction activities between 9:00 P.M. and 7:00 A.M., Monday through Friday. Subdivision (c) would further prohibit such activities from occurring before 8:00 A.M. or after 6:00 P.M. on any Saturday or national holiday, or at any time on any Sunday. These restrictions serve to limit specific Project construction activities to Monday through Friday 7:00 A.M. to 9:00 P.M., and 8:00 A.M. to 6:00 P.M. on Saturdays or national holidays.

SEC.41.40. NOISE DUE TO CONSTRUCTION, EXCAVATION WORK—WHEN PROHIBITED.

(a) No person shall, between the hours of 9:00 P.M. and 7:00 A.M. of the following day, perform any construction or repair work of any kind upon, or any excavating for, any building or structure, where any of the foregoing entails the use of any power drive drill, riveting machine excavator or any other machine, tool, device or equipment which makes loud noises to the disturbance of persons occupying sleeping quarters in any dwelling, hotel or apartment or other place of residence. In addition, the operation, repair or servicing of construction equipment and the job-site delivering of construction materials in such areas shall be prohibited during the hours herein specified. Any person who knowingly and willfully violates the foregoing provision shall be deemed guilty of a misdemeanor punishable as elsewhere provided in this Code.

(c) No person, other than an individual homeowner engaged in the repair or construction of his single-family dwelling shall perform any construction or repair work of any kind upon, or any earth grading for, any building or structure located on land developed with residential buildings under the provisions of Chapter I of this Code, or perform such work within 500 feet of land so occupied, before 8:00 A.M. or after 6:00 P.M. on any Saturday or national holiday nor at any time on any Sunday. In addition, the operation, repair, or servicing of construction equipment and the job-site delivering of construction materials in such areas shall be prohibited on Saturdays and on Sundays during the hours herein specific…

Section 112.05 of the LAMC establishes noise limits for powered equipment and hand tools operated in a residential zone or within 500 feet of any residential zone. Of particular importance to construction activities is subdivision (a), which institutes a maximum noise limit of 75 dBA as measured at a distance of 50 feet from the activity for the types of construction vehicles and equipment that would likely be used in the construction of the Project. However, the LAMC notes that these limitations would not necessarily apply if it can be proven that the Project's compliance would be technically infeasible despite the use of noise-reducing means or methods.

SEC. 112.05. MAXIMUM NOISE LEVEL OF POWERED EQUIPMENT OR POWERED HAND TOOLS

Between the hours of 7:00 A.M. and 10:00 P.M., in any residential zone of the City or within 500 feet thereof, no person shall operate or cause to be operated any powered equipment or powered hand tool that produces a maximum noise level exceeding the following noise limits at a distance of 50 feet therefrom:

(a) 75 dBA for construction, industrial, and agricultural machinery including crawler-tractors, dozers, rotary drills and augers, loaders, power shovels, cranes, derricks, motor graders, paving machines, off-highway trucks, ditchers, trenchers, compactors, scrapers, wagons, pavement breakers, compressors and pneumatic or other powered equipment;

(b) 75 dBA for powered equipment of 20 HP or less intended for infrequent use in residential areas, including chain saws, log chippers and powered hand tools;

(c) 65 dBA for powered equipment intended for repetitive use in residential areas, including lawn mowers, backpack blowers, small lawn and garden tools and riding tractors.

Said noise limitations shall not apply where compliance therewith is technically infeasible. The burden of proving that compliance is technically infeasible shall be upon the person or persons charged with a violation of this section. Technical infeasibility shall mean that said noise limitations cannot be complied with despite the use of mufflers, shields, sound barriers and/or other noise reduction device or techniques during the operation of the equipment.

In addition, the LAMC regulates long-term operations of land uses, including but not limited to the following regulations.

Section 111.02 discusses the measurement procedure and criteria regarding the sound level of "offending" noise sources. A noise source causing a 5 dBA increase over the existing average ambient noise levels of an adjacent property is considered to create a noise violation. However, Section 111.02(b) provides a 5 dBA allowance for noise sources lasting more than five but less than 15 minutes in any 1-hour period, and a 10 dBA allowance for noise sources causing noise lasting 5 minutes or less in any 1-hour period. In accordance with these regulations, a noise level increase from certain city-regulated noise sources of five dBA over the existing or presumed ambient noise level at an adjacent property is considered a violation.

Section 112.02 would prevent Project heating, ventilation, and air conditioning (HVAC) systems and other mechanical equipment from elevating ambient noise levels by more than 5 dBA.

SEC.112.02. AIR CONDITIONING, REFRIGERATION, HEATING, PLUMBING, FILTERING EQUIPMENT

(a) It shall be unlawful for any person, within any zone of the city, to operate any air conditioning, refrigeration or heating equipment for any residence or other structure or to operate any pumping, filtering or heating equipment for any pool or reservoir in such manner as to create any noise which would cause the noise level on the premises of

any other occupied property … to exceed the ambient noise level by more than five decibels.

The LAMC also provides regulations regarding vehicle-related noise, including Sections 114.02, 114.03, and 114.06. Section 114.02 prohibits the operation of any motor driven vehicles upon any property within the City in a manner that would cause the noise level on the premises of any occupied residential property to exceed the ambient noise level by more than 5 dBA. Section 114.03 prohibits loading and unloading causing any impulsive sound, raucous or unnecessary noise within 200 feet of any residential building between the hours of 10:00 P.M. and 7:00 A.M. Section 114.06 requires vehicle theft alarm systems to be silenced within five minutes.

Existing Conditions

Noise Sensitive Receptors

The Project Site is located along the Ventura Boulevard corridor in Woodland Hills. Sensitive receptors within 1,000 feet of the Project Site include, but are not limited to, the following representative sampling:

- Sunrise of Woodland Hills, assisted living facility; 20461 Ventura Boulevard; 70 feet west of the Project Site.
- Woodcourt Medical Building, 20251-20315 Ventura Boulevard; 400 feet east of the Project Site.
- Kol Tikvah Early Childhood Center, 20400 Ventura Boulevard; 130 feet south of the Project Site.
- Multi-family residences; 20500 Ventura Boulevard; 170 feet south of the Project Site
- Residences, 20400 block of Clark Street; 490 feet northeast of the Project Site across the Ventura Freeway.
- Taft High School, 5461 Winnetka Avenue; 670 feet east of the Project Site.

Existing Ambient Noise Levels

The Project Site is currently vacant of any improvements aside from an unused surface parking lot and remnants of a former restaurant. As such, there is no noise generated at the Project Site.

The primary source of noise near the Project Site is vehicle traffic, as transportation noise is the main source of noise in urban environments, largely from the operation of vehicles with internal combustion engines and frictional contact with the ground and air.[8] The major source of vehicle noise in the area is traffic on the Ventura Freeway, located about 100 feet north of the Project Site, where up to 15,400 vehicles per hour contribute substantially to noise on the northern portion of the Project Site.[9] At the southern portion of the Project Site, traffic noise from Ventura

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8 *World Health Organization, https://www.who.int/docstore/peh/noise/Comnoise-2.pdf accessed March 18, 2021.*

9 *Caltrans Traffic Census Program data, 2020 peak hour volumes for US-101 at Winnetka Avenue; https://dot.ca.gov/programs/traffic-operations/census*

Boulevard is the prime contributor, where about 3,002 peak A.M. hour vehicles travel east and west between Winnetka Avenue and Kelvin Avenue.[10]

In January 2022, DKA Planning took short-term noise measurements near the Project site to determine the ambient noise conditions of the neighborhood near sensitive receptors.[11] Figure 1 illustrates where ambient noise levels were measured near the Project Site to establish the noise environment and their relationship to the applicable sensitive receptor(s). As shown in Table 3, noise levels along roadways near the Project Site are high because of vehicle traffic on Ventura Boulevard and the Ventura Freeway. Noise levels ranged from 67.4 to 72.6 dBA L_{eq}, which was generally consistent with the traffic volumes on the applicable street(s). 24-hour CNEL noise levels are generally considered "Conditionally Acceptable" for the types of land uses near the Project Site, though noise levels along Clark Street would be considered "Normally Unacceptable" because of freeway noise.

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10 *DKA Planning 2023, based on City of Los Angeles database of traffic volumes on Ventura Boulevard between Winnetka Avenue and Kelvin Avenue, https://navigatela.lacity.org/dot/traffic_data/automatic_counts/VENTURA.BTWN.CHALKHILL.VILLATERAZA.161220-NDSAUTO%20AS.pdf, 2016 traffic counts adjusted by one percent growth factor to represent existing conditions.*

11 *Noise measurements were taken using a Quest Technologies Sound Examiner SE-400 Meter. The Sound Examiner meter complies with the American National Standards Institute (ANSI) and International Electrotechnical Commission (IEC) for general environmental measurement instrumentation. The meter was equipped with an omni-directional microphone, calibrated before the day's measurements, and set at approximately five feet above the ground.*



DouglasKim+Associates,LLC

Figure 1
Noise Measurement Locations

Table 3
Existing Noise Levels

Noise Measurement Locations	Primary Noise Source	Sound Levels		Nearest Sensitive Receptor(s)	Noise/Land Use Compatibility[b]
		dBA (L_{eq})	dBA (CNEL)[a]		
A. Sunrise of Woodland Hills	Traffic on Ventura Blvd.	67.4	65.4	Residences – Ventura Blvd. (20500 block); Sunrise of Woodland Hills	Conditionally Acceptable
B. Clark St. (20400 block)	Traffic on Ventura Freeway	72.6	70.6	Residences, Clark St. (20400 block)	Normally Unacceptable
C. Taft High School	Traffic on Ventura Blvd.	69.2	67.2	Taft High School	Conditionally Acceptable
D. Kol Tikvah Preschool	Traffic on Ventura Blvd.	69.8	67.8	Kol Tivah Preschool	Conditionally Acceptable

[a] Estimated based on short-term (15-minute) noise measurement using Federal Transit Administration procedures from 2016 Transit Noise and Vibration Impact Assessment Manual, Appendix E, Option 4.
[b] Pursuant to California Office of Planning and Research "General Plan Guidelines, Noise Element Guidelines, 2017. When noise measurements apply to two or more land use categories, the more noise-sensitive land use category is used. See Table 2 above for definition of compatibility designations.

Source: DKA Planning, 2023

Project Impacts

Methodology

On-Site Construction Activities. Construction noise levels at off-site sensitive receptors were modeled employing the ISO 9613-2 sound attenuation methodologies using the SoundPLAN Essential model (version 5.1). This software package considers reference equipment noise levels, noise management techniques, distance to receptors, and any attenuating features to predict noise levels from sources like construction equipment. Construction noise sources were modeled as area sources to reflect the mobile nature of construction equipment. These vehicles would not operate directly where the Project's property line abuts adjacent structures, as they would retain some setback to preserve maneuverability. This equipment would also occasionally operate at reduced power and intensity to maintain precision at these locations.

Off-Site Construction Noise Activities. The Project's off-site construction noise impact from haul trucks, vendor deliveries, and other vehicles accessing the Project Site was analyzed by considering the Project's anticipated vehicle trip generation with existing traffic and roadway noise levels along local roadways, particularly those likely to be part of any haul route. Because it takes a doubling of traffic volumes on a roadway to generate the increased sound energy it takes to elevate ambient noise levels by 3 dBA, the analysis focused on whether truck and auto traffic would double traffic volumes on key roadways to be used for hauling soils to and/or from the

Project Site during construction activities.[12] Because haul trucks generate more noise than traditional passenger vehicles, a 19.1 passenger car equivalency (PCE) was used to convert haul truck trips to a reference level conversion to an equivalent number of passenger vehicles.[13] It should be noted that because an official haul route has not been approved as of the preparation of this analysis, assumptions were made about logical routes that would minimize haul truck traffic on local streets in favor of major arterials that can access regional-serving freeways.

On-Site Operational Noise Activities. The Project's potential to result in significant noise impacts from on-site operational noise sources was evaluated by identifying sources of on-site noise sources and considering the impact that they could produce given the nature of the source (i.e., loudness and whether noise would be produced during daytime or more-sensitive nighttime hours), distances to nearby sensitive receptors, ambient noise levels near the Project Site, the presence of similar noise sources in the vicinity, and maximum noise levels permitted by the LAMC.

Off-Site Operational Noise Activities. The Project's off-site noise impact from Project-related traffic was evaluated based its potential to increase traffic volumes on local roadways that serve the Project site. Because it takes a doubling of traffic volumes on a roadway to generate the increased sound energy it takes to elevate ambient noise levels by 3 dBA, the analysis focused on whether auto trips generated by the Project would double traffic volumes on key roadways that access the Project Site.

Thresholds of Significance

Construction Noise Thresholds. Based on guidelines from the City, the on-site construction noise impact would be considered significant if:

- Construction activities lasting more than one day would exceed existing ambient exterior sound levels by 10 dBA (hourly Leq) or more at a noise-sensitive use;

- Construction activities lasting more than 10 days in a three-month period would exceed existing ambient exterior noise levels by 5 dBA (hourly Leq) or more at a noise-sensitive use; or

- Construction activities of any duration would exceed the ambient noise level by 5 dBA (hourly Leq) at a noise-sensitive use between the hours of 9:00 P.M. and 7:00 A.M. Monday through Friday, before 8:00 A.M. or after 6:00 P.M. on Saturday, or at any time on Sunday.

Operational Noise Thresholds. In addition to applicable City standards and guidelines that would regulate or otherwise moderate the Project's operational noise impacts, the following criteria are adopted to assess the impact of the Project's operational noise sources:

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

[13] *Caltrans, Technical Noise Supplement Table 3-3, 2013.*

- Project operations would cause ambient noise levels at off-site locations to increase by 3 dBA CNEL or more to or within "normally unacceptable" or "clearly unacceptable" noise/land use compatibility categories, as defined by the State's 2017 General Plan Guidelines.

- Project operations would cause any 5 dBA CNEL or greater noise increase.[14]

Analysis of Project Impacts

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

Less Than Significant Impact.

Construction

On-Site Construction Activities

Construction would generate noise during the construction process that would span 19 months of demolition, site preparation, grading, utilities trenching, building construction, paving, and application of architectural coatings, as shown in Table 4. During all construction phases, noise-generating activities could occur at the Project Site between 7:00 A.M. and 9:00 P.M. Monday through Friday, in accordance with LAMC Section 41.40(a). On Saturdays, construction would be permitted to occur between 8:00 A.M. and 6:00 P.M.

Noise levels would generally peak during the demolition and grading phases, when diesel-fueled heavy-duty equipment like excavators and dozers are used to move large amounts of debris and dirt, respectively. This equipment is mobile in nature and does not always operate at in a steady-state mode full load, but rather powers up and down depending on the duty cycle needed to conduct work. As such, equipment is occasionally idle during which time no noise is generated.

During other phases of construction (e.g., trenching, building construction, paving, architectural coatings), noise impacts are generally lesser than during grading because they are less reliant on using heavy equipment with internal combustion engines. Smaller equipment such as forklifts, generators, and various powered hand tools and pneumatic equipment would generally be utilized. Off-site secondary noises would be generated by construction worker vehicles, vendor

[14] *As a 3 dBA increase represents a slightly noticeable change in noise level, this threshold considers any increase in ambient noise levels to or within a land use's "normally unacceptable" or "clearly unacceptable" noise/land use compatibility categories to be significant so long as the noise level increase can be considered barely perceptible. In instances where the noise level increase would not necessarily result in "normally unacceptable" or "clearly unacceptable" noise/land use compatibility, a 5 dBA increase is still considered to be significant. Increases less than 3 dBA are unlikely to result in noticeably louder ambient noise conditions and would therefore be considered less than significant.*

deliveries, and haul trucks. Figure 2 illustrates how noise would propagate from the construction site during the demolition and grading phase.

Table 4
Construction Schedule Assumptions

Phase	Duration	Notes
Demolition	Month 1	Removal of 53,433 square feet of asphalt/concrete parking lot and 3,391 cubic yards of existing structural foundations hauled 25 miles to landfill in 10-cubic yard capacity trucks.
Site Preparation	Month 2	Removal of trees, plants, landscaping, weeds, grubbing
Grading	Months 3-4	Approximately 61,585 cubic yards of soil (including swell factors for topsoil and dry clay) hauled 25 miles to landfill in 10-cubic yard capacity trucks.
Trenching	Months 5-7	Trenching for utilities, including gas, water, electricity, and telecommunications.
Building Construction	Months 5-19	Includes assembly of shoring, installation of floor slabs, columns, and walls for two levels of subterranean structures. Footings and Foundation work (e.g., pouring concrete pads), framing, welding; installing mechanical, electrical, and plumbing. Floor assembly, interior painting, cabinetry and carpentry, elevator installations, low voltage systems, trash management.
Paving	Month 18	Flatwork, including paving of driveways and walkways
Architectural Coatings	Months 17-19	Application of interior and exterior coatings and sealants.
Source: DKA Planning, 2023.		

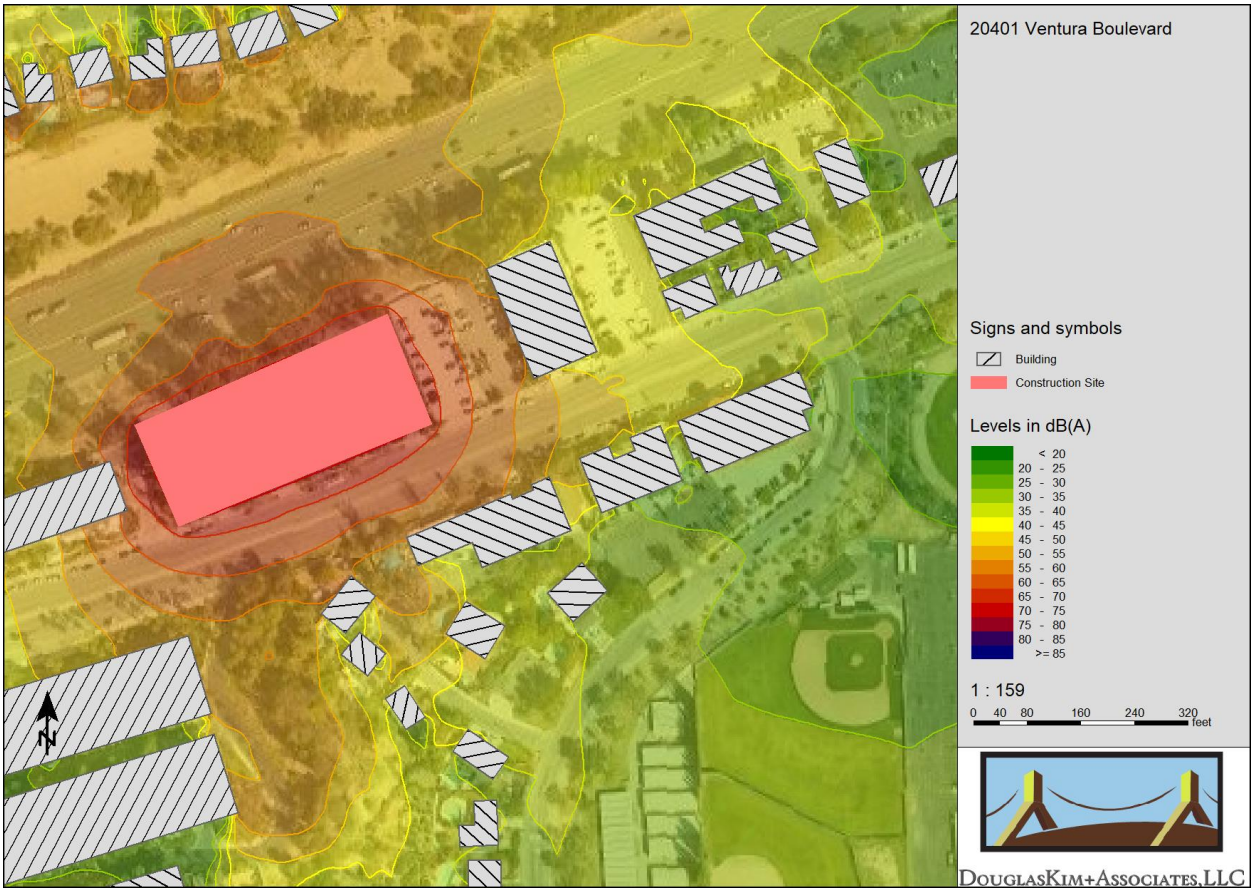


Figure 2
Construction Noise Sound Contours

Because the Project's construction phase would occur for more than three months, the applicable City threshold of significance for the Project's construction noise impacts is an increase of 5 dBA over existing ambient noise levels. As shown in Table 5, when considering ambient noise levels, the use of multiple pieces of powered equipment simultaneously would increase ambient noise negligibly. This assumes the use of best practices techniques required by the City's Building and Safety code, such as temporary sound barriers and quieter and/or smaller equipment. The specific options would be determined in consultation with the Building and Safety Department. These construction noise levels would not exceed the City's significance threshold of 5 dBA. Therefore, the Project's on-site construction noise impact would be less than significant.

Table 5
Construction Noise Impacts at Off-Site Sensitive Receptors

Receptor	Maximum Construction Noise Level (dBA L_{eq})	Existing Ambient Noise Level (dBA L_{eq})	New Ambient Noise Level (dBA L_{eq})	Increase (dBA L_{eq})	Potentially Significant?
1. Residences – Ventura Blvd. (20500 block)	56.7	67.4	67.8	0.4	No
2. Residences – Sunrise of Woodland Hills	56.4	67.4	67.7	0.3	No
3. Residences – Clark St. (20400 block)	53.2	72.6	72.6	0.0	No
4. Taft High School	30.1	69.2	69.2	0.0	No
5. Kol Tikvah Preschool	53.5	69.8	69.9	0.1	No
Source: DKA Planning, 2023.					

Off-Site Construction Activities

The Project would also generate noise at off-site locations from haul trucks moving debris and soil from the Project Site during demolition and grading activities, respectively; vendor and contractor trips; and worker commute trips. These activities would generate up to an estimated 774 peak hourly PCE vehicle trips, as summarized in Table 6, during the grading phase, assuming all workers travel to the worksite at the same time. This includes converting noise from heavy-duty truck trips to an equivalent number of passenger vehicle trips. This would represent about 25.8 percent of traffic volumes on Ventura Boulevard, which carries about 3,002 vehicles between Winnetka Avenue and Kelvin Avenue in the morning peak hour of traffic.[15]

Ventura Boulevard would serve as part of the haul route for any soil exported from the Project Site given its access to north-south arterials that connect to the Ventura Freeway. Because the Project's construction-related trips would not cause a doubling in traffic volumes (i.e., 100 percent increase) on Ventura Boulevard, the Project's construction-related traffic would not increase existing noise levels by 3 dBA or more. Therefore, the Project's noise impacts from construction-related traffic would be less than significant.

[15] *DKA Planning 2023, based on City of Los Angeles database of traffic volumes on Ventura Boulevard between Winnetka Avenue and Kelvin Avenue, https://navigatela.lacity.org/dot/traffic_data/automatic_counts/VENTURA.BTWN.CHALKHILL.VILLATERAZA.161220-NDSAUTO%20AS.pdf, 2016 traffic counts adjusted by one percent growth factor to represent existing conditions.*

Table 6
Construction Vehicle Trips (Maximum Hourly)

Construction Phase	Worker Trips [a]	Vendor Trips	Haul Trips	Total Trips	Percent of Peak A.M. Hour Trips on Ventura Blvd.[e]
Demolition	13	0	70[b]	82	2.7
Site Preparation	8	0	0	8	0.2
Grading	10	0	764[c]	774	25.8
Trenching	10	0	0	10	0.3
Building Construction	67	71[d]	0	137	4.6
Paving	13	0	0	13	0.4
Architectural Coating	13	0	0	13	0.4

[a] Assumes all worker trips occur in the peak hour of construction activity.
[b] The project would generate 537 haul trips over a 21-day period with seven-hour work days. Because haul trucks emit more noise than passenger vehicles, a 19.1 passenger car equivalency (PCE) was used to convert haul truck trips to a passenger car equivalent
[c] The project would generate 12,317 haul trips over a 44-day period with seven-hour work days. Assumes a 19.1 PCE.
[d] This phase would generate about 26 vendor truck trips daily over a seven-hour work day. Assumes a 19.1 PCE.
[e] Percent of existing traffic volumes on Ventura Boulevard between Winnetka Avenue and Kelvin Avenue.

Source: DKA Planning, 2023

Operation

On-Site Operational Noise

During long-term operations, the Project would produce noise from both on- and off-site sources. As discussed below, the Project would not result in an exposure of persons to or a generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. The Project would also not increase surrounding noise levels by more than 5 dBA CNEL, the minimum threshold of significance based on the noise/land use category of sensitive receptors near the Project Site. As a result, the Project's on-site operational noise impacts would be considered less than significant.

Mechanical Equipment

The Project would operate mechanical equipment on the roof that would generate incremental long-term noise impacts. HVAC equipment in the form of 32 large rooftop units suitable for cooling large volumes of a building would be located on the rooftop, approximately 33'4" above grade.

This equipment would include a number of sound sources, including compressors, condenser fans, supply fans, return fans, and exhaust fans that could generate a sound pressure level of up to 81.9 dBA at one foot.[16]

However, noise impacts from rooftop mechanical equipment on nearby sensitive receptors would be negligible for several reasons. First, ambient noise levels at receptors with a line-of-sight to the Project Site (e.g., Sunrise of Woodland Hills, residences on Clark Street) would neutralize any marginal noise from these HVAC units. Second, the presence of the Project's roof edge creates an effective noise barrier that further reduces noise levels from rooftop HVAC units by 8 dBA or more. A parapet would further shield sensitive receptors near the Project Site. These design elements would be helpful in managing noise, as equipment often operates continuously throughout the day and occasionally during the day, evenings, and weekends.

As a result, noise from HVAC units would negligibly elevate ambient noise levels, far less than the 5 dBA CNEL threshold of significance for operational impacts. Compliance with LAMC Section 112.02 would further limit the impact of HVAC equipment on noise levels at adjacent properties.

Other mechanical equipment would be fully enclosed within the structure, shielded from outside sources, and would therefore produce minimal noise impacts for off-site sensitive receptors. A 175 square-foot electrical room and elevator equipment (including hydraulic pump, switches, and controllers) would be on the ground floor of the development while a 380 square-foot pump room would be located on the second floor.

Auto-Related Activities

The majority of vehicle-related noise impacts at the Project Site would come from vehicles entering and exiting the development from a driveway off Ventura Boulevard. Because self-storage facilities generate traffic differently than conventional commercial land uses, the peak hours of vehicle travel would be mid-day, outside the peak hours of traffic congestion, where up to 23 vehicles would access the development.[17] Vehicles would either park in the surface-level lot or use the five loading spaces that are located inside the development. Parking lot noise would include tire friction as vehicles navigate to and from parking spaces, doors slamming, car alarms, and minor engine acceleration. The limited on-site retail would generate vehicle trips throughout the day. Most of these sources are instantaneous (e.g., car alarm chirp, door slam) while others may last a few seconds. Visitors would load and unload materials onto dollies and other moving equipment, generating low levels of noise.

As a result, these noise sources would be intermittent, concentrated during the mid-day period, and would not collectively elevate ambient noise levels by more than 1 dBA CNEL over a 24-hour period. The ambient noise levels near the Ventura Freeway that range from 65.4 to 70.6 dBA L_{eq}

16 City of Pomona, Pomona Ranch Plaza WalMart Expansion Project, Table 4.4-5; August 2014. Source was cluster of mechanical rooftop condensers including two Krack MXE-04 four-fan units and one MXE-02 two-fan unit. Reference noise level based on 30 minutes per hour of activity.

17 *CR Associates, Encino Gardens (20401 Ventura Boulevard, Woodland Hills Self-Storage) – Trip Generation Technical Memorandum. March 2023 using ITE Trip Generation Manual 11th Edition.*

(see Table 3) would further negate any noise from outdoor moving activities at sensitive receptors across the Ventura Freeway and across Ventura Boulevard. Other receptors (e.g., Sunrise of Woodland Hills) would be shielded from parking lot activities by the structure itself. This incremental noise impact would be far less than the 5 dBA CNEL threshold of significance for operational noise impacts. As such, the Project's auto-related activity and parking lot noise would not have a significant impact on the surrounding noise environment.

Outdoor Uses

While most operations would be conducted inside the development, other outdoor activities could generate noise that could impact local sensitive receptors. This would include trash collection, landscape maintenance, and commercial loading. These are discussed below:

- Trash collection. On-site trash and recyclable materials would be managed from the waste collection area at the east end of the parking lot. Haul trucks would access solid waste from Ventura Boulevard, where solid waste activities would include use of trash compactors and hydraulics associated with the refuse trucks themselves. Noise levels of approximately 71 dBA L_{eq} and 66 dBA L_{eq} could be generated by collection trucks and trash compactors, respectively, at 50 feet of distance.[18] Intermittent solid waste management activities would operate during the day. Trash collection activities would not substantially elevate 24-hour noise levels at off-site locations by 5 dBA CNEL or more.
- Landscape maintenance. Noise from gas-powered leaf blowers, lawnmowers, and other landscape equipment can generated substantial bursts of noise during regular maintenance. For example, two gas powered leaf blowers with two-stroke engines and a hose vacuum can generate an average of 85.5 dBA L_{eq} and cause nuisance or potential noise impacts for nearby receptors.[19] However, given the high ambient noise levels of 65 dBA CNEL and more along this section of Ventura Boulevard, the modest sound power from a few minutes of maintenance activities during daytime hours would negligibly affect CNEL sound levels.
- Commercial loading. On-site loading and unloading activities would be managed via five loading spaces inside the development, which is accessible from the parking lot off Ventura Boulevard. Loading and unloading activities would occur within the first floor of the structure facing eastward, obscured from any off-site sensitive use. As a result, there would be negligible noise impacts on off-site receptors and impacts would not increase CNEL noise levels at off-site locations. Further, LAMC Section 114.03 would regulate loading and unloading activities between 10:00 P.M. and 7:00 A.M.

Based on an assessment of these on-site sources, the impact of on-site operational noise sources would be considered less than significant.

18 RK Engineering Group, Inc. Wal-Mart/Sam's Club reference noise level, 2003.

19 *Erica Walker et al, Harvard School of Public Health; Characteristics of Lawn and Garden Equipment Sound; 2017. These equipment generated a range of 74.0-88.5 dBA Leq at 50 feet.*

Off-Site Operational Noise

The majority of the Project's operational noise impacts would be off-site from vehicles traveling to and from the development. The Project could add up to 235 net vehicle trips to the local roadway network on a peak weekday at the start of operations in 2025.[20] During the peak P.M. hour, up to 23 vehicles would generate noise in and out of the parking lot via the driveway off Ventura Boulevard.[21] This would represent about 0.8 percent of traffic volumes on Ventura Boulevard, which carries about 3,002 vehicles between Winnetka Avenue and Kelvin Avenue in the morning peak hour of traffic.[22]

Because it takes a doubling of traffic volumes (i.e., 100 percent) to increase ambient noise levels by 3 dBA L_{eq}, the Project's traffic would neither increase ambient noise levels 3 dBA or more into "normally unacceptable" or "clearly unacceptable" noise/land use compatibility categories, nor increase ambient noise levels 5 dBA or more. Twenty-four-hour CNEL impacts would similarly be minimal, far below criterion for significant operational noise impacts, which begin at 3 dBA. As such, this impact would be considered less than significant.

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

Less Than Significant Impact. The Project Site is located about 5.2 miles west of the Van Nuys Airport. Because the Project would not be located within the vicinity of a private airstrip or within two miles of a public airport, the Project would not expose local workers or residents in the area to excessive noise levels. This would be considered a less than-significant impact.

Cumulative Impacts

Construction

On-Site Construction Noise

During construction of the Project, there could be other construction activity in the area that contributes to cumulative noise impacts at sensitive receptors. Noise from construction of development projects is localized and can affect noise-sensitive uses within 500 feet, based on the City's screening criteria. As such, noise from two construction sites within 1,000 feet of each other can contribute to cumulative noise impacts for receptors located between.

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20 *LADOT Referral Form, May 2023.*

21 *CR Associates, Encino Gardens (20401 Ventura Boulevard, Woodland Hills Self-Storage) – Trip Generation Technical Memorandum. March 2023 using ITE Trip Generation Manual 11th Edition.*

22 *DKA Planning 2023, based on City of Los Angeles database of traffic volumes on Ventura Boulevard between Winnetka Avenue and Kelvin Avenue, https://navigatela.lacity.org/dot/traffic_data/automatic_counts/VENTURA.BTWN.CHALKHILL.VILLATERAZA.161220-NDSAUTO%20AS.pdf, 2016 traffic counts adjusted by one percent growth factor to represent existing conditions.*

The City has confirmed that while there is one related project within 1,000 feet of the Proposed Project (20539 Ventura Boulevard), the automotive dealership is under construction and is expected to be complete when the Proposed Project begins the construction process. As a result, there are no reasonably foreseeable related projects that could contribute to cumulative noise impacts at the analyzed sensitive receptors. Based on this, there would not be cumulative noise impacts at any nearby sensitive uses located near the Project Site and related projects in the event of concurrent construction activities.

Off-Site Construction Noise

Other concurrent construction activities from related projects can contribute to cumulative off-site impacts if haul trucks, vendor trucks, or worker trips for any related project(s) were to utilize the same roadways. Distributing trips to and from each related project construction site substantially reduces the potential that cumulative development could more than double traffic volumes on existing streets, which would be necessary to increase ambient noise levels by 3 dBA. The Proposed Project would represent 25.8 percent of traffic volumes on Ventura Boulevard, which carries about 3,002 vehicles between Winnetka Avenue and Kelvin Avenue in the morning peak hour of traffic.[23] As there are no related projects in the vicinity of the Project that could contribute to cumulative construction noise impacts from traffic on Ventura Boulevard, cumulative off-site noise impacts from construction would be less than significant.

Operation

The Project Site and Ventura Boulevard corridor have been developed with residential and commercial land uses that have previously generated, and will continue to generate, noise from a number of operational noise sources, including mechanical equipment (e.g., HVAC systems), outdoor activity areas, and vehicle travel.

On-Site Stationary Noise Sources

Noise from on-site mechanical equipment (e.g., HVAC units) and any other human activities from related projects would not be typically associated with excessive noise generation that could result in increases of 5 dBA or more in ambient noise levels at sensitive receptors when combined with operational noise from the Proposed Project. As discussed above, the proposed self-storage and retail facility would not result in significant operational noise impacts on nearby sensitive receptors. As there are no related projects in the vicinity of the Project that could contribute to cumulative noise impacts from project operation, cumulative stationary source noise impacts associated with operation of the Project and related projects would be less than significant.

Off-Site Mobile Noise Sources

[23] *City of Los Angeles database of traffic volumes on Ventura Bl between Winnetka Ave and Kelvin Ave. https://navigatela.lacity.org/dot/traffic_data/automatic_counts/VENTURA.BTWN.CHALKHILL.VILLATERAZA.161220-NDSAUTO%20AS.pdf, 2016 traffic counts adjusted by one percent growth factor to represent existing conditions.*

The Project would add up to 235 vehicle trips to the local roadway network on a peak weekday at the start of operations in 2025, including up to 23 maximum hourly vehicle trips that would not significantly elevate traffic noise levels on Ventura Boulevard. As there are no related projects in the vicinity of the Project that could contribute to cumulative traffic noise impacts from project operation, cumulative traffic noise impacts associated with operation of the Project and related projects would be less than significant. This includes residences on Clark Street across the Ventura Freeway, where cumulative noise impacts due to off-site traffic would not increase ambient noise levels by 3 dBA to or within the "Normally Unacceptable" noise category.

TECHNICAL APPENDIX



DouglasKim+Associates,LLC

AMBIENT NOISE MEASUREMENTS



DouglasKim+Associates,LLC

Figure 1
Noise Measurement Locations

Session Report

1/25/2022

Information Panel

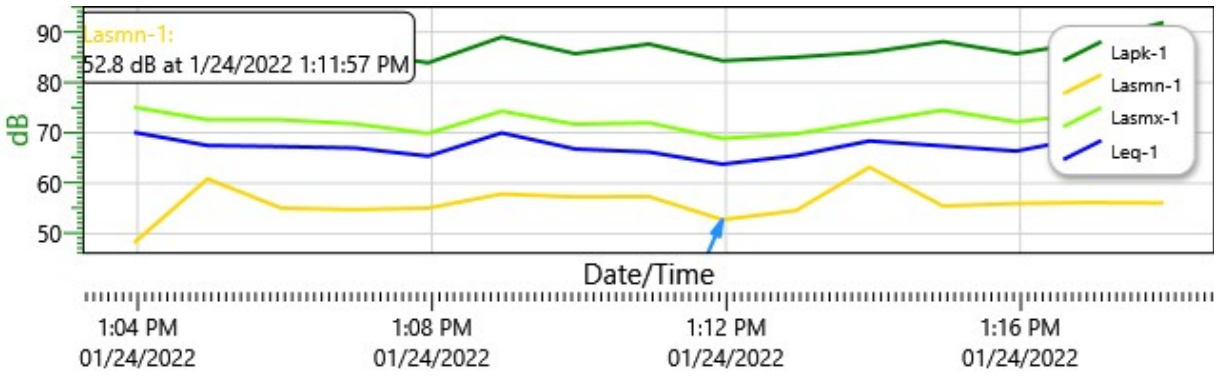
Name	Sunrise of Woodland Hills
Comments	
Start Time	1/24/2022 1:02:57 PM
Stop Time	1/24/2022 1:18:00 PM
Run Time	00:15:03
Serial Number	SE40213991
Device Name	SE40213991
Model Type	Sound Examiner
Device Firmware Rev	R.11C
Company Name	
Description	
Location	
User Name	

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	67.4 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF

Logged Data Chart

Sunrise of Woodland Hills: Logged Data Chart



Logged Data Table

Date/Time	Lapk-1	Lasmn-1	Lasmx-1	Leq-1

Date/Time	Lapk-1	Lasmn-1	Lasmx-1	Leq-1
1/24/2022 1:03:57 PM	88.6	48.2	75.1	70.1
1:04:57 PM	89.6	60.9	72.6	67.5
1:05:57 PM	92.9	55.1	72.6	67.3
1:06:57 PM	86.1	54.8	71.8	67
1:07:57 PM	83.9	55.1	69.9	65.4
1:08:57 PM	89	57.9	74.3	70
1:09:57 PM	85.7	57.3	71.7	66.8
1:10:57 PM	87.6	57.4	72	66.2
1:11:57 PM	84.3	52.8	68.9	63.8
1:12:57 PM	85	54.6	69.8	65.5
1:13:57 PM	86	63.2	72.2	68.4
1:14:57 PM	88.1	55.5	74.5	67.4
1:15:57 PM	85.7	56	72.2	66.4
1:16:57 PM	88.1	56.2	73.8	69.2
1:17:57 PM	91.9	56.1	73.9	64.9

Session Report

1/25/2022

Information Panel

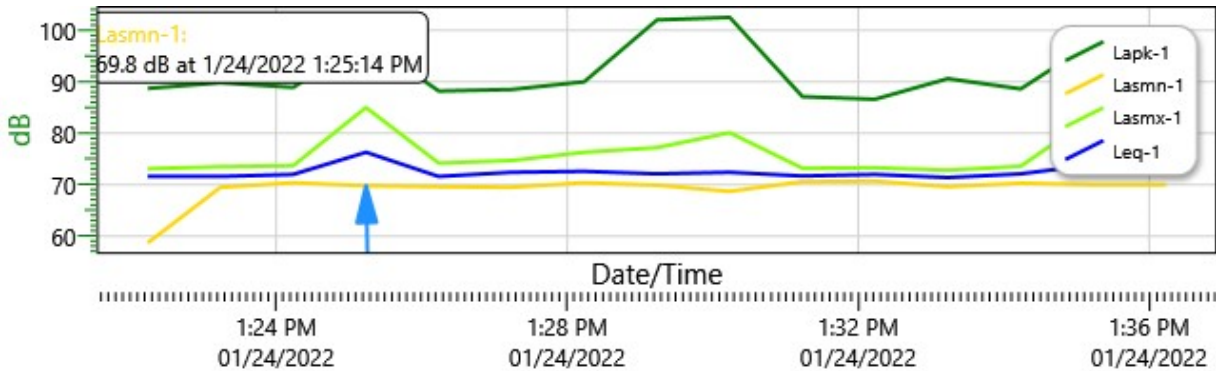
Name	Residences - 20400 block Clark Street
Comments	
Start Time	1/24/2022 1:21:14 PM
Stop Time	1/24/2022 1:36:21 PM
Run Time	00:15:07
Serial Number	SE40213991
Device Name	SE40213991
Model Type	Sound Examiner
Device Firmware Rev	R.11C
Company Name	
Description	
Location	
User Name	

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	72.6 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF

Logged Data Chart

Residences - 20400 block Clark Street: Logged Data Chart



Logged Data Table

Date/Time	Lapk-1	Lasmn-1	Lasmx-1	Leq-1

Date/Time	Lapk-1	Lasmn-1	Lasmx-1	Leq-1
1/24/2022 1:22:14 PM	88.7	58.7	73.1	71.6
1:23:14 PM	89.8	69.5	73.5	71.6
1:24:14 PM	88.9	70.4	73.7	72
1:25:14 PM	98	69.8	85	76.3
1:26:14 PM	88.2	69.6	74.2	71.6
1:27:14 PM	88.5	69.5	74.7	72.4
1:28:14 PM	90	70.4	76.3	72.6
1:29:14 PM	102	69.9	77.2	72.1
1:30:14 PM	102.5	68.7	80.1	72.4
1:31:14 PM	87.1	70.6	73.2	71.7
1:32:14 PM	86.6	70.7	73.3	72
1:33:14 PM	90.6	69.6	72.8	71.4
1:34:14 PM	88.6	70.3	73.6	72.1
1:35:14 PM	97.7	70	83.3	73.9
1:36:14 PM	97.4	70	81.4	73.1

Session Report

1/25/2022

Information Panel

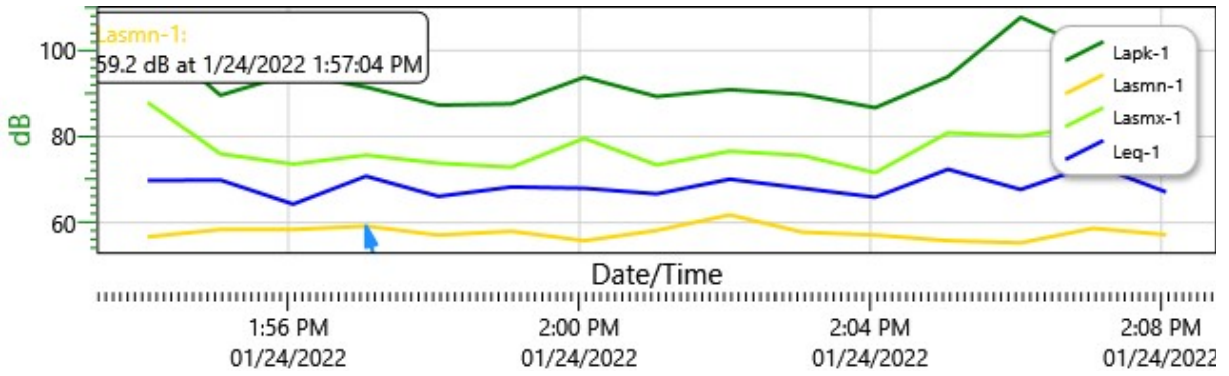
Name	Taft High School
Comments	
Start Time	1/24/2022 1:53:04 PM
Stop Time	1/24/2022 2:08:13 PM
Run Time	00:15:09
Serial Number	SE40213991
Device Name	SE40213991
Model Type	Sound Examiner
Device Firmware Rev	R.11C
Company Name	
Description	
Location	
User Name	

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	69.2 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF

Logged Data Chart

Taft High School: Logged Data Chart



Logged Data Table

Date/Time	Lapk-1	Lasmn-1	Lasmx-1	Leq-1

Date/Time	Lapk-1	Lasmn-1	Lasmx-1	Leq-1
1/24/2022 1:54:04 PM	104	56.7	87.9	69.8
1:55:04 PM	89.6	58.4	76	69.9
1:56:04 PM	94.7	58.4	73.6	64.3
1:57:04 PM	91.5	59.2	75.7	70.8
1:58:04 PM	87.3	57.1	73.8	66.1
1:59:04 PM	87.6	58	72.9	68.3
2:00:04 PM	93.8	55.8	79.6	68
2:01:04 PM	89.3	58.2	73.4	66.7
2:02:04 PM	90.9	61.8	76.6	70.1
2:03:04 PM	89.8	57.8	75.6	68
2:04:04 PM	86.7	57.1	71.6	65.9
2:05:04 PM	93.9	55.8	80.9	72.4
2:06:04 PM	107.7	55.3	80.1	67.7
2:07:04 PM	100.1	58.7	82.5	73.5
2:08:04 PM	92.2	57.2	75.5	67.1

Session Report

1/25/2022

Information Panel

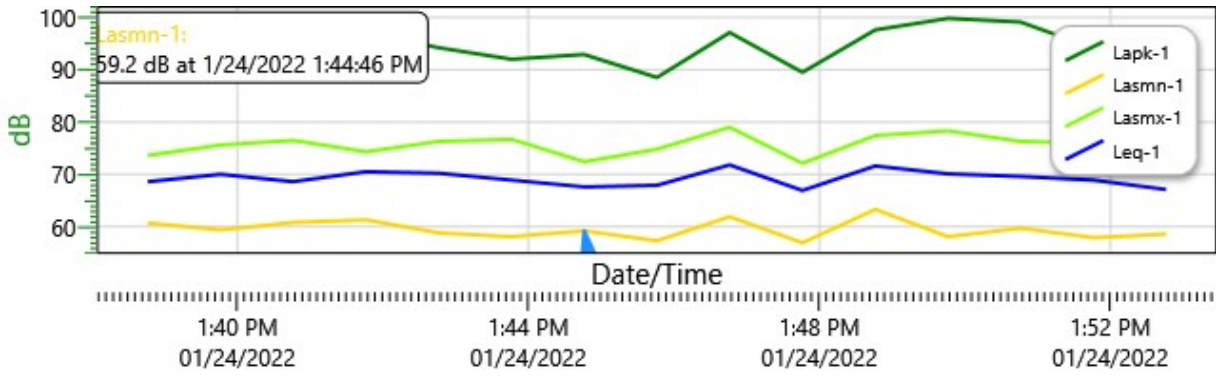
Name	Kol Tikvah Preschool - 20400 Ventura Boulevard
Comments	
Start Time	1/24/2022 1:37:46 PM
Stop Time	1/24/2022 1:52:53 PM
Run Time	00:15:07
Serial Number	SE40213991
Device Name	SE40213991
Model Type	Sound Examiner
Device Firmware Rev	R.11C
Company Name	
Description	
Location	
User Name	

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	69.8 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF

Logged Data Chart

Kol Tikvah Preschool - 20400 Ventura Boulevard: Logged Data Chart



Logged Data Table

Date/Time	Lapk-1	Lasmn-1	Lasmx-1	Leq-1

Date/Time	Lapk-1	Lasmn-1	Lasmx-1	Leq-1
1/24/2022 1:38:46 PM	87.9	60.7	73.6	68.6
1:39:46 PM	100	59.4	75.6	70
1:40:46 PM	95.1	60.8	76.5	68.6
1:41:46 PM	97.1	61.3	74.3	70.5
1:42:46 PM	94.2	58.8	76.3	70.2
1:43:46 PM	92	58.1	76.7	68.9
1:44:46 PM	92.9	59.2	72.4	67.6
1:45:46 PM	88.5	57.3	74.8	67.9
1:46:46 PM	97.1	61.9	79	71.8
1:47:46 PM	89.5	56.9	72.1	66.9
1:48:46 PM	97.6	63.3	77.4	71.6
1:49:46 PM	99.8	58.1	78.3	70.1
1:50:46 PM	99.1	59.7	76.3	69.6
1:51:46 PM	94.1	57.9	75.9	68.9
1:52:46 PM	90.6	58.6	73.8	67.1



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CONSTRUCTION NOISE CALCULATIONS

Noise emissions of industry sources

Source name	Size m/m²	Reference	Level Day dB(A)	Level Night dB(A)	Corrections Cwall dB	Corrections CI dB	Corrections CT dB
Construction Site	6543 m²	Lw/unit	109.7	-	-	-	-

Receiver list

No.	Receiver name	Coordinates X in meter	Coordinates Y in meter	Building side	Floor	Height abv.grd. m	Limit Day dB(A)	Limit Night dB(A)	Level Day dB(A)	Level Night dB(A)	Conflict Day dB	Conflict Night dB
1	Clark Street (20400 block)	11354509.3	3782173.72	South	GF	302.64	-	-	53.2	0.0	-	-
2	Kol Tivah Preschool	11354673.4	3781977.49	North we	GF	285.37	-	-	53.5	0.0	-	-
3	Residences - Ventura Blvd. (2	11354539.6	3781919.87	North	GF	297.37	-	-	56.7	0.0	-	-
4	Sunrise of Woodland Hills	11354521.3	3781979.49	South	GF	293.98	-	-	56.4	0.0	-	-
5	Taft High School	11354861.6	3782058.84	-	GF	272.75	-	-	30.1	0.0	-	-

Contribution levels of the receivers

Source name		Level Day	Night
		dB(A)	
Clark Street (20400 block)	GF	53.2	0.0
Construction Site		53.2	-
Kol Tivah Preschool	GF	53.5	0.0
Construction Site		53.5	-
Residences - Ventura Blvd. (20500 block)	GF	56.7	0.0
Construction Site		56.7	-
Sunrise of Woodland Hills	GF	56.4	0.0
Construction Site		56.4	-
Taft High School	GF	30.1	0.0
Construction Site		30.1	-



20401 Ventura Boulevard

Signs and symbols

Analyzed Sensitive Receptor (Outdoor)

Analyzed Sensitive Receptor

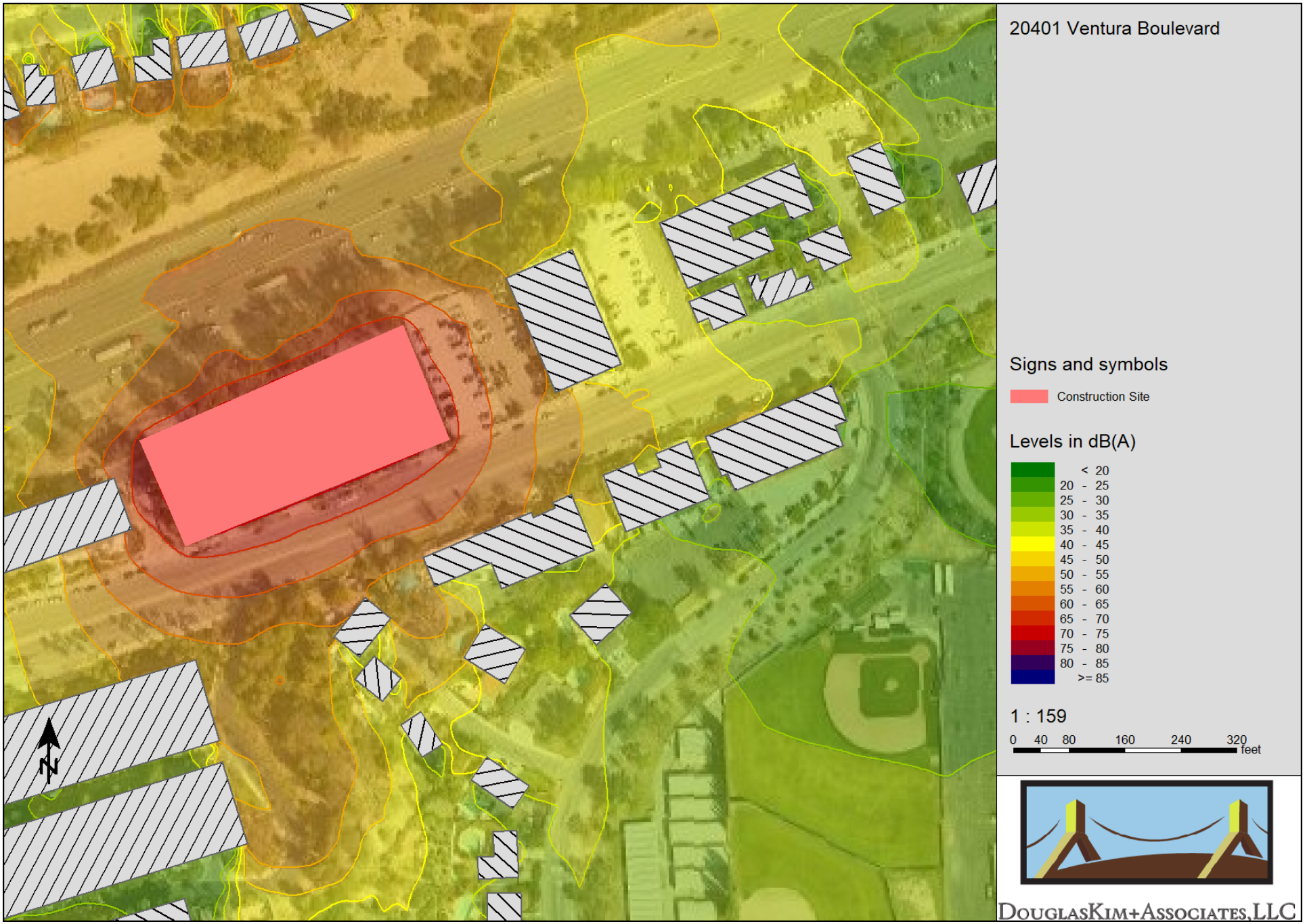
Construction Site

Level tables

1 : 159

0 40 80 160 240 320 feet

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20401 Ventura Boulevard
Signs and symbols
Construction Site
Levels in dB(A)
< 20
20 - 25
25 - 30
30 - 35
35 - 40
40 - 45
45 - 50
50 - 55
55 - 60
60 - 65
65 - 70
70 - 75
75 - 80
80 - 85
>= 85
1 : 159
0 40 80 160 240 320
feet
N
DouglasKim+Associates,LLC

Construction Noise Impacts



Reference	15.24	meter
Sound Pressure Level (Lp)	75.0	dBA
Sound Power Level (Lw)	109.7	dB

Receptor	Existing Leq	Noise	New Leq	Difference Leq	Significant?
Residences - Ventura Blvd. (20500 block)	67.4	56.7	67.8	0.4	**No**
Residences - Sunrise of Woodland Hills	67.4	56.4	67.7	0.3	**No**
Residences - Clark St. (20400 block)	72.6	53.2	72.6	0.0	**No**
Taft High School	69.2	30.1	69.2	0.0	**No**
Kol Tikvah Preschool	69.8	53.5	69.9	0.1	**No**

OFF-SITE CONSTRUCTION-RELATED TRAVEL VOLUMES

Construction Phase	Worker Trips	Vendor Trips	Haul Trips	Total	% of Traffic Volumes
Demolition	12.5	0	69.8	82	2.7%
Site Preparation	7.5	0		8	0.2%
Grading	10	0	763.8	774	25.8%
Trenching	10	0		10	0.3%
Building Construction	66.5	70.9		137	4.6%
Paving	12.5	0.0		13	0.4%
Architectural Coatings	13.3	0		13.3	0.4%
Vendor and Haul trips represent heavy-duty truck trips with a 19.1 Passenger Car Equivalent applied					

3002 Traffic Volumes on Ventura Boulevard between Winnetka Avenue and Kelvin Aven



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OPERATIONS NOISE CALCULATIONS

Hourly Distribution of Entering and Exiting Vehicle Trips by Land Use

Source: ITE *Trip Generation Manual* , 10th Edition

Land Use Code	151
Land Use	Mini-Warehouse
Setting	General Urban/Suburban
Time Period	Weekday
Trip Type	Vehicle
# Data Sites	9

Time	% of 24-Hour Traffic Entering	Exiting
12-1 AM	0	0
1-2 AM	0	0
2-3 AM	0	0
3-4 AM	0	0
4-5 AM	0	0
5-6 AM	0.8	0.8
6-7 AM	0	0
7-8 AM	3.2	1.6
8-9 AM	11.9	5.6
9-10 AM	4.0	6.3
10-11 AM	9.5	6.3
11-12 PM	10.3	12.7
12-1 PM	8.7	7.9
1-2 PM	11.1	11.1
2-3 PM	12.7	11.1
3-4 PM	5.6	6.3
4-5 PM	10.3	7.1
5-6 PM	5.6	15.1
6-7 PM	4.0	5.6
7-8 PM	0.8	0.8
8-9 PM	1.6	1.6
9-10 PM	0	0
10-11 PM	0	0
11-12 AM	0	0

			Hourly Trip	Average Da	Average Nighttime
12-1 AM	0.0	0	0		0
1-2 AM	0.0	0	0		0
2-3 AM	0.0	0	0		0
3-4 AM	0.0	0	0		0
4-5 AM	1.6	0.8	3		3
5-6 AM	0.0	0	0		0
6-7 AM	4.8	2.4	10		10
7-8 AM	17.5	8.75	35	35	
8-9 AM	10.3	5.15	21	21	
9-10 AM	15.8	7.9	32	32	
10-11 AM	23.0	11.5	46	46	
11-12 PM	16.6	8.3	33	33	
12-1 PM	22.2	11.1	45	45	
1-2 PM	23.8	11.9	48	48	
2-3 PM	11.9	5.95	24	24	
3-4 PM	17.4	8.7	35	35	
4-5 PM	20.7	10.35	42	42	
5-6 PM	9.6	4.8	19	19	
6-7 PM	1.6	0.8	3	3	
7-8 PM	3.2	1.6	6		6
8-9 PM	0.0	0	0		0
9-10 PM	0.0	0	0		0
10-11 PM	0.0	0	0		0
11-12 AM	0.0	0	0		0
ADT			403		
				32	2

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TRAFFIC NOISE CALCULATIONS

Prepared by NDS/ATD

VOLUME

Ventura Blvd Bet. Winnetka Ave & Kelvin Ave

Day: Tuesday
Date: 12/20/2016

City: Los Angeles
Project #: CA16_5819_498.4

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	16,177	15,593	31,770

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			47		44		91		12:00			281		259		540	
00:15			41		43		84		12:15			322		276		598	
00:30			19		35		54		12:30			315		273		588	
00:45			26	133	30	152	56	285	12:45			289	1207	261	1069	550	2276
01:00			19		36		55		13:00			274		268		542	
01:15			12		23		35		13:15			269		263		532	
01:30			19		22		41		13:30			248		290		538	
01:45			11	61	19	100	30	161	13:45			262	1053	285	1106	547	2159
02:00			11		18		29		14:00			312		264		576	
02:15			14		16		30		14:15			280		234		514	
02:30			9		12		21		14:30			228		276		504	
02:45			11	45	12	58	23	103	14:45			243	1063	286	1060	529	2123
03:00			12		15		27		15:00			262		295		557	
03:15			11		11		22		15:15			251		288		539	
03:30			12		18		30		15:30			282		249		531	
03:45			8	43	11	55	19	98	15:45			298	1093	294	1126	592	2219
04:00			6		11		17		16:00			324		273		597	
04:15			4		6		10		16:15			297		261		558	
04:30			13		19		32		16:30			361		282		643	
04:45			17	40	17	53	34	93	16:45			343	1325	288	1104	631	2429
05:00			25		18		43		17:00			404		292		696	
05:15			20		22		42		17:15			427		319		746	
05:30			43		36		79		17:30			482		275		757	
05:45			50	138	40	116	90	254	17:45			381	1694	270	1156	651	2850
06:00			81		59		140		18:00			347		319		666	
06:15			126		51		177		18:15			329		282		611	
06:30			108		77		185		18:30			265		294		559	
06:45			122	437	90	277	212	714	18:45			259	1200	269	1164	528	2364
07:00			124		113		237		19:00			236		229		465	
07:15			122		142		264		19:15			203		234		437	
07:30			146		142		288		19:30			197		210		407	
07:45			187	579	190	587	377	1166	19:45			195	831	181	854	376	1685
08:00			164		189		353		20:00			185		212		397	
08:15			188		229		417		20:15			233		187		420	
08:30			181		241		422		20:30			175		167		342	
08:45			216	749	254	913	470	1662	20:45			154	747	177	743	331	1490
09:00			174		202		376		21:00			181		159		340	
09:15			190		231		421		21:15			114		154		268	
09:30			182		184		366		21:30			117		122		239	
09:45			205	751	216	833	421	1584	21:45			114	526	137	572	251	1098
10:00			178		251		429		22:00			137		128		265	
10:15			193		218		411		22:15			79		105		184	
10:30			212		207		419		22:30			71		111		182	
10:45			213	796	208	884	421	1680	22:45			86	373	92	436	178	809
11:00			274		216		490		23:00			62		72		134	
11:15			264		227		491		23:15			52		74		126	
11:30			282		234		516		23:30			48		48		96	
11:45			266	1086	242	919	508	2005	23:45			45	207	62	256	107	463
TOTALS				4858		4947		9805	TOTALS				11319		10646		21965
SPLIT %				49.5%		50.5%		30.9%	SPLIT %				51.5%		48.5%		69.1%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	16,177	15,593	31,770

AM Peak Hour				11:45		11:45		11:45	PM Peak Hour				17:00		17:15		17:00
AM Pk Volume				1184		1050		2234	PM Pk Volume				1694		1183		2850
Pk Hr Factor				0.919		0.951		0.934	Pk Hr Factor				0.879		0.927		0.941
7 - 9 Volume	0	0		1328		1500		2828	4 - 6 Volume	0	0		3019		2260		5279
7 - 9 Peak Hour				08:00		08:00		08:00	4 - 6 Peak Hour				17:00		16:30		17:00
7 - 9 Pk Volume	0	0		749		913		1662	4 - 6 Pk Volume	0	0		1694		1181		2850
Pk Hr Factor	0.000	0.000		0.867		0.899		0.884	Pk Hr Factor	0.000	0.000		0.879		0.926		0.941

TRAFFIC VOLUME ADJUSTMENTS

North/South	Between Winnetka Ave and Kelvin Ave
East/West	Ventura Boulevard
Year	2016
Hour	8:00-9:00 A.M.
Source	https://navigatela.lacity.org/dot/traffic_data/automatic_counts/VENTURA.BTWN.CHALKHILL.VILLATERAZA.161220-NDSAUTO%20AS.pdf

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	NB Approach	SB Approach	EB Approach	WB Approach		
LT						
TH						
RT						
Total			1328	1500		1.07%

2016	-	-	1,328	1,500	-	
2017	-	-	1,341	1,515	-	
2018	-	-	1,355	1,530	-	
2019	-	-	1,368	1,545	-	
2020	-	-	1,382	1,561	-	
2021	-	-	1,396	1,577	-	
2022	**-**	**-**	**1,410**	**1,592**	**-**	**3,002**

	NB Approach	SB Approach	EB Approach	WB Approach		
Auto	-	-	1,151	1,300	6,048,810	82.5%
MDT	-	-	179	202	940,092	12.8%
HDT	-	-	5	5	25,348	0.3%
Buses	-	-	2	2	9,386	0.1%
MCY	-	-	32	36	167,287	2.3%
Aux	-	-	27	31	142,856	1.9%
Total	-	-	1,396	1,577	7,333,779	100.0%



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DEMOLITION ANALYSIS

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CONSTRUCTION BUILDING DEBRIS

Materials	Total SF	Height	Cubic Yards	Pounds per Cub	Tons	Truck Capacity (CY)	Truck Trips
Construction and Demolition	0			Low	Low		
General Building	11,852	6	1,695	1,000	848	10	339
Single Family Residence	-	12	-	1,000	-	10	-
Multi-Family Residence		12	-	1,000	-	10	-
Mobile Home				1,000	-	10	-
Mixed Debris				500	-	10	-
Vegetative Debris (Hardwoods)				500	-	10	-
Vegetative Debris (Softwoods)				333	-	10	-
Asphalt or concrete (Constructior	53,433	0.5	990	2,400	1,187	10	198
TOTAL			2,685		2,035		537

Source: Federal Emergency Management Agency, Debris Estimating Field Guide (FEMA 329), September 2010
Source (Asphalt or concrete): CalRecycle Solid Waste Cleanup Program Weights and Volumes for Project Estimes; http://www.calrecycle.ca.gov/swfacilities/cdi/Tools/Calculations.htm



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GRADING ANALYSIS

DouglasKim+Associates,LLC

SOIL TRANSPORT WITH SHRINK AND SWELL FACTORS

	CY	% Swell	Adjusted CY	Truck Capacity (CY)	Truck Trips
Topsoil	1,424	56%	2,221	10	444
Clay (Dry)	39,576	50%	59,365	10	11,873
Clay (Damp)		67%	-	10	-
Earth, loam (Dry)		50%	-	10	-
Earth, loam (Damp)		43%	-	10	-
Dry sand		11%	-	10	-
TOTAL	41,000		61,585		12,317

Note: Topsoil considered the top ten inches of soil (Wikipedia)
Note: Soil below topsoil assumed to be dry clay; Source: Lyngso website, https://www.lyngsogarden.com/community-resources/tips-on-modifying-your-california-soil-with-amendments/
Source: US Department of Transportation Determination of Excavation and Embankment Volumes; https://highways.dot.gov/federal-lands/pddm/dpg/earthwork-design