

# IDI Rider 2 and 4 High Cube Warehouses and Perris Valley Storm Drain Channel Improvement Project Noise Impact Analysis

NOISE IMPACT ANALYSIS CITY OF PERRIS

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AUGUST 31, 2020

11559-38 Noise Study



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# LIST OF ABBREVIATED TERMS

(1)	Reference
ADT	Average Daily Traffic
ANSI	American National Standards Institute
Calveno	California Vehicle Noise
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Level
dBA	A-weighted decibels
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
Hz	Hertz
I-215	Interstate 215
INCE	Institute of Noise Control Engineering
L <sub>eq</sub>	Equivalent continuous (average) sound level
L <sub>max</sub>	Maximum level measured over the time interval
L <sub>min</sub>	Minimum level measured over the time interval
LUCP	Land Use Compatibility Plan
MARB/IPA	March Air Reserve Base/Inland Port Airport
mph	Miles per hour
OPR	Office of Planning and Research
PVCC SP	Perris Valley Commerce Center Specific Plan
PPV	Peak particle velocity
Project	IDI Rider 2 and 4 High Cube Warehouses and Perris Valley Storm
	Drain Channel Improvement Project
REMEL	Reference Energy Mean Emission Level
RMS	Root-mean-square
VdB	Vibration Decibels



# **EXECUTIVE SUMMARY**

Urban Crossroads, Inc. has prepared this noise study to determine the noise exposure and the necessary noise mitigation measures for the proposed IDI Rider 2 and 4 High Cube Warehouses and Perris Valley Storm Drain Channel Improvement Project development ("Project"). The Project site is located in the City of Perris on the northeast corner of Redlands Avenue and Rider Street within in the *Perris Valley Commerce Center Specific Plan* (PVCC SP) area. The Project is proposed to consist of two Warehouse buildings totaling approximately 1,352,736 square feet (sf) (Rider 2 is to consist of approximately 804,759 sf and Rider 4 is to consist of approximately 547,977) sf of Warehouse use (without cold storage) and the development and subsequent operations and maintenance of improvements to the Perris Valley Storm Drain (PVSD) Channel

At the time this noise analysis was prepared, the future tenants of the proposed Project were unknown. Therefore, for this analysis, it is assumed the Project will operate 24 hours, seven days a week. This study has been prepared to satisfy the City of Perris noise standards and the thresholds of significance identified in the *Perris Valley Commerce Center Specific Plan Environmental Impact Report* (PVCC SP EIR), and Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (1; 2)

### **OFF-SITE TRAFFIC NOISE ANALYSIS**

Traffic generated by the operation of the proposed Project will influence the traffic noise levels in surrounding off-site areas. To quantify the off-site traffic noise increases on the surrounding off-site areas, the changes in traffic noise levels on 27 roadway segments surrounding the Project site were calculated based on the change in the average daily traffic (ADT) volumes. The traffic noise levels provided in this analysis are based on the traffic forecasts found in the *IDI Rider 2* and 4 High Cube Warehouses and Perris Valley Storm Drain Channel Improvement Project Traffic Impact Analysis prepared by Urban Crossroads, Inc. (3) To assess the off-site noise level impacts associated with the proposed Project, noise contour boundaries were developed for Existing, Existing with Project, and Existing plus Ambient plus Cumulative (EAC) with Project conditions.

The findings of the off-site traffic noise analysis indicate that one of the 27 off-site study area roadway segments will experience *potentially significant* Project-related traffic noise level increases on roadway segment 15 (Harley Knox Boulevard east of Perris Boulevard) for Existing plus Project, and the Existing plus Ambient plus Cumulative (EAC) with Project conditions. To reduce the *potentially significant* Project traffic noise level increases potential noise mitigation measures are identified in this analysis. The potential mitigation measures include rubberized asphalt hot mix pavement and off-site noise barriers for existing non-conforming residential use adjacent to impacted roadway segments. However, since these noise mitigation measures would not eliminate the Project-related off-site traffic noise level increases, the off-site traffic noise level impacts at adjacent noise-sensitive land use are considered a *significant and unavoidable* impact. This finding is consistent with the PVCC SP EIR, where buildout conditions of the Specific Plan were shown to result in *significant* off-site traffic noise impacts. (1)



### **OPERATIONAL NOISE ANALYSIS**

Using reference noise levels to represent the expected noise sources from the IDI Rider 2 and 4 High Cube Warehouses and Perris Valley Storm Drain Channel Improvement Project site, this analysis estimates the Project-related operational noise levels at nearest receiver locations. The normal activities associated with the proposed IDI Rider 2 and 4 High Cube Warehouses and Perris Valley Storm Drain Channel Improvement Project are anticipated to generally include loading dock activity, roof-top air conditioning units, parking lot vehicle movements and trash enclosure activity. The operational noise analysis shows that the Project-related operational noise levels due to the loading dock activity, roof-top air conditioning units, parking lot vehicle movements and trash enclosure activity will satisfy the City of Perris Municipal Code and General Plan exterior noise level standards at all nearest sensitive receiver locations.

In addition, this analysis demonstrates that the Project will contribute *less than significant* operational noise levels to the existing ambient noise environment during the daytime and nighttime hours at all nearest sensitive receiver locations. Therefore, the operational noise level impacts associated with the proposed 24-hour seven days per week Project activities will be *less than significant*.

#### **OPERATIONAL VIBRATION ANALYSIS**

The operation of the Project site will include heavy trucks transiting on site to and from the loading dock areas. Truck vibration levels are dependent on vehicle characteristics, load, speed, and pavement conditions. Since trucks rarely create vibration that exceed 70 VdB (unless there are bumps due to frequent potholes in the road) (4 p. 113), it is expected that the on-site heavy trucks will be travelling at very low speeds so activity will satisfy the maximum-acceptable vibration criteria of 78 VdB for daytime residential uses, and therefore, will be *less than significant*.

#### **CONSTRUCTION NOISE ANALYSIS**

Construction-related noise impacts are expected to create temporary and intermittent high-level noise conditions at receivers surrounding the Project site when certain activities occur at the Project site boundary. Using sample reference noise levels to represent the planned construction activities of the IDI Rider 2 and 4 High Cube Warehouses and Perris Valley Storm Drain Channel Improvement Project site, this analysis estimates the Project-related construction noise levels at nearest receiver locations. No pile driving is expected as part of the Project construction activities.

The construction noise analysis shows that the nearest receiver locations will exceed the City of Perris Municipal Code 80 dBA L<sub>max</sub> significance threshold for construction activity at receiver locations R2 and R7. Therefore, the unmitigated noise impact due to Project construction activities is considered *potentially significant*. All other receiver locations will experience *less than significant* construction noise levels. Since receiver locations R2 and R7 will experience *potentially significant* construction noise level impacts, the following temporary construction noise mitigation measure is required:



• Provide a minimum 100-foot buffer zone separating large construction equipment (e.g. dozers, graders, scrapers, etc.) from receiver locations R2 and R7.

With the required minimum 100-foot buffer zone separating large construction equipment (e.g. dozers, graders, scrapers, etc.) from receiver locations R2 and R7, the Project construction noise levels will satisfy the City of Perris 80 dBA L<sub>max</sub> construction noise level threshold. Therefore, the Project construction noise levels are considered *less than significant* with mitigation.

#### **CONSTRUCTION VIBRATION ANALYSIS**

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods used, distance to the affected structures and soil type. It is expected that ground-borne vibration from Project construction activities would cause only intermittent, localized intrusion. The analysis shows that the unmitigated Project-construction vibration levels of up to 74.8 VdB at residential receiver locations will remain below the Federal Transit Administration (FTA) 78 VdB threshold at all receiver locations, and are therefore, considered a *less than significant* impact. Further, vibration levels at the site of the closest receiver are unlikely to be sustained during the entire construction period and will likely only occur when heavy construction equipment is operating at the Project site perimeter.

Although Project construction noise and vibration impacts will be *less than significant*, the Project is required to comply with the following construction-related mitigation measures (MM) from the PVCC Specific Plan Environmental Impact Report:

- **MM Noise 1** During all project site excavation and grading on site, the construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers consistent with manufacturer's standards. The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the project site.
- *MM Noise 2* During construction, stationary construction equipment, stockpiling and vehicle staging areas would be placed a minimum of 446 feet away from the closest sensitive receptor.
- *MM Noise 3* No combustion-powered equipment, such as pumps or generators, shall be allowed to operate within 446 feet of any occupied residence unless the equipment is surrounded by a noise protection barrier.
- **MM Noise 4** Construction contractors of implementing development projects shall limit haul truck deliveries to the same hours specified for construction equipment. To the extent feasible, haul routes shall not pass sensitive land uses or residential dwellings.



#### **SIGNIFICANCE FINDINGS**

The results of this IDI Rider 2 and 4 High Cube Warehouses and Perris Valley Storm Drain Channel Improvement Project Noise Impact Analysis are summarized below based on the significance criteria in Section 4 of this report. Table ES-1 shows the findings of significance for each potential noise and/or vibration impact before and after any required mitigation measures from the PVCC SP EIR.

Analusia	Significance Findings			
Analysis	PVCC EIR	Proposed Project		
Off-Site Traffic Noise	Significant	Significant		
On-Site Aircraft Noise	Less Than Significant	Less Than Significant		
Operational Noise	Less Than Significant	Less Than Significant		
Operational Vibration	Less Than Significant	Less Than Significant		
Construction Noise <sup>1</sup>	Less Than Significant	Less Than Significant		
Construction Vibration <sup>1</sup>	Less Than Significant	Less Than Significant		

#### TABLE ES-1: SUMMARY OF SIGNIFICANCE FINDINGS

<sup>1</sup> Although Project construction noise and vibration impacts will be less than significant, the Project is required to comply with mitigation measures (MM) Noise 1 through MM Noise 4 from the PVCC Specific Plan Environmental Impact Report. "n/a" = No new significant impacts.



# 1 INTRODUCTION

This noise analysis has been completed to determine the noise impacts associated with the development of the proposed IDI Rider 2 and 4 High Cube Warehouses and Perris Valley Storm Drain Channel Improvement Project ("Project"). This noise study briefly describes the proposed Project, provides information regarding noise fundamentals, sets out the local regulatory setting, presents the study methods and procedures for traffic noise analysis, and evaluates the future exterior noise environment. In addition, this study includes an analysis of the potential Project-related long-term operational and short-term construction noise and vibration impacts.

## 1.1 SITE LOCATION

The Project site is located in the City of Perris on the northeast corner of Redlands Avenue and Rider Street within in the *Perris Valley Commerce Center Specific Plan* (PVCC SP) area, as shown on Exhibit 1-A. The March Air Reserve Base/Inland Port Airport (MARB/IPA) is located approximately 2 to 2.5 miles northwest of the Project site, and the Interstate 215 (I-215) Freeway is located roughly 1.8 miles west of the Project site. Existing noise-sensitive land uses in the Project study area include Morgan Park and residences located northeast, east, and southeast of the Project site across the Perris Valley Storm Drain Channel; and existing, non-conforming, residences located west and south of the Project site within areas defined by the PVCC SP and City of Perris Zoning Map as light industrial-designated land use. (5) (1)

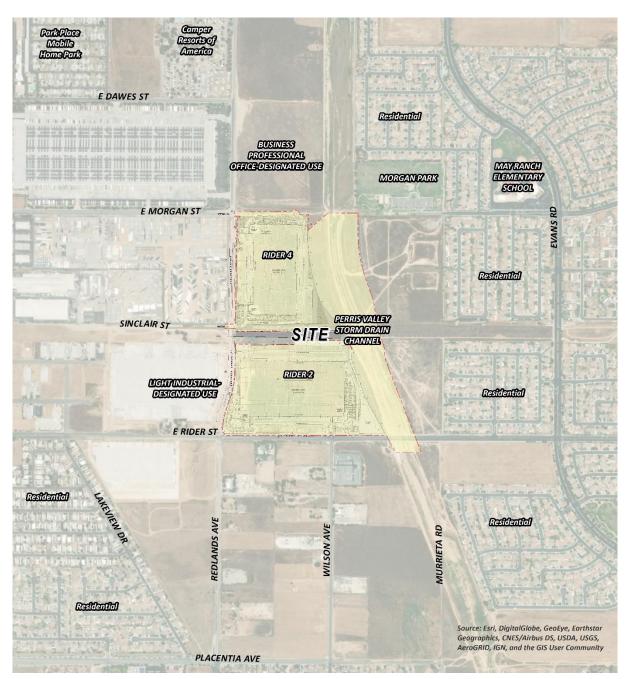
### **1.2 PROJECT DESCRIPTION**

The Project is proposed to consist of two Warehouse buildings totaling approximately 1,352,736 square feet (sf) (Rider 2 is to consist of approximately 804,759 sf and Rider 4 is to consist of approximately 547,977) sf of Warehouse use (without cold storage) and the development and subsequent operations and maintenance of improvements to the Perris Valley Storm Drain (PVSD) Channel. Exhibit 1-B shows the Project site plan.

At the time this noise analysis was prepared the future tenants of the proposed Project were unknown. To present the potential worst-case noise conditions, this analysis assumes the Project would be operational 24 hours per day, seven days per week. It is expected that the Project business operations would primarily be conducted within the enclosed buildings, except for traffic movement, parking, as well as loading and unloading of trucks at designated loading bays.

The on-site Project-related noise sources are expected to generally include: loading dock activity, roof-top air conditioning units, parking lot vehicle movements and trash enclosure activity. This noise analysis is intended to describe noise level impacts associated with the expected typical industrial warehouse activities at the Project site. No cold storage is planned at the Project site.

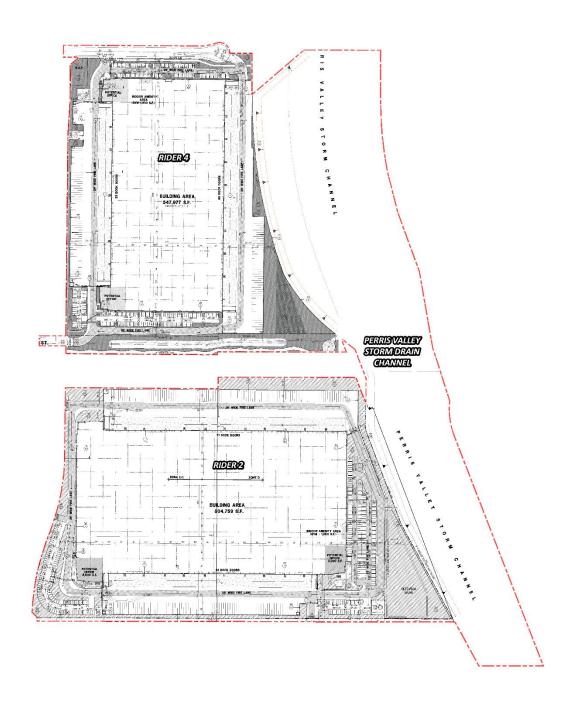




#### EXHIBIT 1-A: LOCATION MAP



EXHIBIT 1-B: SITE PLAN





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# 2 FUNDAMENTALS

For consistency with the PVCC SP EIR, the following noise fundamentals discussion was taken from the EIR, Section 4.9 Noise, Page 4.9-2: (1)

The PVCC SP EIR defines noise as unwanted or objectionable sound. The effect 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). However, since the human ear is not equally sensitive to all frequencies within the sound spectrum, the "A-weighted" noise scale, which weights the frequencies to which humans are sensitive, is used for measurements. Noise levels using A-weighted measurements are written dB(A) or dBA. Decibels are measured on a logarithmic scale which quantifies sound intensity in a manner that is similar to the Richter scale used for earthquake magnitudes. In the case of noise, a doubling of the energy from a noise source, such as the doubling of a traffic volume, would increase the noise level by 3 dBA; a halving of the energy would result in a 3 dBA decrease.

The PVCC SP EIR further states that average noise levels over a period of minutes or hours are usually expressed as dB  $L_{eq}$  or the equivalent noise level for that period of time. For example,  $L_{eq(3)}$ would represent a three hour average. When no time-period is specified, a one-hour average is assumed. Noise standards for land use compatibility are stated in terms of the Community Noise Equivalent Level (CNEL) and the Day-Night Average Noise Level (Ldn). CNEL is a 24-hour weighted average measure of community noise. The computation of CNEL adds 5 dBA to the average hourly noise levels between 7 p.m. and 10 p.m. (evening hours), and 10 dBA to the average hourly noise levels between 10p.m. to 7 a.m. (nighttime hours). This weighting accounts for the increased human sensitivity to noise in the evening and nighttime hours. Ldn is a very similar 24-hour weighted average which weighs only the nighttime hours and not the evening hours. CNEL is normally about 1 dB higher than Ldn for typical traffic and other community noise levels.



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# **3 REGULATORY SETTING**

To limit population exposure to physically and/or psychologically damaging as well as intrusive noise levels, the federal government, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise. In most areas, automobile and truck traffic is the major source of environmental noise. Traffic activity generally produces an average sound level that remains constant with time. Air and rail traffic, and commercial and industrial activities are also major sources of noise in some areas. Federal, state, and local agencies regulate different aspects of environmental noise. Federal and state agencies generally set noise standards for mobile sources such as aircraft and motor vehicles, while regulation of stationary sources is left to local agencies.

# 3.1 STATE OF CALIFORNIA NOISE REQUIREMENTS

The State of California regulates freeway noise, sets standards for sound transmission, provides occupational noise control criteria, identifies noise standards, and provides guidance for local land use compatibility. State law requires that each county and city adopt a General Plan that includes a Noise Element which is to be prepared per guidelines adopted by the Governor's Office of Planning and Research (OPR). (6) The purpose of the Noise Element is to *limit the exposure of the community to excessive noise levels*. In addition, the California Environmental Quality Act (CEQA) requires that all known environmental effects of a project be analyzed, including environmental noise impacts.

# **3.2** STATE OF CALIFORNIA GREEN BUILDING STANDARDS CODE

The State of California's Green Building Standards Code contains mandatory measures for nonresidential building construction in Section 5.507 on Environmental Comfort. (7) These noise standards are applied to new construction in California for controlling interior noise levels resulting from exterior noise sources. The regulations specify that acoustical studies must be prepared when non-residential structures are developed in areas where the exterior noise levels exceed 65 dBA CNEL, such as within a noise contour of an airport, freeway, railroad, and other areas where noise contours are not readily available. If the development falls within an airport or freeway 65 dBA CNEL noise contour, the combined sound transmission class (STC) rating of the wall and roof-ceiling assemblies must be at least 50. For those developments in areas where noise contours are not readily available, and the noise level exceeds 65 dBA L<sub>eq</sub> for any hour of operation, a wall and roof-ceiling combined STC rating of 45, and exterior windows with a minimum STC rating of 40 are required (Section 5.507.4.1).

As further discussed in Section 3.7, the Project site is located outside of the 65 dBA CNEL noise level contour boundaries of the March Air Reserve Base/Inland Port Airport (MARB/IPA). In addition, the Project site is located outside of the 65 dBA CNEL noise level contours of the I-215 Freeway. (8) Therefore, no further analysis is provided in relation to the 2019 State of California's Green Building Standards Code requirements.



### **3.3** CITY OF PERRIS GENERAL PLAN

The City of Perris has adopted a Noise Element of the General Plan (8) to control and abate environmental noise, and to protect the citizens of Perris from excessive exposure to noise. The Noise Element specifies the maximum allowable unmitigated exterior noise levels for new developments impacted by transportation noise sources such as arterial roads, freeways, airports, and railroads. In addition, the Noise Element identifies noise polices and implementation measures designed to protect, create, and maintain an environment free from noise that may jeopardize the health or welfare of sensitive receptors, or degrade quality of life.

The noise standards identified in the City of Perris General Plan are guidelines to evaluate the acceptability of the transportation related noise level impacts. These standards are based on the Governor's Office of Planning and Research (OPR) and are used to assess the long-term traffic noise impacts on land uses. According to the City's Land Use Compatibility for Community Noise Exposure (Exhibit N-1), noise-sensitive land uses such as single-family residences are *normally acceptable* with exterior noise levels below 60 dBA CNEL and *conditionally acceptable* with noise levels below 65 dBA CNEL. Industrial uses, such as the Project, are considered *normally acceptable* with exterior noise levels of up to 70 dBA CNEL, and *conditionally acceptable* with exterior noise levels between 70 to 80 dBA CNEL. (8)

### **3.4 OPERATIONAL NOISE STANDARDS**

To analyze noise impacts originating from a designated fixed location or private property such as the IDI Rider 2 and 4 High Cube Warehouses and Perris Valley Storm Drain Channel Improvement Project, operational noise such as the expected loading dock activity, roof-top air conditioning units, parking lot vehicle movements and trash enclosure activity are typically evaluated against standards established under a City's Municipal Code.

The City of Perris Municipal Code, Chapter 7.34 *Noise Control*, Section 7.34.040, establishes the permissible noise level at any point on the property line of the affected residential receiver. Therefore, for residential properties, the exterior noise level shall not exceed a maximum noise level of 80 dBA  $L_{max}$  during daytime hours (7:01 a.m. to 10:00 p.m.) and shall not exceed a maximum noise level of 60 dBA  $L_{max}$  during the nighttime hours (10:01 p.m. to 7:00 a.m.), as shown on Table 3-1. (9) The City of Perris Municipal Code is included in Appendix 3.1.

Additional exterior noise level standards are identified in the City of Perris General Plan Noise Element Implementation Measure V.A.1 which requires that new industrial facilities within 160 feet of the property line of existing noise-sensitive land uses must demonstrate compliance with a 60 dBA CNEL exterior noise level standard. Table 3-1 shows the Municipal Code and General Plan standards used in this analysis to evaluate the potential operational noise levels from the Project.





Jurisdiction	Land Use	Time Period	Noise Level Standard (dBA)
	Residential <sup>1</sup>	Daytime (7:01 a.m 10:00 p.m.)	80 dBA L <sub>max</sub>
City of Perris	Residential	Nighttime (10:01 p.m 7:00 a.m.)	60 dBA L <sub>max</sub>
1 61113	Within 160 Feet of PL <sup>2</sup>	24-Hours	60 dBA CNEL

#### TABLE 3-1: OPERATIONAL NOISE STANDARDS

 $^{\rm 1}$  Source: City of Perris Municipal Code, Sections 7.34.040 & 7.34.050 (Appendix 3.1).

<sup>2</sup> Source: City of Perris General Plan Noise Element, Implementation Measure V.A.1.

#### **3.5 CONSTRUCTION NOISE STANDARDS**

To analyze noise impacts originating from the construction of the IDI Rider 2 and 4 High Cube Warehouses and Perris Valley Storm Drain Channel Improvement Project site, noise from construction activities are typically evaluated against standards established under a City's Municipal Code. The City of Perris Municipal Code, Section 7.34.060, identifies the City's construction noise standards and permitted hours of construction activity (refer to Table 3-2). Further, the City of Perris Municipal Code, Section 7.34.060, noise level standard of 80 dBA L<sub>max</sub> at residential properties shall apply to the noise-sensitive receiver locations located in the City of Perris. (9)

#### TABLE 3-2: CONSTRUCTION NOISE STANDARDS

Jurisdiction	Permitted Hours of Construction Activity	Construction Noise Level Standard	
City of Perris <sup>1</sup>	7:00 a.m. to 7:00 p.m. on any day except Sundays and legal holidays (with the exception of Columbus Day and Washington's birthday).	80 dBA L <sub>max</sub>	

<sup>1</sup> Source: City of Perris Municipal Code, Section 7.34.060 (Appendix 3.1).

#### **3.6 VIBRATION STANDARDS**

The City of Perris has not identified or adopted specific vibration level standards. However, the United States Department of Transportation Federal Transit Administration (FTA) provides guidelines for maximum-acceptable vibration criteria for different types of land uses. These guidelines allow 78 VdB for residential uses and buildings where people normally sleep. (4) Operational and construction activities can result in varying degrees of ground-borne vibration, depending on the equipment and methods used, distance to the affected structures and soil type. Construction vibration is generally associated with pile driving and rock blasting. Other construction equipment such as air compressors, light trucks, hydraulic loaders, etc., generates little or no ground vibration. Large bulldozers and loaded trucks can cause perceptible vibration levels proximate receptors. The FTA guidelines of 78 VdB for sensitive land uses provide a



substantiated basis for determining the relative significance of potential Project-related vibration impacts due to on-site operational and construction activities.

### 3.7 MARCH AIR RESERVE BASE/INLAND PORT AIRPORT LAND USE COMPATIBILITY

The March Air Reserve Base/Inland Port Airport (MARB/IPA) is located approximately 2 to 2.5 miles northwest of the Project site. The *March Air Reserve Base/Inland Port Airport Land Use Compatibility Plan* (MARB/IPA LUCP) includes the policies for determining the land use compatibility of the Project, although it is located further than 2 miles of an airport runway. The MARB/IPA, Map MA-1, indicates that the Project site is located within Compatibility Zones C-1 and D, and the Table MA-1 Compatibility Zone Factors indicates that this area is considered to have a *moderate to low* noise impact, and is mostly within the 55 dBA CNEL contour with a portion of the southwestern part of the Rider 2 site within 60 dBA CNEL contour. Further, the Basic Compatibility Criteria, listed in Table MA-2 of the MARB/IPA LUCP identifies no prohibited uses other than those that would pose a safety risk due to building height. (11) The MARB/IPA LUCP does not identify industrial-use specific noise compatibility standards, and therefore, the Governor's Office of Planning and Research (OPR) Land Use Compatibility for Community Noise Exposure, previously discussed in Section 3.3, is used to assess potential aircraft-related noise levels at the Project site. The OPR guidelines indicate that industrial uses, such as the Project, are considered *normally acceptable* with exterior noise levels of up to 70 dBA CNEL. (6)

The noise contour boundaries of MARB/IPA are presented on Exhibit 3-A of this report and show that the Project is considered *normally acceptable* land use since it is located mostly within the 55 dBA CNEL contour with a portion of the southwestern part of the Rider 2 site within 60 dBA CNEL contour. Further, Table MA-2 indicates that no uses are prohibited in this area except for those which would pose hazards to flights.



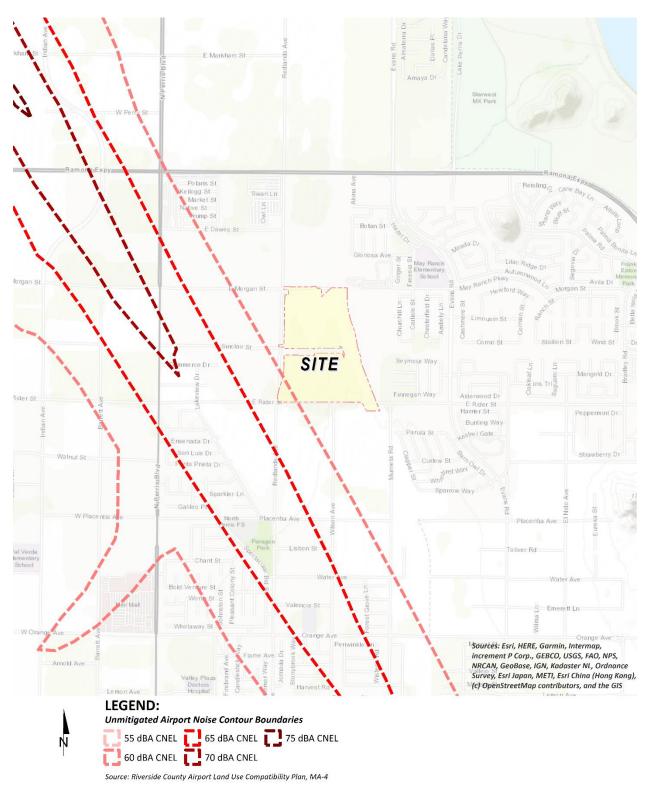


EXHIBIT 3-A: MARB/IPA FUTURE AIRPORT NOISE CONTOURS



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# 4 SIGNIFICANCE CRITERIA

The following significance criteria are based on currently adopted guidance provided by Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (2) For the purposes of this report, impacts would be potentially significant if the Project results in or causes:

- 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?
- B. Generation of excessive ground-borne vibration or ground-borne noise levels?
- C. 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?

While the City of Perris General Plan Guidelines provide direction on noise compatibility and establish noise standards by land use type that are sufficient to assess the significance of noise impacts, they do not define the levels at which increases are considered substantial for use under Guideline A. CEQA Appendix G Guideline C applies to nearest public and private airports, if any, and the Project's land use compatibility.

#### 4.1 CEQA GUIDELINES NOT FURTHER ANALYZED

The closest airport which would require additional noise analysis under CEQA Appendix G Guideline C is the MARB/IPA. As previously described in Section 3.7, the Project is located in Compatibility Zones C-1 and D, and Table MA-1 of the MARB/IPA LUCP indicates that the noise impact is considered *low*, and Table MA-2 indicates that no uses are prohibited in this area except for those which would pose hazards to flights. Therefore, the potential impacts under CEQA Appendix G Guideline C are *less than significant* and are not further analyzed in this noise study.

### 4.2 PVCC SP EIR THRESHOLDS

As identified in the PVCC SP EIR, sensitive receivers are areas where humans are participating in activities that may be subject to the stress of significant interference from noise and often include residential dwellings, mobile homes, hotels, motels, hospitals, nursing homes, educational facilities, and libraries. Other receivers include office and industrial buildings, which are not considered as sensitive as single-family homes, but are still protected by City of Perris land use compatibility standards, as discussed below.

Noise level increases at nearest receiver locations resulting from the Project are evaluated based on the PVCC SP EIR Thresholds described below at nearest receiver locations. Further, CEQA requires that consideration be given to the magnitude of the increase, the existing ambient noise levels, and the location of noise-sensitive receivers to determine if a noise increase represents a significant adverse environmental impact. This approach recognizes *that there is no single noise increase that renders the noise impact significant.* (12)



According to the PVCC SP EIR, there is no official "industry standard" of determining significance of noise impacts. However, typically, a jurisdiction will identify either 3 dBA or 5 dBA increase as being the threshold because these levels represent varying levels of perceived noise increases. The PVCC SP EIR indicates that a 5 dBA noise level increase is considered discernable to most people in an exterior environment when the resulting noise levels are below 60 dBA. Further, it identifies a 3 dBA increase threshold when the noise levels already exceed 60 dBA. In addition, according to the PVCC SP EIR, an increase of 5 dBA or more above without Project noise levels is considered a significant impact at all other sensitive land uses. (1)

#### 4.3 SIGNIFICANCE CRITERIA SUMMARY

Noise impacts shall be considered significant if any of the following occur as a direct result of the proposed development. Table 4-1 shows the significance criteria summary matrix. The following significance criteria are based upon the applicable provisions of the PVCCSP EIR, the City of Perris Noise Element and Section 7.34.040 of the Perris Municipal Code.

#### OFF-SITE TRAFFIC NOISE

To assess the off-site transportation CNEL noise level impacts associated with the proposed Project, noise contours were used to assess the Project's incremental traffic-related noise impacts at land uses adjacent to roadways conveying Project traffic based on the following PVCC SP EIR significance criteria.

- When the resulting noise levels at noise-sensitive land uses (e.g. residential, etc.)
  - are less than 60 dBA CNEL and the Project creates a 5 dBA CNEL or greater Project-related noise level increase; or
  - exceed 60 dBA CNEL and the Project creates a 3 dBA CNEL or greater Project-related noise level increase (PVCC SP EIR, Page 4.9-20).

#### **OPERATIONAL NOISE**

To demonstrate compliance with local noise regulations, the Project-only operational noise levels are evaluated against the stationary source City of Perris L<sub>max</sub> exterior noise level standards in the Municipal Code and the 24-hour CNEL noise level criteria for new industrial facilities identified in City of Perris General Plan Noise Element.

- If Project-related operational noise levels
  - exceed the 80 dBA L<sub>max</sub> daytime or 60 dBA L<sub>max</sub> nighttime noise level standards at the nearest sensitive receiver locations in the City of Perris (City of Perris Municipal Code, Section 7.34.040); or
  - exceed the 60 dBA CNEL exterior noise level standard at residential receiver locations within 160 feet of the Project site, in the City of Perris (City of Perris General Plan Noise Element, Implementation Measure V.A.1).
- If the resulting noise levels at the nearest noise-sensitive receivers near the Project site:
  - $\circ~$  are less than 60 dBA  $L_{eq}$  and the Project creates a 5 dBA  $L_{eq}$  or greater Project-related noise level increase; or



- $\circ$  exceed 60 dBA L<sub>eq</sub> and the Project creates a 3 dBA L<sub>eq</sub> or greater Project-related noise level increase (PVCC SP EIR, Page 4.9-20).
- If long-term project generated operational source vibration levels could exceed the FTA maximum acceptable vibration standard of 78 vibration decibels (VdB) at noise-sensitive receiver locations. (FTA Transit Noise and Vibration Impact Assessment)

#### CONSTRUCTION NOISE AND VIBRATION

Noise from construction activities are typically evaluated against standards established under a City's Municipal Code. In addition, since the City of Perris has not identified or adopted specific vibration level standards guidelines for maximum-acceptable vibration criteria for different types of land uses were derived from the United States Department of Transportation Federal Transit Administration (FTA)

- If Project-related construction activities create noise levels at sensitive receiver locations in the City of Perris which exceed the construction noise level limit of 80 dBA L<sub>max</sub> (City of Perris Municipal Code7.34.060).
- If short-term project generated construction source vibration levels could exceed the FTA maximum acceptable vibration standard of 78 vibration decibels (VdB) at noise-sensitive receiver locations. (FTA Transit Noise and Vibration Impact Assessment).

Analysis	Receiving Land Use	Condition(s)	Significance Criteria		
			Daytime	Nighttime	
	Noise- Sensitive <sup>1</sup>	if resulting noise level is < 60 dBA CNEL	≥ 5 dBA CNEL Project increase		
Off-Site		if resulting noise level is > 60 dBA CNEL	≥ 3 dBA CNEL Project increase		
	Perris	At residential land use <sup>2</sup>	80 dBA L <sub>max</sub>	60 dBA L <sub>max</sub>	
		Within 160 Feet of residential use <sup>3</sup>	60 dBA CNEL		
Operational	ional Noise- Sensitive	if resulting noise level is < 60 dBA $L_{eq}^1$	≥ 5 dBA L <sub>eq</sub> Project increase		
		if resulting noise level is > 60 dBA $L_{eq}^1$	≥ 3 dBA L <sub>eq</sub> Project increase		
	Schättive	Vibration Level Threshold <sup>4</sup>	78	VdB	
Construction	Noise- Sensitive	Noise Level Threshold <sup>5</sup>	80 dBA L <sub>max</sub>		
Construction		Vibration Level Threshold <sup>4</sup>	78 VdB		

#### TABLE 4-1: SIGNIFICANCE CRITERIA SUMMARY

<sup>1</sup> Source: PVCC SP EIR, Page 4.9-20).

<sup>2</sup> Source: City of Perris Municipal Code, Section 7.34.040 (Appendix 3.1).

<sup>3</sup> Source: City of Perris General Plan Noise Element, Implementation Measure V.A.1.

<sup>4</sup> Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, May 2006.

<sup>5</sup> Source: City of Perris Municipal Code, Section 7.34.060 (Appendix 3.1).

"Daytime" = 7:01 a.m. - 10:00 p.m.; "Nighttime" = 10:01 p.m. - 7:00 a.m.



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# 5 EXISTING NOISE LEVEL MEASUREMENTS

To assess the existing noise level environment, eight 24-hour noise level measurements were taken at potential receiver locations in the Project study area. The measurement locations were selected to describe and document the existing noise environment within the Project study area. Exhibit 5-A provides the boundaries of the Project study area and the noise level measurement locations. To fully describe the existing noise conditions, noise level measurements were collected by Urban Crossroads, Inc. on Thursday, July 19<sup>th</sup>, 2018. Appendix 5.1 includes study area photos.

## 5.1 MEASUREMENT PROCEDURE AND CRITERIA

To describe the existing noise environment, the hourly noise levels were measured during typical weekday conditions over a 24-hour period. By collecting individual hourly noise level measurements, it is possible to describe the daytime and nighttime hourly noise levels and calculate the 24-hour CNEL. The long-term noise readings were recorded using Piccolo Type 2 integrating sound level meter and dataloggers. The Piccolo sound level meters were calibrated using a Larson-Davis calibrator, Model CAL 150. All noise meters were programmed in "slow" mode to record noise levels in "A" weighted form. The sound level meters and microphones were equipped with a windscreen during all measurements. All noise level measurement equipment satisfies the American National Standards Institute (ANSI) standard specifications for sound level meters ANSI S1.4-2014/IEC 61672-1:2013. (13)

## 5.2 NOISE MEASUREMENT LOCATIONS

The long-term noise level measurements were positioned as close to the nearest receiver locations as possible to assess the existing ambient hourly noise levels surrounding the Project site. Both Caltrans and the FTA recognize that it is not reasonable to collect noise level measurements that can fully represent every part of a private yard, patio, deck, or balcony normally used for human activity when estimating impacts for new development projects. This is demonstrated in the Caltrans general site location guidelines which indicate that, *sites must be free of noise contamination by sources other than sources of interest. Avoid sites located near sources such as barking dogs, lawnmowers, pool pumps, and air conditioners unless it is the express intent of the analyst to measure these sources. (14) Further, FTA guidance states, that it is not necessary nor recommended that existing noise exposure be determined by measuring at every noise-sensitive location in the project area. Rather, the recommended approach is to characterize the noise environment for clusters of sites based on measurements or estimates at representative locations in the community. (4)* 

Based on recommendations of Caltrans and the FTA, it is not necessary to collect measurements at each individual building or residence, because each receiver measurement represents a group of buildings that share acoustical equivalence. (4) In other words, the area represented by the receiver shares similar shielding, terrain, and geometric relationship to the reference noise source. Receivers represent a location of noise used to estimate the future noise level impacts. Collecting reference ambient noise level measurements at the receiver locations allows for a

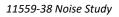


comparison of the before and after Project noise levels and is necessary to assess potential noise impacts due to the Project's contribution to the ambient noise levels.

#### 5.3 NOISE MEASUREMENT RESULTS

The noise measurements presented below focus on the average or equivalent sound levels ( $L_{eq}$ ). The equivalent sound level ( $L_{eq}$ ) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. Table 5-1 identifies the hourly daytime (7:01 a.m. to 10:00 p.m.) and nighttime (10:01 p.m. to 7:00 a.m.) noise levels at each noise level measurement location consistent with the City of Perris Municipal Code. Appendix 5.2 provides a summary of the existing hourly ambient noise levels described below:

- Location L1 represents the noise levels north of the Project site on Redlands Avenue adjacent to an existing, RV park use, and an existing industrial use. The noise level measurements collected show an overall 24-hour exterior noise level of 67.5 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 62.9 dBA L<sub>eq</sub> with an average nighttime noise level of 59.2 dBA L<sub>eq</sub>.
- Location L2 represents the noise levels east of the Project site at the southwest corner of Morgan Park. The noise level measurements collected show an overall 24-hour exterior noise level of 55.2 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 53.9 dBA L<sub>eq</sub> with an average nighttime noise level of 44.9 dBA L<sub>eq</sub>.
- Location L3 represents the noise levels east of the Project site adjacent to existing residences west of Evans Road. The noise level measurements collected show an overall 24-hour exterior noise level of 61.9 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 56.1 dBA L<sub>eq</sub> with an average nighttime noise level of 55.3 dBA L<sub>eq</sub>.
- Location L4 represents the noise levels east of the Project site adjacent to existing residences north of Rider Street. The noise level measurements collected show an overall 24-hour exterior noise level of 57.7 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 55.9 dBA L<sub>eq</sub> with an average nighttime noise level of 48.6 dBA L<sub>eq</sub>.
- Location L5 represents the noise levels southeast of the Project site adjacent to residences on Parula Street. The noise level measurements collected show an overall 24-hour exterior noise level of 56.9 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 55.6 dBA L<sub>eq</sub> with an average nighttime noise level of 48.0 dBA L<sub>eq</sub>.
- Location L6 represents the noise levels south of the Project site across Rider Street adjacent to a non-conforming existing residential home. The noise level measurements collected show an overall 24-hour exterior noise level of 66.9 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 63.7 dBA Leq with an average nighttime noise level of 59.0 dBA Leq.
- Location L7 represents the noise levels south of the Project site on the southeast corner of Redlands Avenue and Rider Street near non-conforming existing residences. The noise level measurements collected show an overall 24-hour exterior noise level of 71.4 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 67.7 dBA L<sub>eq</sub> with an average nighttime noise level of 63.4 dBA L<sub>eq</sub>.





 Location L8 represents the noise levels southwest of the Project site adjacent to Rider Street and nearest non-conforming residences. The noise level measurements collected show an overall 24hour exterior noise level of 71.4 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 67.6 dBA L<sub>eq</sub> with an average nighttime noise level of 63.7 dBA L<sub>eq</sub>.

Table 5-1 provides the (energy average) noise levels used to describe the daytime and nighttime ambient conditions. These daytime and nighttime energy average noise levels represent the average of all hourly noise levels observed during these time periods expressed as a single number. Appendix 5.2 provides summary worksheets of the noise levels for each hour as well as the minimum, maximum, L<sub>1</sub>, L<sub>2</sub>, L<sub>5</sub>, L<sub>8</sub>, L<sub>25</sub>, L<sub>50</sub>, L<sub>90</sub>, L<sub>95</sub>, and L<sub>99</sub> percentile noise levels observed during the daytime and nighttime periods.

The background ambient noise levels in the Project study area are dominated by the transportation-related noise associated with the arterial roadway network (i.e., Redlands Avenue, Dawes Street, Morgan Street, Rider Street, and local residential roads). This includes the auto and heavy truck activities near the noise level measurement locations. Additional background noise sources in the Project study area include aircraft overflight noise from the MARB/IPA. The 24-hour existing noise level measurements are shown on Table 5-1.

Location <sup>1</sup>	Distance to Project	Description	Energy Average Noise Level (dBA L <sub>eq</sub> ) <sup>2</sup>		CNEL
	Boundary (Feet)		Daytime	Nighttime	
L1	1,346'	Located north of the Project site on Redlands Avenue adjacent to an existing RV park and industrial use.	62.9	59.2	67.5
L2	30'	Located east of the Project site at the southwest corner of Morgan Park.	53.9	44.9	55.2
L3	944'	Located east of the Project site adjacent to existing residence west of Evans Road.	56.1	55.3	61.9
L4	509'	Located east of the Project site adjacent to existing residence north of Rider Street.	55.9	48.6	57.7
L5	567'	Located southeast of the Project site adjacent to residence on Parula Street.	55.6	48.0	56.9
L6	278'	Located south of the Project site across Rider Street adjacent to an existing residence.	63.7	59.0	66.9
L7	107'	Located south of the Project site on the southeast corner of Redlands Avenue and Rider Street near existing residences	67.7	63.4	71.4
L8	538'	Located southwest of the Project site adjacent to Rider Street and nearest residences.	67.6	63.7	71.4

<sup>1</sup> See Exhibit 5-A for the noise level measurement locations.

<sup>2</sup> The long-term 24-hour measurement printouts are included in Appendix 5.2.

"Daytime" = 7:01 a.m. to 10:00 p.m.; "Nighttime" = 10:01 p.m. to 7:00 a.m.





**EXHIBIT 5-A: NOISE MEASUREMENT LOCATIONS** 

A Measurement Locations

# 6 METHODS AND PROCEDURES

The following section outlines the methods and procedures used to model and analyze the future traffic noise environment.

### 6.1 FHWA TRAFFIC NOISE PREDICTION MODEL

The expected roadway noise level increases from vehicular traffic were calculated by Urban Crossroads, Inc. using a computer program that replicates the Federal Highway Administration (FHWA) Traffic Noise Prediction Model FHWA-RD-77-108. (15) The FHWA Model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). In California the national REMELs are substituted with the California Vehicle Noise (Calveno) Emission Levels. (16) Adjustments are then made to the REMEL to account for: the roadway classification (e.g., collector, secondary, major or arterial), the roadway active width (i.e., the distance between the center of the outermost travel lanes on each side of the roadway), the total average daily traffic (ADT), the travel speed, the percentages of automobiles, medium trucks, and heavy trucks in the traffic volume, the roadway grade, the angle of view (e.g., whether the roadway view is blocked), the site conditions ("hard" or "soft" relates to the absorption of the ground, pavement, or landscaping), and the percentage of total ADT which flows each hour throughout a 24-hour period. Research conducted by Caltrans has shown that the use of soft site conditions is appropriate for the application of the FHWA traffic noise prediction model used in this analysis. (17)

## 6.2 OFF-SITE TRAFFIC NOISE PREDICTION MODEL INPUTS

Table 6-1 presents the roadway parameters used to assess the Project's off-site transportation noise impacts. Table 6-1 identifies the 27 study area roadway segments, the distance from the centerline to adjacent land use based on the functional roadway classifications according to the City of Perris *General Plan Circulation Element*, and the posted vehicle speeds. According to the *IDI Rider 2 and 4 High Cube Warehouses and Perris Valley Storm Drain Channel Improvement Project Traffic Impact Analysis* prepared by Urban Crossroads, Inc., the Project is expected to generate a total of approximately 1,926 trip-ends per day (actual vehicles). (18) The Project trip generation includes 1,304 passenger cars and 622 truck trip-ends per day from the proposed buildings within the Project site. The ADT volumes used in this study are presented on Table 6-2 were obtained from the *Traffic Impact Analysis* for the following traffic conditions: Existing, Existing with Project, and Existing plus Ambient plus Cumulative (EAC) with Project

This noise study relies on the net Project trips to accurately account for the effect of individual passenger cars and truck trips on the study area roadway network. Consistent with the traffic study, the off-site traffic noise analysis maintains a peak hour to average daily traffic (peak-to-daily) relationship of approximately 6.83%. Table 6-3 provides the time of day (daytime, evening, and nighttime) vehicle splits.



ID	Roadway	Segment	Adjacent Planned Land Use (Existing if Different) <sup>1</sup>	Distance from Centerline to Nearest Adjacent Land Use (Feet) <sup>2</sup>	Posted Speed Limit (mph)
1	Perris Bl.	n/o Harley Knox Bl.	Commercial	64'	45
2	Perris Bl.	s/o Harley Knox Bl.	Commercial	64'	45
3	Perris Bl.	n/o Ramona Expwy.	Commercial	64'	45
4	Perris Bl.	s/o Ramona Expwy.	Commercial	64'	45
5	Perris Bl.	s/o Morgan St.	Light Industrial	64'	45
6	Perris Bl.	s/o Rider St.	Light Industrial (Residential)	64'	45
7	Redlands Av.	s/o Harley Knox Bl.	Light Industrial	47'	40
8	Redlands Av.	s/o Markham St.	Light Industrial	47'	40
9	Redlands Av.	s/o Ramona Expwy.	Commercial (Res.)	47'	40
10	Redlands Av.	s/o Rider St.	Light Industrial (Residential)	47'	40
11	Harley Knox Bl.	e/o Western Wy.	Light Industrial	64'	45
12	Harley Knox Bl.	e/o Patterson Av.	General Industrial	64'	45
13	Harley Knox Bl.	e/o Webster Av.	General Industrial	64'	45
14	Harley Knox Bl.	e/o Indian Av.	Light Industrial	64'	50
15	Harley Knox Bl.	e/o Perris Bl.	Commercial (Non-Conforming Res.)	64'	45
16	Markham St.	w/o Redlands Av.	Light Industrial	47'	35
17	Ramona Expwy.	w/o Nevada Av.	Commercial	92'	50
18	Ramona Expwy.	e/o Nevada Av.	Commercial	92'	50
19	Ramona Expwy.	e/o Webster Av.	Commercial/Light Industrial	92'	50
20	Ramona Expwy.	e/o Indian Av.	Light Industrial	92'	50
21	Ramona Expwy.	e/o Perris Bl.	Commercial (Residential)	92'	50
22	Ramona Expwy.	w/o Redlands Av.	Commercial (Residential)	92'	50
23	Ramona Expwy.	e/o Redlands Av.	Office	92'	50
24	Morgan St.	e/o Perris Bl.	Light Industrial	47'	40
25	Rider St.	e/o Perris Bl.	Light Industrial (Residential)	47'	45
26	Rider St.	w/o Redlands Av.	Light Industrial (Residential)	47'	45
27	Rider St.	e/o Redlands Av.	Light Industrial (Residential)	47'	45

#### TABLE 6-1: OFF-SITE ROADWAY PARAMETERS

<sup>1</sup> Sources: Perris Valley Commerce Center Land Use Plan and Nearmap aerial imagery.

<sup>2</sup> Distance to adjacent land use is based upon the right-of-way distances for each functional roadway classification provided in the General Plan

Circulation Element.

"Res." = Residential



			Average Daily Traffic Volumes <sup>1</sup>			
ID	Roadway	Segment	Existing (2018)		EA plus Cumulative (EAC)	
			Without Project	With Project	Without Project	With Project
1	Perris Bl.	n/o Harley Knox Bl.	37,951	38,147	43,311	43,507
2	Perris Bl.	s/o Harley Knox Bl.	29,867	30,063	33,448	33,644
3	Perris Bl.	n/o Ramona Exwy.	28,741	28,937	32,683	32,879
4	Perris Bl.	s/o Ramona Exwy.	24,036	24,753	29,400	30,117
5	Perris Bl.	s/o Morgan St.	25,640	26,031	30,598	30,989
6	Perris Bl.	s/o Rider St.	27,553	27,749	31,700	31,896
7	Redlands Av.	s/o Harley Knox Bl.	4,829	5,450	8,417	9,038
8	Redlands Av.	s/o Markham St.	5,338	5,959	8,957	9,578
9	Redlands Av.	s/o Ramona Exwy.	1,882	2,829	4,375	5,322
10	Redlands Av.	s/o Rider St.	3,872	3,937	4,180	4,245
11	Harley Knox Bl.	e/o Western Wy.	20,457	21,078	33,356	33,977
12	Harley Knox Bl.	e/o Patterson Av.	18,343	18,964	30,578	31,199
13	Harley Knox Bl.	e/o Webster Av.	17,217	17,838	25,942	26,563
14	Harley Knox Bl.	e/o Indian Av.	10,660	11,281	15,136	15,757
15	Harley Knox Bl.	e/o Perris Bl.	4,906	5,527	8,625	9,246
16	Markham St.	w/o Redlands Av.	679	679	720	720
17	Ramona Exwy.	w/o Nevada Av.	45,711	46,363	58,404	59,056
18	Ramona Exwy.	e/o Nevada Av.	42,502	43,154	55,000	55,652
19	Ramona Exwy.	e/o Webster Av.	38,445	39,097	50,081	50,733
20	Ramona Exwy.	e/o Indian Av.	39,309	39,961	48,646	49,298
21	Ramona Exwy.	e/o Perris Bl.	35,282	35,412	44,094	44,224
22	Ramona Exwy.	w/o Redlands Av.	37,257	37,387	40,750	40,880
23	Ramona Exwy.	e/o Redlands Av.	41,716	41,912	45,361	45,557
24	Morgan St.	e/o Perris Bl.	1,311	1,637	1,606	1,932
25	Rider St.	e/o Perris Bl.	12,357	12,944	16,275	16,862
26	Rider St.	w/o Redlands Av.	12,392	12,979	16,312	16,899
27	Rider St.	e/o Redlands Av.	15,258	15,714	18,127	18,583

#### TABLE 6-2: AVERAGE DAILY TRAFFIC VOLUMES

<sup>1</sup> Source: Project Traffic Impact Analysis, Urban Crossroads, Inc.

#### TABLE 6-3: TIME OF DAY VEHICLE SPLITS

Vahiala Tuma		Time of Day Splits <sup>1</sup>		Total of Time of
Vehicle Type	Daytime	Evening	Nighttime	Day Splits
Autos	68.17%	12.26%	19.57%	100.00%
Medium Trucks	69.75%	8.81%	21.44%	100.00%
Heavy Trucks	58.32%	5.05%	36.63%	100.00%

<sup>1</sup> Based on existing ADT counts by vehicle type taken on 5/24/2018 on Perris Boulevard north of Rider Street (Project Traffic Impact Analysis, Urban Crossroads, Inc.). All values rounded to the nearest one-hundredth.

"Daytime" = 7:00 a.m. to 7:00 p.m.; "Evening" = 7:00 p.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

To quantify the off-site noise levels, the Project related truck trips were added to the heavy truck category in the FHWA noise prediction model. The addition of the Project related truck trips increases the percentage of heavy trucks in the vehicle mix. This approach recognizes that the FHWA noise prediction model is significantly influenced by the number of heavy trucks in the vehicle mix.

The daily Project automobile and truck trip-ends were assigned to the individual off-site study area roadway segments based on the Project automobile and truck trip distribution percentages documented in the *Traffic Impact Analysis*. Using the Project truck trips in combination with the Project trip distribution, Urban Crossroads, Inc. calculated the number of additional Project truck trips and vehicle mix percentages for each of the study area roadway segments. Table 6-4 shows the traffic flow by vehicle type (vehicle mix) used in the without Project traffic scenarios, and Tables 6-5 to 6-6 show the vehicle mixes used for the with Project traffic scenarios.

#### TABLE 6-4: WITHOUT PROJECT CONDITIONS VEHICLE MIX

Classification	Тс	Total		
Classification	Autos	Medium Trucks	Heavy Trucks	Total
All Segments	91.21%	6.78%	2.01%	100.00%

<sup>1</sup> Based on existing ADT counts by vehicle type taken on 5/24/2018 on Perris Boulevard north of Rider Street (Project Traffic Impact Analysis, Urban Crossroads, Inc.). All values rounded to the nearest one-hundredth.



			With Project <sup>1</sup>			
ID	Roadway	Segment	Autos	Medium Trucks	Heavy Trucks	Total <sup>2</sup>
1	Perris Bl.	n/o Harley Knox Bl.	91.25%	6.75%	2.00%	100.00%
2	Perris Bl.	s/o Harley Knox Bl.	91.26%	6.74%	2.00%	100.00%
3	Perris Bl.	n/o Ramona Expwy.	91.26%	6.74%	2.00%	100.00%
4	Perris Bl.	s/o Ramona Expwy.	91.46%	6.59%	1.96%	100.00%
5	Perris Bl.	s/o Morgan St.	91.34%	6.68%	1.98%	100.00%
6	Perris Bl.	s/o Rider St.	91.27%	6.73%	2.00%	100.00%
7	Redlands Av.	s/o Harley Knox Bl.	80.98%	7.91%	11.11%	100.00%
8	Redlands Av.	s/o Markham St.	81.85%	7.81%	10.33%	100.00%
9	Redlands Av.	s/o Ramona Expwy.	72.43%	8.19%	19.38%	100.00%
10	Redlands Av.	s/o Rider St.	91.35%	6.67%	1.98%	100.00%
11	Harley Knox Bl.	e/o Western Wy.	88.57%	7.07%	4.36%	100.00%
12	Harley Knox Bl.	e/o Patterson Av.	88.27%	7.11%	4.62%	100.00%
13	Harley Knox Bl.	e/o Webster Av.	88.09%	7.13%	4.79%	100.00%
14	Harley Knox Bl.	e/o Indian Av.	86.27%	7.33%	6.40%	100.00%
15	Harley Knox Bl.	e/o Perris Bl.	81.12%	7.89%	10.98%	100.00%
16	Markham St.	w/o Redlands Av.	91.21%	6.78%	2.01%	100.00%
17	Ramona Expwy.	w/o Nevada Av.	91.33%	6.69%	1.99%	100.00%
18	Ramona Expwy.	e/o Nevada Av.	91.34%	6.68%	1.98%	100.00%
19	Ramona Expwy.	e/o Webster Av.	91.35%	6.67%	1.98%	100.00%
20	Ramona Expwy.	e/o Indian Av.	91.35%	6.67%	1.98%	100.00%
21	Ramona Expwy.	e/o Perris Bl.	91.24%	6.76%	2.01%	100.00%
22	Ramona Expwy.	w/o Redlands Av.	91.24%	6.76%	2.01%	100.00%
23	Ramona Expwy.	e/o Redlands Av.	91.25%	6.75%	2.00%	100.00%
24	Morgan St.	e/o Perris Bl.	92.93%	5.45%	1.62%	100.00%
25	Rider St.	e/o Perris Bl.	91.60%	6.48%	1.92%	100.00%
26	Rider St.	w/o Redlands Av.	91.60%	6.47%	1.92%	100.00%
27	Rider St.	e/o Redlands Av.	91.47%	6.58%	1.95%	100.00%

TABLE 6-5: EXISTING WITH PROJECT CONDITIONS VEHICLE MIX

<sup>1</sup> Source: Project Traffic Impact Analysis, Urban Crossroads, Inc.

<sup>2</sup> Total of vehicle mix percentage values rounded to the nearest one-hundredth.

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			With Project <sup>1</sup>			
ID	Roadway	Segment	Autos	Medium Trucks	Heavy Trucks	Total <sup>2</sup>
1	Perris Bl.	n/o Harley Knox Bl.	91.25%	6.75%	2.00%	100.00%
2	Perris Bl.	s/o Harley Knox Bl.	91.26%	6.74%	2.00%	100.00%
3	Perris Bl.	n/o Ramona Expwy.	91.26%	6.74%	2.00%	100.00%
4	Perris Bl.	s/o Ramona Expwy.	91.42%	6.62%	1.96%	100.00%
5	Perris Bl.	s/o Morgan St.	91.32%	6.69%	1.99%	100.00%
6	Perris Bl.	s/o Rider St.	91.26%	6.74%	2.00%	100.00%
7	Redlands Av.	s/o Harley Knox Bl.	84.79%	7.49%	7.72%	100.00%
8	Redlands Av.	s/o Markham St.	85.16%	7.45%	7.39%	100.00%
9	Redlands Av.	s/o Ramona Expwy.	80.39%	7.59%	12.01%	100.00%
10	Redlands Av.	s/o Rider St.	91.34%	6.68%	1.98%	100.00%
11	Harley Knox Bl.	e/o Western Wy.	89.52%	6.97%	3.51%	100.00%
12	Harley Knox Bl.	e/o Patterson Av.	89.36%	6.98%	3.65%	100.00%
13	Harley Knox Bl.	e/o Webster Av.	89.06%	7.02%	3.92%	100.00%
14	Harley Knox Bl.	e/o Indian Av.	87.56%	7.18%	5.26%	100.00%
15	Harley Knox Bl.	e/o Perris Bl.	84.94%	7.47%	7.59%	100.00%
16	Markham St.	w/o Redlands Av.	91.21%	6.78%	2.01%	100.00%
17	Ramona Expwy.	w/o Nevada Av.	91.30%	6.71%	1.99%	100.00%
18	Ramona Expwy.	e/o Nevada Av.	91.31%	6.70%	1.99%	100.00%
19	Ramona Expwy.	e/o Webster Av.	91.32%	6.69%	1.99%	100.00%
20	Ramona Expwy.	e/o Indian Av.	91.32%	6.69%	1.99%	100.00%
21	Ramona Expwy.	e/o Perris Bl.	91.23%	6.76%	2.01%	100.00%
22	Ramona Expwy.	w/o Redlands Av.	91.23%	6.76%	2.01%	100.00%
23	Ramona Expwy.	e/o Redlands Av.	91.24%	6.75%	2.00%	100.00%
24	Morgan St.	e/o Perris Bl.	92.67%	5.65%	1.68%	100.00%
25	Rider St.	e/o Perris Bl.	91.51%	6.54%	1.94%	100.00%
26	Rider St.	w/o Redlands Av.	91.52%	6.54%	1.94%	100.00%
27	Rider St.	e/o Redlands Av.	91.44%	6.60%	1.96%	100.00%

TABLE 6-6: EXISTING PLUS AMBIENT PLUS CUMULATIVE WITH PROJECT VEHICLE MIX

<sup>1</sup> Source: Project Traffic Impact Analysis, Urban Crossroads, Inc.

<sup>2</sup> Total of vehicle mix percentage values rounded to the nearest one-hundredth.

#### 6.3 VIBRATION ASSESSMENT

This analysis focuses on the potential ground-borne vibration associated with vehicular traffic and construction activities. Ground-borne vibration levels from automobile traffic are generally overshadowed by vibration generated by heavy trucks that roll over the same uneven roadway surfaces. However, due to the rapid drop-off rate of ground-borne vibration and the short duration of the associated events, vehicular traffic-induced ground-borne vibration is rarely perceptible beyond the roadway right-of-way, and rarely results in vibration levels that cause damage to buildings in the vicinity.



However, while vehicular traffic is rarely perceptible, construction has the potential to result in varying degrees of temporary ground vibration, depending on the specific construction activities and equipment used. Ground vibration levels associated with various types of construction equipment are summarized on Table 6-7. Based on the representative vibration levels presented for various construction equipment types, it is possible to estimate the human response (annoyance) using the following vibration assessment methods defined by the FTA. To describe the human response (annoyance) associated with vibration impacts the FTA provides the following equation:  $L_{VdB}(D) = L_{VdB}(25 \text{ ft}) - 30\log(D/25)$ 

Equipment	Vibration Decibels (VdB) at 25 feet
Small bulldozer	58
Jackhammer	79
Loaded Trucks	86
Large bulldozer	87
Pile Driver (Impact)	104
Pile Driver (Sonic)	93
Caisson Drill	87

#### TABLE 6-7: VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment

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# 7 OFF-SITE TRANSPORTATION NOISE IMPACTS

To assess the off-site transportation CNEL noise level impacts associated with the proposed Project, noise contours were developed based on the *IDI Rider 2 and 4 High Cube Warehouses and Perris Valley Storm Drain Channel Improvement Project Traffic Impact Analysis*. (18) Noise contour boundaries represent the equal levels of noise exposure and are measured in CNEL from the center of the roadway. Noise contours were developed for the following traffic scenarios:

- <u>Existing Without / With Project</u>: This scenario refers to the existing present-day noise conditions, without and with the proposed Project. This condition is provided solely for analytical purposes and will not occur, since the Project will not be fully developed and occupied under Existing conditions.
- <u>Existing plus Ambient plus Cumulative (EAC) With Project</u>: This scenario refers to the exterior background noise conditions with the proposed Project plus ambient growth. This scenario corresponds to future conditions, and includes all cumulative projects identified in the *Traffic Impact Analysis*.

### 7.1 TRAFFIC NOISE CONTOURS

Noise contours were used to assess the Project's incremental traffic-related noise impacts at land uses adjacent to roadways conveying Project traffic based on the PVCC SP EIR significance criteria discussed in Section 4. The noise contours represent the distance to noise levels of a constant value and are measured from the center of the roadway for the 70, 65, and 60 dBA noise levels. The noise contours do not consider the effect of any existing noise barriers or topography that may attenuate ambient noise levels. In addition, because the noise contours reflect modeling of vehicular noise on area roadways, they appropriately do not reflect noise contributions from the surrounding stationary noise sources within the Project study area.

Tables 7-1 through 7-3 present a summary of the exterior traffic noise levels, without barrier attenuation, for the twenty-seven study area roadway segments analyzed for Existing, Existing with Project, and Existing plus Ambient plus Cumulative (EAC) with Project conditions. Appendix 7.1 includes a summary of the traffic noise level contours for each of the traffic scenarios.



ID	Road Segment Existing Land Use <sup>1</sup>		CNEL at Nearest Adjacent Land Use	from C 70	nce to Co enterline 65	e (Feet) 60	
				(dBA) <sup>2</sup>	dBA CNEL	dBA CNEL	dBA CNEL
1	Perris Bl.	n/o Harley Knox Bl.	Commercial	76.7	180	388	835
2	Perris Bl.	s/o Harley Knox Bl.	Commercial	75.7	153	330	712
3	Perris Bl.	n/o Ramona Expwy.	Commercial	75.5	149	322	694
4	Perris Bl.	s/o Ramona Expwy.	Commercial	74.8	133	286	616
5	Perris Bl.	s/o Morgan St.	Light Industrial	75.0	139	298	643
6	Perris Bl.	s/o Rider St.	Light Industrial (Residential)	75.3	145	313	675
7	Redlands Av.	s/o Harley Knox Bl.	Light Industrial	68.5	RW	80	173
8	Redlands Av.	s/o Markham St.	Light Industrial	68.9	RW	86	185
9	Redlands Av.	s/o Ramona Expwy.	Commercial (Residential)	64.4	RW	RW	92
10	Redlands Av.	s/o Rider St.	Light Industrial (Residential)	67.5	RW	69	149
11	Harley Knox Bl.	e/o Western Wy.	Light Industrial	74.0	119	257	553
12	Harley Knox Bl.	e/o Patterson Av.	General Industrial	73.6	111	239	514
13	Harley Knox Bl.	e/o Webster Av.	General Industrial	73.3	106	229	493
14	Harley Knox Bl.	e/o Indian Av.	Light Industrial	72.2	90	194	418
15	Harley Knox Bl.	e/o Perris Bl.	Commercial (Non-Conforming Res.)	67.8	RW	99	214
16	Markham St.	w/o Redlands Av.	Light Industrial	58.8	RW	RW	RW
17	Ramona Expwy.	w/o Nevada Av.	Commercial	75.8	223	481	1035
18	Ramona Expwy.	e/o Nevada Av.	Commercial	75.5	212	458	986
19	Ramona Expwy.	e/o Webster Av.	Commercial/Light Industrial	75.0	199	428	922
20	Ramona Expwy.	e/o Indian Av.	Light Industrial	75.1	202	435	936
21	Ramona Expwy.	e/o Perris Bl.	Commercial (Residential)	74.6	188	404	871
22	Ramona Expwy.	w/o Redlands Av.	Commercial (Residential)	74.9	195	419	903
23	Ramona Expwy.	e/o Redlands Av.	Office	75.4	210	452	974
24	Morgan St.	e/o Perris Bl.	Light Industrial	62.8	RW	RW	73
25	Rider St.	e/o Perris Bl.	Light Industrial (Residential)	73.7	83	178	383
26	Rider St.	w/o Redlands Av.	Light Industrial (Residential)	73.7	83	178	384
27	Rider St.	e/o Redlands Av.	Light Industrial (Residential)	74.6	95	205	441

TABLE 7-1: EXISTING WITHOUT PROJECT NOISE CONTOURS

<sup>1</sup> Sources: Perris Valley Commerce Center Land Use Plan and Nearmap aerial imagery.

<sup>2</sup> The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.

"RW" = Location of the respective noise contour falls within the right-of-way of the road.



	D Road Segment		Adjacent Existing	CNEL at Nearest Adjacent	from C	nce to Co enterline	e (Feet)
	KUdu	Segment	Land Use <sup>1</sup>	Land Use (dBA) <sup>2</sup>	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Perris Bl.	n/o Harley Knox Bl.	Commercial	76.7	180	388	836
2	Perris Bl.	s/o Harley Knox Bl.	Commercial	75.7	154	331	713
3	Perris Bl.	n/o Ramona Expwy.	Commercial	75.5	150	323	695
4	Perris Bl.	s/o Ramona Expwy.	Commercial	74.8	134	288	620
5	Perris Bl.	s/o Morgan St.	Light Industrial	75.1	139	300	645
6	Perris Bl.	s/o Rider St.	Light Industrial (Residential)	75.4	146	314	676
7	Redlands Av.	s/o Harley Knox Bl.	Light Industrial	73.7	83	178	384
8	Redlands Av.	s/o Markham St.	Light Industrial	73.8	85	182	392
9	Redlands Av.	s/o Ramona Expwy.	Commercial (Residential)	72.8	73	156	337
10	Redlands Av.	s/o Rider St.	Light Industrial (Residential)	67.6	RW	70	150
11	Harley Knox Bl.	e/o Western Wy.	Light Industrial	75.8	156	337	726
12	Harley Knox Bl.	e/o Patterson Av.	General Industrial	75.5	149	321	692
13	Harley Knox Bl.	e/o Webster Av.	General Industrial	75.3	145	313	674
14	Harley Knox Bl.	e/o Indian Av.	Light Industrial	75.0	138	297	641
15	Harley Knox Bl.	e/o Perris Bl.	Commercial (Non-Conforming Res.)	72.8	98	211	454
16	Markham St.	w/o Redlands Av.	Light Industrial	58.8	RW	RW	RW
17	Ramona Expwy.	w/o Nevada Av.	Commercial	75.8	224	482	1039
18	Ramona Expwy.	e/o Nevada Av.	Commercial	75.5	213	459	990
19	Ramona Expwy.	e/o Webster Av.	Commercial/Light Industrial	75.0	200	430	926
20	Ramona Expwy.	e/o Indian Av.	Light Industrial	75.1	203	436	940
21	Ramona Expwy.	e/o Perris Bl.	Commercial (Residential)	74.7	188	405	872
22	Ramona Expwy.	w/o Redlands Av.	Commercial (Residential)	74.9	195	420	904
23	Ramona Expwy.	e/o Redlands Av.	Office	75.4	210	453	975
24	Morgan St.	e/o Perris Bl.	Light Industrial	63.2	RW	RW	76
25	Rider St.	e/o Perris Bl.	Light Industrial (Residential)	73.7	83	180	388
26	Rider St.	w/o Redlands Av.	Light Industrial (Residential)	73.8	84	180	388
27	Rider St.	e/o Redlands Av.	Light Industrial (Residential)	74.6	96	206	444

TABLE 7-2: EXISTING WITH PROJECT NOISE CONTOURS

<sup>1</sup> Sources: Perris Valley Commerce Center Land Use Plan and Nearmap aerial imagery.

<sup>2</sup> The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.

"RW" = Location of the respective noise contour falls within the right-of-way of the road.



			Adjacent	CNEL at Nearest		nce to Co enterline	
ID	Road	Segment	Existing Land Use <sup>1</sup>	Adjacent Land Use (dBA) <sup>2</sup>	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Perris Bl.	n/o Harley Knox Bl.	Commercial	77.3	197	424	913
2	Perris Bl.	s/o Harley Knox Bl.	Commercial	76.2	166	357	769
3	Perris Bl.	n/o Ramona Expwy.	Commercial	76.1	163	351	757
4	Perris Bl.	s/o Ramona Expwy.	Commercial	75.7	153	329	708
5	Perris Bl.	s/o Morgan St.	Light Industrial	75.8	156	337	726
6	Perris Bl.	s/o Rider St.	Light Industrial (Residential)	76.0	160	344	742
7	Redlands Av.	s/o Harley Knox Bl.	Light Industrial	74.6	95	204	440
8	Redlands Av.	s/o Markham St.	Light Industrial	74.7	96	208	448
9	Redlands Av.	s/o Ramona Expwy.	Commercial (Residential)	73.6	82	176	379
10	Redlands Av.	s/o Rider St.	Light Industrial (Residential)	67.9	RW	73	158
11	Harley Knox Bl.	e/o Western Wy.	Light Industrial	77.3	198	426	917
12	Harley Knox Bl.	e/o Patterson Av.	General Industrial	77.1	189	407	878
13	Harley Knox Bl.	e/o Webster Av.	General Industrial	76.5	175	376	810
14	Harley Knox Bl.	e/o Indian Av.	Light Industrial	75.9	158	340	732
15	Harley Knox Bl.	e/o Perris Bl.	Commercial (Non-Conforming Res.)	73.7	113	244	525
16	Markham St.	w/o Redlands Av.	Light Industrial	59.0	RW	RW	RW
17	Ramona Expwy.	w/o Nevada Av.	Commercial	76.9	263	567	1222
18	Ramona Expwy.	e/o Nevada Av.	Commercial	76.6	253	545	1175
19	Ramona Expwy.	e/o Webster Av.	Commercial/Light Industrial	76.2	238	512	1104
20	Ramona Expwy.	e/o Indian Av.	Light Industrial	76.1	233	503	1083
21	Ramona Expwy.	e/o Perris Bl.	Commercial (Residential)	75.6	218	469	1011
22	Ramona Expwy.	w/o Redlands Av.	Commercial (Residential)	75.3	207	445	960
23	Ramona Expwy.	e/o Redlands Av.	Office	75.7	222	479	1031
24	Morgan St.	e/o Perris Bl.	Light Industrial	64.0	RW	RW	87
25	Rider St.	e/o Perris Bl.	Light Industrial (Residential)	74.9	100	216	464
26	Rider St.	w/o Redlands Av.	Light Industrial (Residential)	74.9	100	216	465
27	Rider St.	e/o Redlands Av.	Light Industrial (Residential)	75.4	107	231	498

<sup>1</sup> Sources: Perris Valley Commerce Center Land Use Plan and Nearmap aerial imagery.

<sup>2</sup> The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.

"RW" = Location of the respective noise contour falls within the right-of-way of the road.



### 7.2 EXISTING PROJECT-RELATED TRAFFIC NOISE LEVEL CONTRIBUTIONS AND IMPACTS

An analysis of existing off-site traffic noise levels has been included in this report based on the traffic volumes identified in the *IDI Rider 2 and 4 High Cube Warehouses and Perris Valley Storm Drain Channel Improvement Project Traffic Impact Analysis* prepared by Urban Crossroads, Inc. Consistent with other environmental reports prepared for the City of Perris, this analysis evaluates the off-site traffic noise impacts by comparing the Existing traffic volumes to the Existing with Project traffic volumes.

Table 7-1 presents the Existing without Project conditions CNEL noise levels. The Existing without Project exterior noise levels are expected to range from 58.8 to 76.7 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-2 shows that the Existing with Project conditions will also range from 58.8 to 76.7 dBA CNEL. As shown on Table 7-4 the Project is expected to generate existing off-site traffic noise level increases ranging from 0.0 dBA CNEL to up to 8.4 dBA CNEL.

Based on the 5 dBA CNEL increase significance criteria when noise levels at noise-sensitive land uses are below 60 dBA CNEL or the 3 dBA CNEL increase criteria when the noise levels already exceed 60 dBA CNEL, one of the 27 study area roadway segments are shown to experience *potentially significant* off-site traffic noise level increases due to the proposed Project truck trip distribution under Existing with Project conditions. The existing noise-sensitive land use on this segment is described below.

• Non-conforming, existing noise-sensitive uses on Harley Knox Boulevard east of Perris Boulevard (Segment #15). A review of the Project study area indicates that three existing residences adjacent to this segment do not conform to the underlying industrial land use designation of the PVCC SP and City of Perris Zoning Map. Therefore, these residences are considered an existing non-conforming use. Even though these existing non-conforming residences likely will ultimately be developed with land uses that are consistent with the underlying industrial land use designation of the PVCC SP and City of Perris Zoning Map, for purposes of analysis they are considered sensitive noise receivers until such time they are unoccupied or no longer exist.

Section 7.4 describes the off-site traffic noise mitigation measures considered in this analysis. All other roadway segments would not experience noise level increases under Existing with Project conditions that would exceed the established thresholds of significance.

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ID	Road	Segment		EL at Adjaco nd Use (dBA		Noise- Sensitive Land		l Noise Level Threshold <sup>3</sup>
			Existing Ambient	Existing +Project	Project Increase	Use? <sup>2</sup>	Limit	Exceeded?
1	Perris Bl.	n/o Harley Knox Bl.	76.7	76.7	0.0	No	n/a	No
2	Perris Bl.	s/o Harley Knox Bl.	75.7	75.7	0.0	No	n/a	No
3	Perris Bl.	n/o Ramona Expwy.	75.5	75.5	0.0	No	n/a	No
4	Perris Bl.	s/o Ramona Expwy.	74.8	74.8	0.0	No	n/a	No
5	Perris Bl.	s/o Morgan St.	75.0	75.1	0.1	No	n/a	No
6	Perris Bl.	s/o Rider St.	75.3	75.4	0.1	Yes	3.0	No
7	Redlands Av.	s/o Harley Knox Bl.	68.5	73.7	5.2	No	n/a	No
8	Redlands Av.	s/o Markham St.	68.9	73.8	4.9	No	n/a	No
9	Redlands Av.	s/o Ramona Expwy.	64.4	72.8	8.4	No	n/a	No
10	Redlands Av.	s/o Rider St.	67.5	67.6	0.1	Yes	3.0	No
11	Harley Knox Bl.	e/o Western Wy.	74.0	75.8	1.8	No	n/a	No
12	Harley Knox Bl.	e/o Patterson Av.	73.6	75.5	1.9	No	n/a	No
13	Harley Knox Bl.	e/o Webster Av.	73.3	75.3	2.0	No	n/a	No
14	Harley Knox Bl.	e/o Indian Av.	72.2	75.0	2.8	No	n/a	No
15	Harley Knox Bl.	e/o Perris Bl.	67.8	72.8	5.0	Yes	3.0	Yes
16	Markham St.	w/o Redlands Av.	58.8	58.8	0.0	No	n/a	No
17	Ramona Expwy.	w/o Nevada Av.	75.8	75.8	0.0	No	n/a	No
18	Ramona Expwy.	e/o Nevada Av.	75.5	75.5	0.0	No	n/a	No
19	Ramona Expwy.	e/o Webster Av.	75.0	75.0	0.0	No	n/a	No
20	Ramona Expwy.	e/o Indian Av.	75.1	75.1	0.0	No	n/a	No
21	Ramona Expwy.	e/o Perris Bl.	74.6	74.7	0.1	Yes	3.0	No
22	Ramona Expwy.	w/o Redlands Av.	74.9	74.9	0.0	Yes	3.0	No
23	Ramona Expwy.	e/o Redlands Av.	75.4	75.4	0.0	No	n/a	No
24	Morgan St.	e/o Perris Bl.	62.8	63.2	0.4	No	n/a	No
25	Rider St.	e/o Perris Bl.	73.7	73.7	0.0	Yes	3.0	No
26	Rider St.	w/o Redlands Av.	73.7	73.8	0.1	Yes	3.0	No
27	Rider St.	e/o Redlands Av.	74.6	74.6	0.0	Yes	3.0	No

TABLE 7-4: EXISTING CONDITION WITH PROJECT TRAFFIC NOISE IMPACTS

<sup>1</sup> The CNEL is calculated at the boundary of the right-of-way of each roadway and the nearest adjacent land use.

<sup>2</sup> "Yes" = Existing, noise-sensitive land uses adjacent to the study area roadway segment.

<sup>3</sup> Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?



## 7.3 EAC with Project Traffic Noise Level Contributions and Impacts

Table 7-5 presents a comparison of the Existing and the Existing plus Ambient plus Cumulative (EAC) with Project CNEL noise levels. Table 7-5 presents a comparison of the cumulative off-site traffic impact based on the difference between the Existing and the EAC plus Project traffic volumes. This comparison is used by the City of Perris to describe the cumulative off-site traffic noise impacts. Table 7-5 shows that the cumulative off-site traffic noise impacts will range from 0.2 dBA CNEL to 9.2 dBA CNEL.

Based on the 5 dBA CNEL increase significance criteria when noise levels at noise-sensitive land uses are below 60 dBA CNEL or the 3 dBA CNEL increase criteria when the noise levels already exceed 60 dBA CNEL, one of the 27 study area roadway segments are shown to experience *potentially significant* off-site traffic noise level increases due to the proposed Project truck trip distribution under EAC with Project conditions. The noise-sensitive land uses on this segment is described below.

• Non-conforming, existing noise-sensitive uses on Harley Knox Boulevard east of Perris Boulevard (Segment #15). A review of the Project study area indicates that three existing residences adjacent to this segment do not conform to the underlying industrial land use designation of the PVCC SP and City of Perris Zoning Map. Therefore, these residences are considered an existing non-conforming use. Even though these existing non-conforming residences likely will ultimately be developed with land uses that are consistent with the underlying industrial land use designation of the PVCC SP and City of Perris Zoning Map, for purposes of analysis they are considered sensitive noise receivers until such time they are unoccupied or no longer exist.

Section 7.4 describes the off-site traffic noise mitigation measures considered in this analysis. All other roadway segments would not experience noise level increases under EAC with Project conditions that would exceed the established thresholds of significance.

# 7.4 OFF-SITE TRAFFIC NOISE MITIGATION

To reduce the *potentially significant* Project traffic noise level increases on the study area roadway segment (Segment #15) for Existing plus Project and EAC plus Project conditions, potential noise mitigation measures are identified in this analysis. Potential mitigation measures discussed below include rubberized asphalt hot mix pavement and off-site noise barriers for the existing non-conforming residential use adjacent to impacted roadway segments.

### 7.5.1 RUBBERIZED ASPHALT

Due to the potential noise attenuation benefits, rubberized asphalt is considered as a mitigation measure for the Project-related roadway improvements associated with Project construction. To reduce traffic noise levels at the noise source, Caltrans research has shown that rubberized asphalt can provide noise attenuation of approximately 4 dBA for automobile traffic noise levels. (19) Changing the pavement type of a roadway has been shown to reduce the amount of tire/pavement noise produced at the source under both near-term and long-term conditions. Traffic noise is generated primarily by the interaction of the tires and pavement, the engine, and exhaust systems. For automobiles noise, as much as 75 to 90-percent of traffic noise is generated



by the interaction of the tires and pavement, especially when traveling at higher and constant speeds. (14) According to research conducted by Caltrans (19) and the Canadian Ministry of Transportation and Highways (20) a 4 dBA reduction in tire/pavement noise is attainable using rubberized asphalt under typical operating conditions.

The effectiveness of reducing traffic noise levels is higher on roadways with low percentages of heavy trucks, since the heavy truck engine and exhaust noise is not affected by rubberized alternative pavement due to the truck engine and exhaust stack height above the pavement itself. (19) Per Caltrans guidance a truck stack height is modeled using a height of 11.5 feet above the road. (21) (22) With the primary off-site traffic noise source consisting of heavy trucks with a stack height of 11.5 feet off the ground, the tire/pavement noise reduction benefits associated rubberized asphalt will be primarily limited to autos.

While the off-site Project-related traffic noise level increases would theoretically be reduced with the 4 dBA reduction provided by rubberized asphalt, the reduction would not provide reliable benefits for the noise levels generated by heavy truck traffic. This is, as previously stated, due to the noise source height difference between automobiles and trucks. While rubberized asphalt will provide some noise reduction, this noise study recognizes that this is only effective for tireon-pavement noise at higher speeds and would not reduce truck-related off-site traffic noise levels associated with truck engine and exhaust stacks to less than significant impacts. Since the use of rubberized asphalt would not lower the off-site traffic noise levels below a level of significance, rubberized asphalt is not proposed as mitigation for the Project and the off-site Project-related traffic noise level increases at adjacent land uses would remain *significant*.

## 7.5.2 OFF-SITE NOISE BARRIERS

Since existing and future noise-sensitive receiving land uses are located adjacent to the impacted roadway segments in the Project study area, off-site noise barriers were considered in this analysis as a potential traffic noise mitigation measure to reduce the impacts. Off-site noise barriers are estimated to provide a *readily perceptible* 5 dBA reduction which, according to the FHWA, is *simple* to attain when blocking the line-of-sight from the noise source to the receiver. (21) As previously discussed, Caltrans guidance in the Highway Design Manual, Section 1102.3(3), indicates that for design purposes, *the noise barrier should intercept the line of sight from the exhaust stack of a truck to the receptor*, and an 11.5-foot-high truck stack height is assumed to represent the truck engine and exhaust noise source. (22) Therefore, any exterior noise barriers at receiving noise sensitive land uses experiencing Project-related traffic noise level increases would need to be high enough and long enough to block the line-of-sight from the noise source (at 11.5 feet high per Caltrans) to the receiver (at 5 feet high per FHWA guidance) in order to provide a 5 dBA reduction per FHWA guidance. (22)

In addition, according to FHWA guidance, outdoor living areas are generally limited to outdoor living areas of frequent human use (e.g., backyards of single-family homes). Therefore, front and side yards of residential homes adjacent to off-site roadway segments do not represent noise sensitive areas of frequent human use that require exterior noise mitigation. (21) Exterior noise mitigation in the form of noise barriers is not anticipated to provide the FHWA attainable reduction of 5 dBA required to reduce the off-site traffic noise level increases and would also

require potential openings for driveway access to individual residential lots fronting the road. As such, off-site noise barriers would not be feasible and would not lower the off-site traffic noise levels below a level of significance, and therefore, noise barriers are not proposed as mitigation for the Project.

### 7.5.3 SIGNIFICANT OFF-SITE TRAFFIC NOISE IMPACTS

Both rubberized asphalt and off-site noise barriers are considered as potential noise mitigation measures to reduce the *potentially significant* off-site traffic noise level increases shown on Tables 7-4 to 7-5. However, neither form of mitigation would eliminate the off-site traffic noise level increases at the adjacent land uses to the impacted roadway segments. Therefore, the Project-related off-site traffic noise level increases at adjacent noise-sensitive land are considered a *significant and unavoidable* impact



ID	Road	Segment		CNEL at Adjacent Land Use (dBA) <sup>1</sup>				l Noise Level Threshold <sup>3</sup>
			Existing Ambient	EAPC	Project Increase	Land Use? <sup>2</sup>	Limit	Exceeded?
1	Perris Bl.	n/o Harley Knox Bl.	76.7	77.3	0.6	No	n/a	No
2	Perris Bl.	s/o Harley Knox Bl.	75.7	76.2	0.5	No	n/a	No
3	Perris Bl.	n/o Ramona Expwy.	75.5	76.1	0.6	No	n/a	No
4	Perris Bl.	s/o Ramona Expwy.	74.8	75.7	0.9	No	n/a	No
5	Perris Bl.	s/o Morgan St.	75.0	75.8	0.8	No	n/a	No
6	Perris Bl.	s/o Rider St.	75.3	76.0	0.7	Yes	3.0	No
7	Redlands Av.	s/o Harley Knox Bl.	68.5	74.6	6.1	No	n/a	No
8	Redlands Av.	s/o Markham St.	68.9	74.7	5.8	No	n/a	No
9	Redlands Av.	s/o Ramona Expwy.	64.4	73.6	9.2	No	n/a	No
10	Redlands Av.	s/o Rider St.	67.5	67.9	0.4	Yes	3.0	No
11	Harley Knox Bl.	e/o Western Wy.	74.0	77.3	3.3	No	n/a	No
12	Harley Knox Bl.	e/o Patterson Av.	73.6	77.1	3.5	No	n/a	No
13	Harley Knox Bl.	e/o Webster Av.	73.3	76.5	3.2	No	n/a	No
14	Harley Knox Bl.	e/o Indian Av.	72.2	75.9	3.7	No	n/a	No
15	Harley Knox Bl.	e/o Perris Bl.	67.8	73.7	5.9	Yes	3.0	Yes
16	Markham St.	w/o Redlands Av.	58.8	59.0	0.2	No	n/a	No
17	Ramona Expwy.	w/o Nevada Av.	75.8	76.9	1.1	No	n/a	No
18	Ramona Expwy.	e/o Nevada Av.	75.5	76.6	1.1	No	n/a	No
19	Ramona Expwy.	e/o Webster Av.	75.0	76.2	1.2	No	n/a	No
20	Ramona Expwy.	e/o Indian Av.	75.1	76.1	1.0	No	n/a	No
21	Ramona Expwy.	e/o Perris Bl.	74.6	75.6	1.0	Yes	3.0	No
22	Ramona Expwy.	w/o Redlands Av.	74.9	75.3	0.4	Yes	3.0	No
23	Ramona Expwy.	e/o Redlands Av.	75.4	75.7	0.3	No	n/a	No
24	Morgan St.	e/o Perris Bl.	62.8	64.0	1.2	No	n/a	No
25	Rider St.	e/o Perris Bl.	73.7	74.9	1.2	Yes	3.0	No
26	Rider St.	w/o Redlands Av.	73.7	74.9	1.2	Yes	3.0	No
27	Rider St.	e/o Redlands Av.	74.6	75.4	0.8	Yes	3.0	No

#### TABLE 7-5: EAC WITH PROJECT TRAFFIC NOISE IMPACTS

<sup>1</sup> The CNEL is calculated at the boundary of the right-of-way of each roadway and the nearest adjacent land use.

<sup>2</sup> "Yes" = Existing, noise-sensitive land uses adjacent to the study area roadway segment.

<sup>3</sup> Does the Project create an incremental noise level increase exceeding the significance criteria (Table 4-1)?



# 8 **RECEIVER LOCATIONS**

To assess the potential for long-term operational and short-term construction impacts, the following receiver locations, as shown on Exhibit 8-A, were identified as representative locations for analysis. As identified in the PVCC SP EIR, sensitive receivers are areas where humans are participating in activities that may be subject to the stress of significant interference from noise and often include residential dwellings, mobile homes, hotels, motels, hospitals, nursing homes, educational facilities, and libraries. Other receivers include office and industrial buildings, which are not considered as sensitive as single-family homes, but are still protected by City of Perris land use compatibility standards, as discussed below.

Representative sensitive receivers in the Project study area include single-family residences and Morgan Park, as described below. In addition, other receivers include an existing RV park, which is a transient commercial use and is not considered a sensitive land use, and receiver locations BIO-1 and BIO-2, which represent existing open space uses and potential sensitive receiver locations for further consideration in the Bio report for the Project. Sensitive land uses in the Project study area that are located at greater distances than receivers identified in this noise study will experience lower noise levels than those presented in this report due to the additional attenuation from distance and the shielding of intervening structures. Distance is measured in a straight line from the project boundary to each receiver location.

- R1: Location R1 represents the existing Camper Resorts of America RV park located approximately 1,345 feet north of the Project site, which is not a sensitive receiver. A 24-hour noise measurement was taken near this location, L1, to describe the existing ambient noise environment.
- R2: Location R2 represents the existing park, Morgan Park, located approximately 50 feet northeast of the Project site (east of the PVSD Channel Improvement Project). A 24-hour noise measurement was taken near this location, L2, to describe the existing ambient noise environment.
- R3: Location R3 represents the existing single-family residential property line at 3502 Churchill lane located approximately 944 feet east of the Project site (east of the PVSD Channel Improvement Project). A 24-hour noise measurement was taken near this location, L3, to describe the existing ambient noise environment.
- R4: Location R4 represents the existing single-family residential property line at 805 Finnegan Way located approximately 382 feet east of the Project site (east of the PVSD Channel Improvement Project). A 24-hour noise measurement was taken near this location, L4, to describe the existing ambient noise environment.
- R5: Location R5 represents existing single-family residential property line located at 812 Parula Street approximately 456 feet southeast of the Project site. A 24-hour noise measurement was taken near this location, L5, to describe the existing ambient noise environment.
- R6: Location R6 represents existing non-conforming residential property line within light industrial-designated land use located approximately 357 feet south of the Project site. A 24-hour noise measurement was taken near this location, L6, to describe the existing ambient noise environment.



- R7: Location R7 represents existing non-conforming residential property line within light industrial-designated land use located approximately 50 feet south of the Project site. A 24-hour noise measurement was taken near this location, L7, to describe the existing ambient noise environment.
- R8: Location R8 represents existing non-conforming residential property line within light industrial-designated land use located approximately 409 feet west of the Project site. A 24-hour noise measurement was taken near this location, L8, to describe the existing ambient noise environment.
- BIO-1: Location BIO-1 represents open space located approximately 30 feet east of the Project site (east of the PVSD Channel Improvement Project).
- BIO-2: Location BIO-2 represents open space located approximately 30 feet east of the Project site (east of the PVSD Channel Improvement Project).





#### **EXHIBIT 8-A: RECEIVER LOCATIONS**

Existing 6-Foot High Barrier



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# 9 OPERATIONAL NOISE IMPACTS

This section analyzes the potential stationary-source operational noise impacts at the nearest receiver locations, identified in Section 8, resulting from the operation of the proposed IDI Rider 2 and 4 High Cube Warehouses and Perris Valley Storm Drain Channel Improvement Project. Exhibit 9-A identifies the noise source locations used to assess the operational noise levels. The operational noise analysis includes the planned 14-foot-high screen wall on the perimeter of the truck trailer parking areas for each building. The screen wall locations shown on Exhibit 9-A are designed for screening, privacy, noise control, and security with berms on the street side.

## 9.1 OPERATIONAL NOISE SOURCES

This operational noise analysis is intended to describe noise level impacts associated with the expected typical of daytime and nighttime activities at the Project site. To present the potential worst-case noise conditions, this analysis assumes the Project would be operational 24 hours per day, seven days per week. Consistent with similar warehouse uses, the Project business operations would primarily be conducted within the enclosed buildings, except for traffic movement, parking, as well as loading and unloading of trucks at designated loading bays. The on-site Project-related noise sources are expected to include: loading dock activity, roof-top air conditioning units, parking lot vehicle movements and trash enclosure activity.

## 9.2 REFERENCE NOISE LEVELS

To estimate the Project operational noise impacts, reference noise level measurements were collected from similar types of activities to represent the noise levels expected with the development of the proposed Project. This section provides a detailed description of the reference noise level measurements shown on Table 9-1 used to estimate the Project operational noise impacts. Table 9-1 presents both the average hourly  $L_{eq}$  and the maximum permissible  $L_{max}$  reference noise levels. The average hour  $L_{eq}$  noise levels are used to calculate the 24-hour noise levels necessary to demonstrate compliance with the City of Perris 60 dBA CNEL exterior noise level standard for new industrial facilities within 160 feet of the property line of existing noise-sensitive land uses.

In addition, the average hourly  $L_{eq}$  noise levels are used to describe the Project related operational noise level increases. The  $L_{max}$  reference noise levels shown on Table 9-1 are used to estimate the Project's maximum permissible exterior noise level consistent with the City's  $L_{max}$  noise level standards. It is important to note that the following projected noise levels assume the worst-case noise environment with the loading dock activity, roof-top air conditioning units, parking lot vehicle movements and trash enclosure activity all operating continuously. These sources of noise activity will likely vary throughout the day.



EXHIBIT 9-A: OPERATIONAL NOISE SOURCE LOCATIONS



Naise Course	Ref. Distance (Feet) Noise Source Height (Feet)		Min./Hour⁵			ce Noise JBA L <sub>eq</sub> )	Reference Noise Level (dBA L <sub>max</sub> )	
Noise Source			Day	Night	@ Ref. Dist.	@ 50 Feet	@ Ref. Dist.	@ 50 Feet
Loading Dock Activity <sup>1</sup>	30'	8'	60	60	67.2	62.8	75.6	71.2
Roof-Top Air Conditioning Units <sup>2</sup>	5'	5'	39	28	77.2	57.2	77.7	57.7
Parking Lot Vehicle Movements <sup>3</sup>	10'	5'	60	60	52.2	41.7	61.0	50.5
Trash Enclosure Activity <sup>4</sup>	8'	5'	5	5	72.7	56.8	87.0	71.1

TABLE 9-1: REFERENCE NOISE LEVEL MEASUREMENTS

<sup>1</sup> As measured by Urban Crossroads, Inc. at the Motivational Fulfillment & Logistics Services distribution facility in the City of Chino.

<sup>2</sup> Lennox SCA120 series 10-ton model packaged air conditioning unit.

<sup>3</sup> As measured by Urban Crossroads, Inc. at the Panasonic Avionics Corporation parking lot in the City of Lake Forest.

<sup>4</sup>As measured by Urban Crossroads, Inc. at a commercial and office park trash enclosure in the City of Costa Mesa.

<sup>5</sup> Anticipated duration (minutes within the hour) of noise activity during typical hourly conditions expected at the Project site.

"Daytime" = 7:01 a.m. to 10:00 p.m.; "Nighttime" = 10:01 p.m. to 7:00 a.m.

### 9.2.1 MEASUREMENT PROCEDURES

The reference noise level measurements presented in this section were collected using a Larson Davis LxT Type 1 precisions sound level meter (serial number 01146). The LxT sound level meter was calibrated using a Larson-Davis calibrator, Model CAL 200, was programmed in "slow" mode to record noise levels in "A" weighted form and was located at approximately five feet above the ground elevation for each measurement. The sound level meters and microphones were equipped with a windscreen during all measurements. All noise level measurement equipment satisfies the American National Standards Institute (ANSI) standard specifications for sound level meters ANSI S1.4-2014/IEC 61672-1:2013. (13)

### 9.2.2 LOADING DOCK ACTIVITY

The reference loading dock activities are intended to describe the typical operational noise activities associated with the Project. This includes trucks maneuvering, truck loading, truck unloading, backup alarms or beepers, truck docking, a combination of tractor trailer semi-trucks, two-axle delivery trucks, and background forklift operations. To describe the warehouse loading dock activities without cold storage, short-term reference noise level measurements were collected at the Motivational Fulfillment & Logistics Services distribution facility located at 6810 Bickmore Avenue in the City of Chino. The reference loading dock activity noise level measurement was taken over a fifteen-minute period and represents multiple noise sources taken from the center of activity generating a reference noise level of 71.2 dBA L<sub>max</sub> at a uniform reference distance of 50 feet. At this measurement location, the noise sources associated with employees unloading a docked truck container included the squeaking of the truck's shocks when weight was removed from the truck, employees playing music over a radio, as well as a forklift horn and backup alarm or beeper.



## 9.2.3 ROOF-TOP AIR CONDITIONING UNITS

To assess the noise levels created by the roof-top air conditioning units, reference noise level measurements were collected from Lennox SCA120 series 10-ton model packaged air conditioning unit. At a uniform reference distance of 50 feet, the roof-top air conditioning units generate a reference noise level of 57.7 dBA L<sub>max</sub>. Based on the typical operating conditions observed over a four-day measurement period, the roof-top air conditioning units are estimated to operate for and average 39 minutes per hour during the daytime hours, and 28 minutes per hour during the nighttime hours. These operating conditions reflect summer cooling requirements with measured temperatures approaching 96 degrees Fahrenheit (°F) with average daytime temperatures of 82°F. For this noise analysis, the air conditioning units are expected to be located on the roof of the Project buildings.

## 9.2.4 PARKING LOT VEHICLE MOVEMENTS (AUTOS)

To determine the noise levels associated with parking lot vehicle movements, Urban Crossroads collected reference noise level measurements over a 24-hour period at the parking lot for the Panasonic Avionics Corporation office and warehouse building in the City of Lake Forest. The peak hour of activity measured over the 24-hour noise level measurement period occurred between 12:00 p.m. to 1:00 p.m., or the typical lunch hour for employees working in the area. The measured reference noise level at 50 feet from parking lot vehicle movements was measured at 50.5 dBA L<sub>max</sub>. The parking lot noise levels are mainly due to cars pulling in and out of spaces during peak lunch hour activity and employees talking, and represents peak activity observed over a 24-hour period. Noise associated with parking lot vehicle movements is expected to operate for the entire hour.

### 9.2.5 TRASH ENCLOSURE ACTIVITY

To describe the noise levels associated with a trash enclosure activity, Urban Crossroads collected a reference noise level measurement at an existing trash enclosure containing two dumpster bins. The trash enclosure noise levels describe metal gates opening and closing, metal scraping against concrete floor sounds, dumpster movement on metal wheels, trash dropping into the metal dumpster. The reference noise levels describe trash enclosure noise activities when trash is dropped into an empty metal dumpster, as would occur at the Project site. The measured reference noise level at the uniform 50-foot reference distance is 71.1 dBA L<sub>max</sub> for the trash enclosure activities with the trash enclosures for each of the Project buildings. Typical trash enclosure activities are estimated to occur for 5 minutes per hour.

# 9.3 CADNAA NOISE PREDICTION MODEL

To fully describe the exterior operational noise levels from the Project, Urban Crossroads, Inc. developed a noise prediction model using the CadnaA (Computer Aided Noise Abatement) computer program. CadnaA can analyze multiple types of noise sources using the spatially accurate Project site plan, georeferenced Nearmap aerial imagery, topography, buildings, and barriers in its calculations to predict the outdoor noise levels.



Using the ISO 9613 protocol, CadnaA will calculate the distance from each noise source to the noise receiver locations, using the ground absorption, distance, and barrier/building attenuation inputs to provide a noise level summary at each receiver and the partial noise level contributions by noise source. Consistent with the ISO 9613 protocol, the CadnaA noise prediction model relies on the reference sound power level (PWL) to describe individual noise sources. While sound pressure levels (e.g. L<sub>eq</sub>) quantify in decibels the intensity of given sound sources at a reference distance, sound power levels (PWL) are connected to the sound source and are independent of distance. Sound pressure levels vary substantially with distance from the source and diminish because of intervening obstacles and barriers, air absorption, wind, and other factors. Sound power is the acoustical energy emitted by the sound source and is an absolute value that is not affected by the environment.

The operational noise level calculations provided in this noise study account for the distance attenuation provided due to geometric spreading, when sound from a localized stationary source (i.e., a point source) propagates uniformly outward in a spherical pattern. A default ground attenuation factor of 0.5 was used in the noise analysis to account for mixed ground representing a combination of hard and soft surfaces. Appendix 9.1 includes the detailed noise model inputs including the planned 14-foot high screen wall used to estimate the Project operational noise levels presented in this section.

## 9.4 PROJECT OPERATIONAL NOISE LEVELS

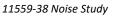
Using the reference noise levels to represent the proposed Project operations that include loading dock activity, roof-top air conditioning units, parking lot vehicle movements and trash enclosure activity, Urban Crossroads, Inc. calculated the operational source noise levels that are expected to be generated at the Project site and the Project-related noise level increases that would be experienced at each of the receiver locations. Tables 9-2 shows the Project operational noise levels during the daytime hours of 7:01 a.m. to 10:00 p.m. The daytime hourly noise levels at the off-site receiver locations are expected to range from 44.5 to 59.9 dBA L<sub>max</sub>.

Noise Coursel	Operational Noise Levels by Receiver Location (dBA L <sub>max</sub> )									
Noise Source <sup>1</sup>	R1	R2	R3	R4	R5	R6	R7	R8	BIO-1	BIO-2
Loading Dock Activity	44.5	53.7	47.6	52.9	49.4	55.6	59.9	44.4	57.9	55.3
Roof-Top Air Conditioning Units	19.6	22.8	19.7	23.6	22.1	28.1	32.2	21.4	23.5	26.1
Parking Lot Vehicle Movements	22.2	31.5	22.3	32.3	30.8	37.4	38.3	26.5	30.7	36.0
Trash Enclosure Activity	12.8	13.1	8.7	21.1	17.1	23.6	32.9	15.4	15.2	24.6
Total (All Noise Sources)	44.5	53.7	47.6	52.9	49.5	55.7	59.9	44.5	57.9	55.4

### TABLE 9-2: DAYTIME PROJECT OPERATIONAL NOISE LEVELS

<sup>1</sup> See Exhibit 9-A for the noise source locations. CadnaA noise model calculations are included in Appendix 9.1.

Table 9-3 shows the Project operational noise levels during the nighttime hours of 10:01 p.m. to 7:00 a.m. The nighttime hourly noise levels at the off-site receiver locations are expected to range from 44.5 to 59.9 dBA  $L_{max}$ . The minor differences between the daytime and nighttime noise levels is largely related to the duration of noise activity by the individual noise source





activity (Table 9-1). While the individual noise source levels vary between the daytime and nighttime operational noise levels, the loading dock activity noise source levels effectively overshadows the other noise source activity. This effectively produces the same daytime and nighttime noise levels.

Noise Source <sup>1</sup>		Operational Noise Levels by Receiver Location (dBA Lmax)									
Noise Source-	R1	R2	R3	R4	R5	R6	R7	R8	BIO-1	BIO-2	
Loading Dock Activity	44.5	53.7	47.6	52.9	49.4	55.6	59.9	44.4	57.9	55.3	
Roof-Top Air Conditioning Units	17.2	20.3	17.2	21.2	19.7	25.7	29.8	19.0	21.1	23.7	
Parking Lot Vehicle Movements	22.2	31.5	22.3	32.3	30.8	37.4	38.3	26.5	30.7	36.0	
Trash Enclosure Activity	11.9	12.1	7.8	20.1	16.2	22.6	31.9	14.5	14.3	23.6	
Total (All Noise Sources)	44.5	53.7	47.6	52.9	49.5	55.7	59.9	44.5	57.9	55.4	

### TABLE 9-3: NIGHTTIME PROJECT OPERATIONAL NOISE LEVELS

<sup>1</sup> See Exhibit 9-A for the noise source locations. CadnaA noise model calculations are included in Appendix 9.1.

### 9.5 PROJECT OPERATIONAL NOISE LEVEL COMPLIANCE

To demonstrate compliance with local noise regulations, the Project-only operational noise levels are evaluated against exterior noise level thresholds based on the City of Perris  $L_{max}$  exterior noise level standards at the nearest noise-sensitive receiver locations. Table 9-4 shows the operational noise levels associated with IDI Rider 2 and 4 High Cube Warehouses and Perris Valley Storm Drain Channel Improvement Project will satisfy the City of Perris operational noise level standards at all the nearest receiver locations. Therefore, the operational noise impacts are considered *less than significant*.

Receiver Location <sup>1</sup>	Noise	perational Levels L <sub>max</sub> ) <sup>2</sup>	Level St	r Noise andards L <sub>max</sub> ) <sup>3</sup>	Noise Level Standards Exceeded? <sup>4</sup>		
	Daytime	Nighttime	Daytime	Nighttime	Daytime	Nighttime	
R1	44.5	44.5	80	60	No	No	
R2	53.7	53.7	80	60	No	No	
R3	47.6	47.6	80	60	No	No	
R4	52.9	52.9	80	60	No	No	
R5	49.5	49.5	80	60	No	No	
R6	55.7	55.7	80	60	No	No	
R7	59.9	59.9	80	60	No	No	
R8	44.5	44.5	80	60	No	No	
BIO-1	57.9	57.9	_5	_5	_5	_5	
BIO-2	55.4	55.4	_5	_5	_5	_5	

TABLE 9-4: OPERATIONAL NOISE LEVEL COMPLIANCE

<sup>1</sup> See Exhibit 8-A for the receiver locations.

<sup>2</sup> Proposed Project operational noise levels as shown on Tables 9-2 and 9-3.

<sup>3</sup> Exterior noise level standard as shown on Table 3-1.

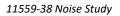
<sup>4</sup> Do the estimated Project operational noise source activities exceed the noise level standards?

<sup>5</sup> Receiver location and Project operational noise levels provided for informational purposes. Potential impacts analyzed in the Bio report for the Project.

"Daytime" = 7:01 a.m. to 10:00 p.m.; "Nighttime" = 10:01 p.m. to 7:00 a.m.

Consistent with the City of Perris General Plan Noise Element, Implementation Measure V.A.1, Project operational noise levels at nearest sensitive receiver locations cannot exceed 60 dBA CNEL. The CNEL metric is typically used to describe 24-hour transportation-related noise levels, however, the City of Perris General Plan Noise Element requires new industrial land use such as the Project to demonstrate compliance at any noise-sensitive land use within 160 feet of the Project site. Table 9-5 includes the evening and nighttime adjustments made to the operational noise levels during the applicable hours to convert the worst-case hourly operational noise levels ( $L_{eq}$ ) to 24-hour CNELs.

Table 9-5 indicates that the 24-hour noise levels associated with the IDI Rider 2 and 4 High Cube Warehouses and Perris Valley Storm Drain Channel Improvement Project at the nearest receiver locations are expected to range from 42.8 to 58.3 dBA CNEL. The Project-related operational noise levels shown on Table 9-5 will satisfy the City of Perris 60 dBA CNEL exterior noise level standards at the nearest sensitive receiver locations.





	Project	Operational Noise	e Levels	Exterior Noise	Noise Level
Receiver Location <sup>1</sup>	Daytime (dBA L <sub>eq</sub> )	Nighttime (dBA L <sub>eq</sub> )	24-Hour (CNEL)	Level Standards (CNEL) <sup>3</sup>	Standards Exceeded? <sup>4</sup>
R1	36.2	36.2	42.8	60	No
R2	45.4	45.4	52.1	60	No
R3	39.2	39.2	45.9	60	No
R4	44.6	44.6	51.3	60	No
R5	41.1	41.1	47.8	60	No
R6	47.3	47.3	54.0	60	No
R7	51.6	51.6	58.3	60	No
R8	36.1	36.1	42.8	60	No
BIO-1	49.5	49.5	56.2	_5	_5
BIO-2	47.0	47.0	53.7	_5	_5

#### TABLE 9-5: OPERATIONAL NOISE LEVEL COMPLIANCE (CNEL)

<sup>1</sup> See Exhibit 8-A for the receiver locations.

<sup>2</sup> Proposed Project operational noise level calculations are included in Appendix 9.1.

<sup>3</sup> City of Perris General Plan Noise Element Implementation Measure V.A.1

<sup>4</sup> Do the estimated Project operational noise source activities exceed the noise level standards?

<sup>5</sup> Receiver location and Project operational noise levels provided for informational purposes. Potential impacts analyzed in the Bio report for the Project.

"Daytime" = 7:01 a.m. to 10:00 p.m.; "Nighttime" = 10:01 p.m. to 7:00 a.m.

### 9.6 PROJECT OPERATIONAL NOISE LEVEL INCREASES

To describe the Project operational noise level increases, the Project operational noise levels are combined with the existing ambient noise levels measurements for the nearest receiver locations potentially impacted by Project operational noise sources. Since the units used to measure noise, decibels (dB), are logarithmic units, the Project-operational and existing ambient noise levels cannot be combined using standard arithmetic equations. (14) Instead, they must be logarithmically added using the following base equation:

 $SPL_{Total} = 10log_{10}[10^{SPL1/10} + 10^{SPL2/10} + \dots 10^{SPLn/10}]$ 

Where "SPL1," "SPL2," etc. are equal to the sound pressure levels being combined, or in this case, the Project-operational and existing ambient noise levels. The difference between the combined Project and ambient noise levels describe the Project noise level increases to the existing ambient noise environment. Noise levels that would be experienced at receiver locations when Project-source noise is added to the ambient daytime and nighttime conditions are presented on Tables 9-6 and 9-7.

As indicated on Tables 9-6 and 9-7, the Project will contribute a daytime operational noise level increase of up to 0.6 dBA  $L_{eq}$  and a nighttime operational noise level increase of up to 3.3 dBA  $L_{eq}$  at the sensitive receiver locations. Since the Project-related operational noise level contributions would not exceed the significance criteria of 5 dBA when the without Project noise levels are below 60 dBA CNEL or 3 dBA when the without Project noise levels exceed 60 dBA CNEL, the increases at the sensitive receiver locations are considered *less than significant*.



Receiver Location <sup>1</sup>	Total Project Operational Noise Level <sup>2</sup>	Measurement Location <sup>3</sup>	Reference Ambient Noise Levels <sup>4</sup>	Combined Project and Ambient⁵	Project Increase <sup>6</sup>	Increase Criteria <sup>7</sup>	Increase Criteria Exceeded?
R1	36.2	L1	62.9	62.9	0.0	3.0	No
R2	45.4	L2	53.9	54.5	0.6	5.0	No
R3	39.2	L3	56.1	56.2	0.1	5.0	No
R4	44.6	L4	55.9	56.2	0.3	5.0	No
R5	41.1	L5	55.6	55.8	0.2	5.0	No
R6	47.3	L6	63.7	63.8	0.1	3.0	No
R7	51.6	L7	67.7	67.8	0.1	3.0	No
R8	36.1	L8	67.6	67.6	0.0	3.0	No

TABLE 9-6: PROJECT DAYTIME NOISE LEVEL CONTRIBUTIONS (DBA LEQ)

<sup>1</sup> See Exhibit 8-A for the receiver locations.

<sup>2</sup> Total Project daytime operational noise levels as shown on Table 9-2.

<sup>3</sup> Reference noise level measurement locations as shown on Exhibit 5-A.

<sup>4</sup> Observed daytime ambient noise levels as shown on Table 5-1.

<sup>5</sup> Represents the combined ambient conditions plus the Project activities.

<sup>6</sup> The noise level increase expected with the addition of the proposed Project activities.

<sup>7</sup> Significance increase criteria as shown on Table 4-1.

#### TABLE 9-7: PROJECT NIGHTTIME NOISE LEVEL CONTRIBUTIONS (DBA LEQ)

Receiver Location <sup>1</sup>	Total Project Operational Noise Level <sup>2</sup>	Measurement Location <sup>3</sup>	Reference Ambient Noise Levels <sup>4</sup>	Combined Project and Ambient <sup>5</sup>	Project Increase <sup>6</sup>	Increase Criteria <sup>7</sup>	Increase Criteria Exceeded?
R1	36.2	L1	59.2	59.2	0.0	5.0	No
R2	45.4	L2	44.9	48.2	3.3	5.0	No
R3	39.2	L3	55.3	55.4	0.1	5.0	No
R4	44.6	L4	48.6	50.1	1.5	5.0	No
R5	41.1	L5	48.0	48.8	0.8	5.0	No
R6	47.3	L6	59.0	59.3	0.3	5.0	No
R7	49.5	L7	63.4	63.6	0.2	3.0	No
R8	47.0	L8	63.7	63.8	0.1	3.0	No

 $^{\rm 1}$  See Exhibit 8-A for the receiver locations.

<sup>2</sup> Total Project nighttime operational noise levels as shown on Table 9-3.

<sup>3</sup> Reference noise level measurement locations as shown on Exhibit 5-A.

<sup>4</sup> Observed daytime ambient noise levels as shown on Table 5-1.

<sup>5</sup> Represents the combined ambient conditions plus the Project activities.

<sup>6</sup> The noise level increase expected with the addition of the proposed Project activities.

<sup>7</sup> Significance increase criteria as shown on Table 4-1.



### 9.5 OPERATIONAL VIBRATION IMPACTS

To assess the potential vibration impacts from truck haul trips associated with operational activities the FTA *Transit Noise and Vibration Impact Assessment Manual* maximum-acceptable vibration criteria of 78 VdB for daytime residential uses in buildings where people normally sleep is used. However, trucks rarely create vibration that exceeds 70 VdB (unless there are bumps due to frequent potholes in the road). (4 p. 113) Trucks transiting on site will be travelling at very low speeds so it is expected that truck vibration impacts at the nearest homes will satisfy the maximum-acceptable vibration criteria of 78 VdB for daytime for residential uses, and therefore, will be *less than significant*.



# **10 CONSTRUCTION IMPACTS**

Construction-related noise impacts are expected to create short-term and intermittent high-level noise conditions at the nearest noise sensitive receivers surrounding the Project site. Using sample reference noise levels to represent the planned construction activities of IDI Rider 2 and 4 High Cube Warehouses and Perris Valley Storm Drain Channel Improvement Project site, this section analyzes the potential impacts resulting from the construction of the Rider 2 and 4 Warehouse as shown on Exhibit 10-A and the PVSD Channel Improvements as shown on Exhibit 10-B.

## **10.1** CONSTRUCTION NOISE LEVELS

Noise generated by the Project construction equipment will include a combination of trucks, power tools, concrete mixers, and portable generators that when operating at the project site boundaries closest the nearest receiver locations can reach high levels. The number and mix of construction equipment are expected to occur in the stages outlined below based on the *IDI Rider 2 and 4 High Cube Warehouses and Perris Valley Storm Drain Channel Improvement Project Air Quality Impact Analysis* prepared by Urban Crossroads, Inc. (3)

### 10.1.1 RIDER 2 AND 4 WAREHOUSE CONSTRUCTION

Project construction will consist of two Warehouse buildings totaling approximately 1,352,736 square feet (sf) (Rider 2 is to consist of approximately 804,759 sf and Rider 4 is to consist of approximately 547,977) sf of Warehouse use (without cold storage) in the following stages:

- Site Preparation
- Grading
- Building Construction
- Paving
- Architectural Coating

### **10.1.2 PVSD CHANNEL IMPROVEMENTS**

The proposed improvements to the PVSD Channel entail Phase 1 of a larger channel improvement project to accommodate 100-year storm flows, which would ultimately extend north to just past Ramona Expressway and south of Rider Street. The PVSD Channel would be earthen except in the vicinity of the engineered drop structure and Rider Street bridge, where it would have concrete side slopes. Erosion protection features would be installed, and existing storm drain inlets that tie into the PVSD Channel would be reconstructed as part of the Project. The proposed widening of the PVSD Channel would also require replacing the existing bridge with a longer bridge over the Channel.



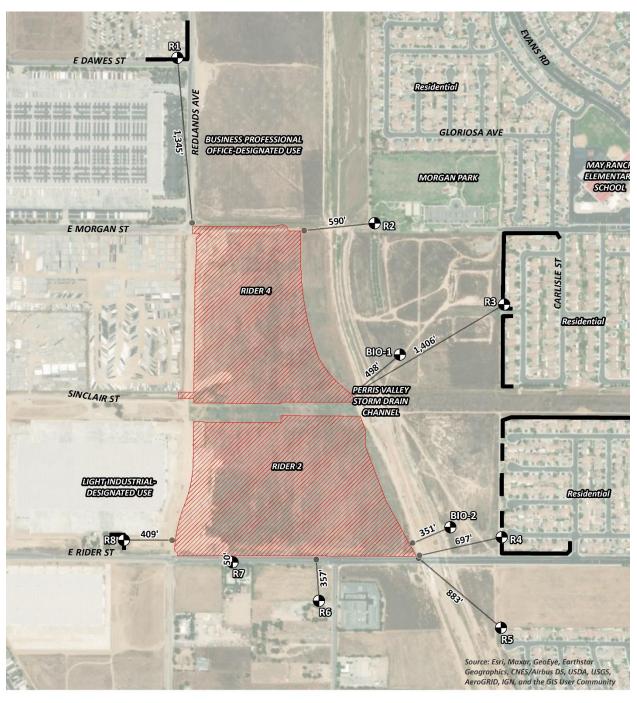


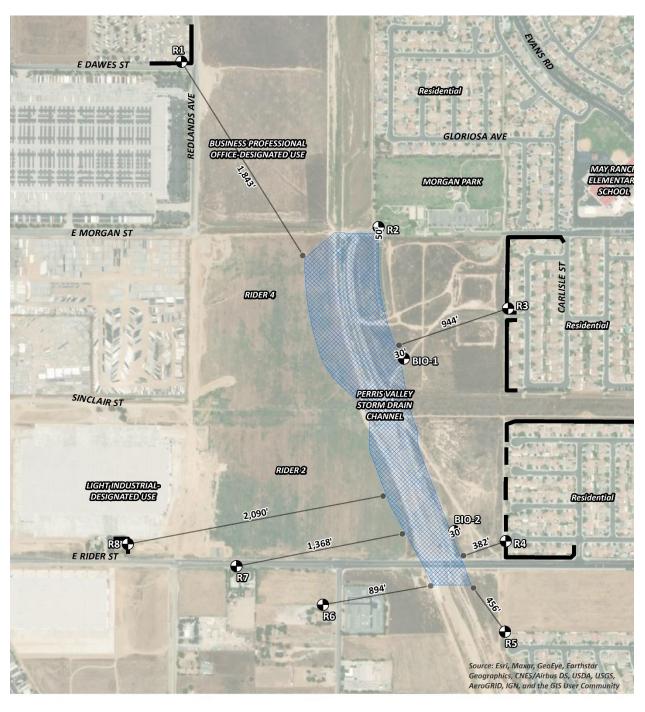
EXHIBIT 10-A: RIDER 2 AND 4 WAREHOUSE CONSTRUCTION ACTIVITIES



Rider 2 and 4 Construction

Existing 6-Foot High Barrier — Distance from receiver to construction activity (in feet)

N



**EXHIBIT 10-B: PVSD CHANNEL IMPROVEMENTS CONSTRUCTION ACTIVITIES** 

#### **LEGEND:** Ð N

**Receiver Locations** 

PVSD Channel Improvements

Existing 6-Foot High Barrier — Distance from receiver to construction activity (in feet)



The bridge would consist of pre-cast (i.e., prefabricated in a shop plant and assembled at the job site) pre-stressed (PC/PS) voided concrete slab. No pile driving is expected as part of the Project construction activities. However, the PVSD Channel bridge construction may consist of one or two stages. With one stage of construction the entire bridge will be replaced thereby eliminating through traffic. Two stages of construction will take longer and permit through traffic during construction. The staging of bridge construction shown below only changes the duration of the potential noise level impacts and does not affect the Project construction noise levels at the nearest receiver locations.

• PVSD Channel Excavation

•

- Rider Bridge Construction
  - Grubbing/Land Clearing
  - Grading/Excavation/Removing Existing Bridge
  - Bridge Construction
  - Drainage/Utilities/Sub-Grade
  - o Paving

### **10.2** CONSTRUCTION REFERENCE NOISE LEVELS

This construction noise analysis was prepared using reference construction equipment noise levels from the Federal Highway Administration (FHWA) published the Roadway Construction Noise Model (RCNM), which includes a national database of construction equipment reference noise emission levels. (24) The RCNM equipment database, provides a comprehensive list of the noise generating characteristics for specific types of construction equipment including reference L<sub>max</sub> noise levels measured at 50 feet.

Noise levels generated by heavy construction equipment can range from approximately 68 dBA to more than 85 dBA  $L_{max}$  when measured at 50 feet. However, these noise levels diminish with distance from the construction site at a rate of 6 dBA per doubling of distance. For example, a noise level of 85 dBA  $L_{max}$  measured at 50 feet from the noise source to the receiver would be reduced to 79 dBA  $L_{max}$  at 100 feet from the source to the receiver, and would be further reduced to 73 dBA  $L_{max}$  at 200 feet from the source to the receiver.

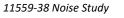
Table 10-1 provides a summary of the construction reference noise levels expected with the Rider 2 and 4 warehouse construction activities. Table 10-2 presents a summary of the PVSD Channel Improvement construction reference noise levels.



Construction Stage	Construction Activity	Reference Noise Level @ 50 Feet (dBA L <sub>max</sub> ) <sup>1</sup>	Highest Reference Noise Level (dBA L <sub>max</sub> )	
Site	Crawler Tractors	82	82	
Preparation	Rubber Tired Dozers	79	82	
	Crawler Tractors	82		
	Excavators	81		
Grading	Graders	85	85	
	Rubber Tired Dozers	79	-	
	Graders	85	-	
	Cranes	81		
	Crawler Tractors	82	1	
-	Crawler Tractors82Excavators81Graders85Rubber Tired Dozers79Graders85Cranes81Crawler Tractors82Rubber Tired Dozers79Graders81Cranes81Crawler Tractors82Rubber Tired Dozers79Generator Sets73Welders74Pavers77	82		
Construction	Generator Sets	73		
	Welders	74		
	Pavers	77		
Paving	Hauling Trucks	76	80	
	Rollers	80		
Arch. Coating	Air Compressors	78	78	

TABLE 10-1: RIDER 2 AND 4 WAREHOUSE CONSTRUCTION REFERENCE NOISE LEVELS

<sup>1</sup> FHWA's Roadway Construction Noise Model, January 2006.





Construction Stage	Construction Activity	Reference Noise Level @ 50 Feet (dBA L <sub>max</sub> ) <sup>1</sup>	Highest Reference Noise Level (dBA L <sub>max</sub> )	
Excavation	Graders	85	85	
	Crawler Tractors	82		
Grubbing/ Land Clearing	Excavators	81	82	
Land cleaning	Hauling Trucks	Level @ 50 Feet (dBA Lmax) <sup>1</sup> 85 82		
	Crawler Tractors	82		
Grading/	Scrapers	84	0.4	
Excavation	Backhoes	78	84	
	Hauling Trucks	76		
	Drilling Rig	79		
	Cranes	81		
Bridge Construction	Excavators	81	85	
construction	Compactors	83		
	Graders	85		
Drainage/	Crawler Tractors	82	00	
Utilities	Backhoes	78	82	
	Pavers	77	80	
Paving	Hauling Trucks	76		
	Rollers	80		

<sup>1</sup> FHWA's Roadway Construction Noise Model, January 2006.

### **10.3** CONSTRUCTION NOISE ANALYSIS

Using the reference RCNM  $L_{max}$  construction equipment noise levels, calculations of the Project construction noise levels at the nearest receiver locations were completed. Tables 10-3 and 10-4 provide a summary of the noise levels by construction stage at the nearest receiver locations. The noise analysis shows that the Project construction activities are expected to range from 52.6 to 85.0 dBA  $L_{max}$  at the nearest receiver locations. Appendix 10.1 includes the detailed noise model inputs used to estimate the Project construction noise levels presented in this section.



Receiver Location <sup>1</sup>	Distance to	Construction Noise Levels (dBA L <sub>max</sub> )								
	Receiver (Feet)	Site Preparation	Grading	Building Construction	Paving	Arch. Coating	Highest Levels <sup>2</sup>			
R1	1,345'	53.4	56.4	53.4	51.4	49.4	56.4			
R2	590'	60.6	63.6	60.6	58.6	56.6	63.6			
R3	1,406'	53.0	56.0	53.0	51.0	49.0	56.0			
R4	697'	59.1	62.1	59.1	57.1	55.1	62.1			
R5	883'	57.1	60.1	57.1	55.1	53.1	60.1			
R6	357'	64.9	67.9	64.9	62.9	60.9	67.9			
R7	50'	82.0	85.0	82.0	80.0	78.0	85.0			
R8	409'	63.7	66.7	63.7	61.7	59.7	66.7			
BIO-1	498'	62.0	65.0	62.0	60.0	58.0	65.0			
BIO-2	351'	65.1	68.1	65.1	63.1	61.1	68.1			

TABLE 10-3: RIDER 2 AND 4 WAREHOUSE CONSTRUCTION NOISE LEVEL SUMMARY

<sup>1</sup>Noise receiver locations are shown on Exhibit 10-A.

<sup>2</sup> Construction noise level calculations based on distance from the project site boundaries (construction activity area) to the nearest receiver locations.

#### TABLE 10-4: PVSD CHANNEL IMPROVEMENTS CONSTRUCTION NOISE LEVEL SUMMARY

	Distance to	Construction Noise Levels (dBA L <sub>max</sub> )								
Receiver Location <sup>1</sup>	Receiver (Feet)	Excavation	Grubbing/ Land Clearing	Grading/ Excavation	Bridge Construction	Drainage/ Utilities	Paving	Highest Levels <sup>2</sup>		
R1	1,843'	53.7	50.7	52.7	53.7	50.7	48.7	53.7		
R2	50'	85.0	82.0	84.0	85.0	82.0	80.0	85.0		
R3	944'	59.5	56.5	58.5	59.5	56.5	54.5	59.5		
R4	382'	67.3	64.3	66.3	67.3	64.3	62.3	67.3		
R5	456'	65.8	62.8	64.8	65.8	62.8	60.8	65.8		
R6	894'	60.0	57.0	59.0	60.0	57.0	55.0	60.0		
R7	1,368'	56.3	53.3	55.3	56.3	53.3	51.3	56.3		
R8	2,090'	52.6	49.6	51.6	52.6	49.6	47.6	52.6		
BIO-1	30'	89.4	86.4	88.4	89.4	86.4	84.4	89.4		
BIO-2	30'	89.4	86.4	88.4	89.4	86.4	84.4	89.4		

<sup>1</sup>Noise receiver locations are shown on Exhibit 10-B.

<sup>2</sup> Construction noise level calculations based on distance from the project site boundaries (construction activity area) to the nearest receiver locations.



### **10.4** CONSTRUCTION NOISE LEVEL COMPLIANCE

The construction noise analysis shows that the highest construction noise levels will occur when equipment is operating at the closest point from the edge of the Project construction boundary to each of the nearest receiver locations. As shown on Table 10-5, the highest unmitigated construction noise levels are expected to range from 52.6 to 85.0 dBA L<sub>max</sub>.

	Highest Construction Noise Levels (dBA L <sub>max</sub> )								
Receiver Location <sup>1</sup>	Rider 2 and 4PVSD ChannelWarehouseImprovements		Threshold <sup>3</sup>	Threshold Exceeded? <sup>4</sup>					
R1	56.4	53.7	80	No					
R2	63.6	85.0	80	Yes					
R3	56.0	59.5	80	No					
R4	62.1	67.3	80	No					
R5	60.1	65.8	80	No					
R6	67.9	60.0	80	No					
R7	85.0	56.3	80	Yes					
R8	66.7	52.6	80	No					
BIO-1	65.0	89.4	_5	_5					
BIO-2	68.1	89.4	_5	_5					

### TABLE 10-5: CONSTRUCTION NOISE LEVEL COMPLIANCE

<sup>1</sup>Noise receiver locations are shown on Exhibits 10-A and 10-B.

 $^2$  Highest construction noise level calculations based on distance from the construction noise source activity to the nearest receiver locations as shown on Table 10-3 and 10-4.

<sup>3</sup> Construction noise level thresholds as shown on Table 4-1.

<sup>4</sup> Do the estimated Project construction noise levels exceed the construction noise level threshold?

<sup>5</sup> Receiver location and Project construction noise levels provided for informational purposes. Potential impacts analyzed in the Bio report for the Project.

The construction noise analysis shows that receiver locations R2 and R7 will exceed the City of Perris Municipal Code 80 dBA L<sub>max</sub> significance threshold for construction activity. Therefore, the unmitigated noise impact due to Project construction activities is considered *potentially significant*. All other receiver locations will experience *less than significant* construction noise levels.

Located 50 feet northeast of the PVSD Channel Improvement area, receiver location R2 is used to describe Morgan Park. Receiver location R7 describes the residential property line at 475 E Rider Street located 50 feet south of the Rider 2 construction boundary. While the analysis shows that receiver locations R2 and R7 will exceed the City of Perris 80 dBA L<sub>max</sub> construction significance threshold, neither R2 or R7 represent private outdoor living areas or areas of frequent human use. However, since receiver locations R2 and R7 will experience *potentially significant* construction noise level impacts, the following temporary construction noise mitigation measure is required: • Provide a minimum 100-foot buffer zone separating large construction equipment (e.g. dozers, graders, scrapers, etc.) from receiver locations R2 and R7.

Using the drop-off rate of 6 dBA per doubling of distance, the highest construction equipment reference noise level noise levels associated with large construction equipment of 85 dBA L<sub>max</sub> at 50 feet would be reduced to 79 dBA L<sub>max</sub> at 100 feet. With the required minimum 100-foot buffer zone separating large construction equipment (e.g. dozers, graders, scrapers, etc.) from receiver locations R2 and R7, the Project construction noise levels will satisfy the City of Perris 80 dBA L<sub>max</sub> construction noise level threshold. Therefore, the Project construction noise levels are considered *less than significant* with mitigation.

## **10.5** Typical Construction Vibration Impacts

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods used, distance to the affected structures and soil type. It is expected that ground-borne vibration from Project construction activities would cause only intermittent, localized intrusion. The proposed Project's construction activities most likely to cause vibration impacts are:

- Heavy Construction Equipment: Although all heavy mobile construction equipment has the potential of causing at least some perceptible vibration while operating close to buildings, the vibration is usually short-term and is not of sufficient magnitude to cause building damage.
- Trucks: Trucks hauling building materials to construction sites can be sources of vibration intrusion if the haul routes pass through residential neighborhoods on streets with bumps or potholes. Repairing the bumps and potholes generally eliminates the problem.

Ground-borne vibration levels resulting from construction activities occurring within the Project site were estimated by data published by the Federal Transit Administration. Construction activities that would have the potential to generate low levels of ground-borne vibration within the Project site include grading. Using the vibration source level of construction equipment provided on Table 6-7 and the construction vibration assessment methodology published by the FTA, it is possible to estimate the Project vibration impacts. Tables 10-6 and 10-7 presents the expected Project related vibration levels at the nearest receiver locations.

Based on the reference vibration levels provided by the FTA, a large bulldozer represents the peak source of vibration with a reference level of 87 VdB at 25 feet. Construction vibration levels are expected to range from 29.3 to 78.0 VdB at residential receiver locations. Using the construction vibration assessment methods provided by the FTA, Project construction vibration levels would not exceed the FTA 78 VdB threshold at all sensitive residential receiver locations, and therefore, is considered a *less than significant* impact. Further, vibration levels at the site of the closest sensitive receiver are unlikely to be sustained during the entire construction period but will occur rather only during the times that heavy construction equipment is operating at the Project site perimeter.



	Distance to		Receiver V					
Receiver Location <sup>1</sup>	Construction Activity (Feet)	Small Bulldozer	Jack- hammer	Loaded Trucks	Large Bulldozer	Highest Vibration Levels	Threshold VdB <sup>3</sup>	Threshold Exceeded? <sup>4</sup>
R1	1,345'	6.1	27.1	34.1	35.1	35.1	78	No
R2	590'	16.8	37.8	44.8	45.8	45.8	78	No
R3	1,406'	5.5	26.5	33.5	34.5	34.5	78	No
R4	697'	14.6	35.6	42.6	43.6	43.6	78	No
R5	883'	11.6	32.6	39.6	40.6	40.6	78	No
R6	357'	23.4	44.4	51.4	52.4	52.4	78	No
R7	50'	49.0	70.0	77.0	78.0	78.0	78	No
R8	409'	21.6	42.6	49.6	50.6	50.6	78	No
BIO-1	498'	19.0	40.0	47.0	48.0	48.0	_5	_5
BIO-2	351'	23.6	44.6	51.6	52.6	52.6	_5	_5

TABLE 10-6: RIDER 2 AND 4 WAREHOUSE CONSTRUCTION VIBRATION LEVELS

<sup>1</sup>Noise receiver locations are shown on Exhibit 10-A.

<sup>2</sup> Based on the Vibration Source Levels of Construction Equipment included on Table 6-7.

<sup>3</sup> FTA Transit Noise and Vibration Impact Assessment maximum acceptable vibration criteria as shown on Table 4-2.

<sup>4</sup> Does the vibration level exceed the maximum acceptable vibration threshold?

<sup>5</sup> Receiver location and Project construction noise levels provided for informational purposes. Potential impacts analyzed in the Bio report for the Project.

#### TABLE 10-7: PVSD CHANNEL IMPROVEMENTS CONSTRUCTION VIBRATION LEVELS

	Distance to		Receiver \					
Receiver Location <sup>1</sup>	Construction Activity (Feet)	Small Bulldozer	Jack- hammer	Loaded Trucks	Large Bulldozer	Highest Vibration Levels	Threshold VdB <sup>3</sup>	Threshold Exceeded? <sup>4</sup>
R1	1,843'	2.0	23.0	30.0	31.0	31.0	78	No
R2	50'	49.0	70.0	77.0	78.0	78.0	78	No
R3	944'	10.7	31.7	38.7	39.7	39.7	78	No
R4	382'	22.5	43.5	50.5	51.5	51.5	78	No
R5	456'	20.2	41.2	48.2	49.2	49.2	78	No
R6	894'	11.4	32.4	39.4	40.4	40.4	78	No
R7	1,368'	5.9	26.9	33.9	34.9	34.9	78	No
R8	2,090'	0.3	21.3	28.3	29.3	29.3	78	No
BIO-1	30'	55.6	76.6	83.6	84.6	84.6	_5	_5
BIO-2	30'	55.6	76.6	83.6	84.6	84.6	_5	_5

<sup>1</sup>Noise receiver locations are shown on Exhibit 10-A.

<sup>2</sup> Based on the Vibration Source Levels of Construction Equipment included on Table 6-7.

<sup>3</sup> FTA Transit Noise and Vibration Impact Assessment maximum acceptable vibration criteria as shown on Table 4-2.

<sup>4</sup> Does the vibration level exceed the maximum acceptable vibration threshold?

<sup>5</sup> Receiver location and Project construction noise levels provided for informational purposes. Potential impacts analyzed in the Bio report for the Project.



# **11 REFERENCES**

- 1. City of Perris. Perris Valley Commerce Center Specific Plan Environmental Impact Report. July 2011.
- 2. State of California. California Environmental Quality Act, Appendix G. 2019.
- 3. **Urban Crossroads, Inc.** *IDI Rider 2 and 4 High Cube Warehouse and Perris Valley Storm Drain Channel Improvement Project Air Quality Impact Analysis.* July 2020.
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- 5. City of Perris. Zoning Map. October 2016.
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- 7. State of California. California Green Building Standards Code. 2019.
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- 9. —. Municipal Code, Chapter 7.34 Noise Control.
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- 12. American National Standards Institute (ANSI). Specification for Sound Level Meters ANSI S1.4-2014/IEC 61672-1:2013.
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- 14. U.S. Department of Transportation, Federal Highway Administration. FHWA Highway Traffic Noise Prediction Model. December 1978. FHWA-RD-77-108.
- 15. California Department of Transportation Environmental Program, Office of Environmental Engineering. Use of California Vehicle Noise Reference Energy Mean Emission Levels (Calveno REMELs) in FHWA Highway Traffic Noise Prediction. September 1995. TAN 95-03.
- 16. **California Department of Transportation.** *Traffic Noise Attenuation as a Function of Ground and Vegetation Final Report.* June 1995. FHWA/CA/TL-95/23.
- 17. **Urban Crossroads, Inc.** *IDI Rider 2 and 4 High Cube Warehouse and Perris Valley Storm Drain Channel Improvement Project Traffic Impact Analysis.* July 2020.
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- 20. U.S. Department of Transportation, Federal Highway Administration, Office of Environment and Planning, Noise and Air Quality Branch. *Highway Traffic Noise Analysis and Abatement Policy and Guidance*. December 2011.
- 21. California Department of Transportation. *Highway Design Manual, Chapter 1100 Highway Traffic Noise Abatement*. November 2017.
- 22. U.S. Department of Transportation, Federal Highway Administration, Office of Environment and Planning. FHWA Roadway Construction Noise Model. January, 2006.





# 12 CERTIFICATION

The contents of this noise study report represent an accurate depiction of the noise environment and impacts associated with the proposed IDI Rider 2 and 4 High Cube Warehouses and Perris Valley Storm Drain Channel Improvement Project. The information contained in this noise study report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at (949) 336-5979.

Bill Lawson, P.E., INCE Principal URBAN CROSSROADS, INC. 260 E. Baker St., Suite 200 Costa Mesa, CA 92626 (949) 336-5979 blawson@urbanxroads.com



### EDUCATION

Master of Science in Civil and Environmental Engineering California Polytechnic State University, San Luis Obispo • December, 1993

Bachelor of Science in City and Regional Planning California Polytechnic State University, San Luis Obispo • June, 1992

### **PROFESSIONAL REGISTRATIONS**

PE – Registered Professional Traffic Engineer – TR 2537 • January, 2009
AICP – American Institute of Certified Planners – 013011 • June, 1997–January 1, 2012
PTP – Professional Transportation Planner • May, 2007 – May, 2013
INCE – Institute of Noise Control Engineering • March, 2004

### **PROFESSIONAL AFFILIATIONS**

ASA – Acoustical Society of America ITE – Institute of Transportation Engineers

### **PROFESSIONAL CERTIFICATIONS**

Certified Acoustical Consultant – County of Orange • February, 2011 FHWA-NHI-142051 Highway Traffic Noise Certificate of Training • February, 2013





APPENDIX 3.1:

CITY OF PERRIS MUNICIPAL CODE





#### Sec. 7.34.010. - Declaration of policy.

Excessive noise levels are detrimental to the health and safety of individuals. Noise is considered a public nuisance, and the city discourages unnecessary, excessive or annoying noises from all sources. Creating, maintaining, causing, or allowing to be created, caused or maintained, any noise or vibration in a manner prohibited by the provisions of the ordinance codified in this chapter is a public nuisance and shall be punishable as a misdemeanor.

(Code 1972, § 7.34.010; Ord. No. 1082, § 2(part), 2000)

#### Sec. 7.34.020. - Definitions.

(a) *General.* The following words, terms and phrases, when used in this chapter, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Ambient noise means the all-encompassing noise associated with a given environment usually being composed of sounds from many sources near and far. For the purpose of this chapter, ambient noise level is the level obtained when the noise level is averaged over a period of five minutes without inclusion of noise from isolated identifiable sources at the location and time of day near that at which a comparison is to be made.

*Decibel (dB)* means an intensity unit which denotes the ratio between two quantities which are proportional to power; the number of decibels corresponding to the ratio is ten times the common logarithm of this ratio.

Sound amplifying equipment means any machine or device for the amplification of the human voice, music or any other sound. The term "sound amplifying equipment" does not include standard vehicle radios when used and heard only by the occupants of the vehicle in which the vehicle radio is installed. The term "sound amplifying equipment," as used in this chapter, does not include warning devices on any vehicle used only for traffic safety purposes and shall not include communications equipment used by public or private utilities when restoring utility service following a public emergency or when doing work required to protect person or property from an imminent exposure to danger.

*Sound level* (noise level) in decibels is the value of a sound measurement using the "A" weighting network of a sound level meter. Slow response of the sound level meter needle shall be used except where the sound is impulsive or rapidly varying in nature, in which case, fast response shall be used.

*Sound level meter* means an instrument, including a microphone, an amplifier, an output meter and frequency weighting networks, for the measurement of sound levels, which satisfies the pertinent requirements in American National Standards Institute's specification S1.4-1971 or the most recent revision for type S-2A general purpose sound level meters.

(b) *Supplementary definitions of technical terms.* Definitions of technical terms not defined in this section shall be obtained from the American National Standards Institute's Acoustical Terminology S1-1971 or the most recent revision thereof.

(Code 1972, § 7.34.020; Ord. No. 1082, § 2(part), 2000)

Sec. 7.34.030. - Measurement methods.

- (a) Sound shall be measured with a sound level meter as defined in section 7.34.020.
- (b) Unless otherwise provided, outdoor measurements shall be taken with the microphone located at any point

on the property line of the noise source but no closer than five feet from any wall or vertical obstruction and three to five feet above ground level whenever possible.

- (c) Unless otherwise provided, indoor measurements shall be taken inside the structure with the microphone located at any point as follows:
  - (1) No less than three feet above floor level;
  - (2) No less than five feet from any wall or vertical obstruction; and
  - (3) Not under common possession and control with the building or portion of the building from which the sound is emanating.

(Code 1972, § 7.34.030; Ord. No. 1082, § 2(part), 2000)

Sec. 7.34.040. - Sound amplification.

No person shall amplify sound using sound amplifying equipment contrary to any of the following:

- (1) The only amplified sound permitted shall be either music or the human voice, or both.
- (2) The volume of amplified sound shall not exceed the noise levels set forth in this subsection when measured outdoors at or beyond the property line of the property from which the sound emanates.

Time Period	Maximum Noise Level
10:01 p.m.—7:00 a.m.	60 dBA
7:01 a.m.—10:00 p.m.	80 dBA

### (Code 1972, § 7.34.040; Ord. No. 1082, § 2(part), 2000)

Sec. 7.34.050. - General prohibition.

- (a) It unlawful for any person to willfully make, cause or suffer, or permit to be made or caused, any loud excessive or offensive noises or sounds which unreasonably disturb the peace and quiet of any residential neighborhood or which are physically annoying to persons of ordinary sensitivity or which are so harsh, prolonged or unnatural or unusual in their use, time or place as to occasion physical discomfort to the inhabitants of the city, or any section thereof. The standards for dBA noise level in <u>section 7.34.040</u> shall apply to this section. To the extent that the noise created causes the noise level at the property line to exceed the ambient noise level by more than 1.0 decibels, it shall be presumed that the noise being created also is in violation of this section.
- (b) The characteristics and conditions which should be considered in determining whether a violation of the provisions of this section exists should include, but not be limited to, the following:
  - (1) The level of the noise;
  - (2) Whether the nature of the noise is usual or unusual;
  - (3) Whether the origin of the noise is natural or unnatural;
  - (4) The level of the ambient noise;
  - (5) The proximity of the noise to sleeping facilities;

- (6) The nature and zoning of the area from which the noise emanates and the area where it is received;
- (7) The time of day or night the noise occurs;
- (8) The duration of the noise; and
- (9) Whether the noise is recurrent, intermittent or constant.

(Code 1972, § 7.34.050; Ord. No. 1082, § 2(part), 2000)

Sec. 7.34.060. - Construction noise.

It is unlawful for any person between the hours of 7:00 p.m. of any day and 7:00 a.m. of the following day, or on a legal holiday, with the exception of Columbus Day and Washington's birthday, or on Sundays to erect, construct, demolish, excavate, alter or repair any building or structure in such a manner as to create disturbing, excessive or offensive noise.

(Code 1972, § 7.34.060; Ord. No. 1082, § 2(part), 2000)

Sec. 7.34.070. - Refuse vehicles and parking lot sweepers.

No person shall operate or permit to be operated a refuse compacting, processing or collection vehicle or parking lot sweeper between the hours of 7:00 p.m. to 7:00 a.m. in any residential area unless a permit has been applied for and granted by the city.

(Code 1972, § 7.34.070; Ord. No. 1082, § 2(part), 2000)

Sec. 7.34.080. - Disturbing, excessive, offensive noises; declaration of certain acts constituting.

The following activities, among others, are declared to cause loud, disturbing, excessive or offensive noises in violation of this section and are unlawful, namely:

- (1) *Horns, signaling devices, etc.* Unnecessary use or operation of horns, signaling devices or other similar devices on automobiles, motorcycles or any other vehicle.
- (2) *Radios, television sets, phonographs, loud speaking amplifiers and similar devices.* The use or operation of any sound production or reproduction device, radio receiving set, musical instrument, drums, phonograph, television set, loudspeakers, sound amplifier, or other similar machine or device for the producing or reproducing of sound, in such a manner as to disturb the peace, quiet or comfort of any reasonable person of normal sensitivity in any area of the city is prohibited. This provision shall not apply to any participant in a licensed parade or to any person who has been otherwise duly authorized by the city to engage in such conduct.
- (3) Animals.
  - a. The keeping or maintenance, or the permitting to be kept or maintained, upon any premises owned, occupied or controlled by any person of any animal or animals which by any frequent or long-continued noise shall cause annoyance or discomfort to a reasonable person of normal sensitiveness in the vicinity.
  - b. The noise from any such animal or animals that disturbs two or more residents residing in separate residences adjacent to any part of the property on which the subject animal or animals are kept or maintained, or three or more residents residing in separate residences in close proximity to the

property on which the subject animal or animals are kept or maintained, shall be prima facie evidence of a violation of this section.

- (4) Hospitals, schools, libraries, rest homes, long-term medical or mental care facilities. To make loud, disturbing, excessive noises adjacent to a hospital, school, library, rest home or long-term medical or mental care facility, which noise unreasonably interferes with the workings of such institutions or which disturbs or unduly annoys occupants in said institutions.
- (5) *Playing of radios on buses and trolleys.* The operation of any radio, phonograph or tape player on an urban transit bus or trolley so as to emit noise that is audible to any other person in the vehicle is prohibited.
- (6) Playing of radios, phonographs and other sound production or reproduction devices in public parks and public parking lots and streets adjacent thereto. The operation of any radio, phonograph, television set or any other sound production or reproduction device in any public park or any public parking lot, or street adjacent to such park or beach, without the prior written approval of the city manager or the administrator, in such a manner that such radio, phonograph, television set or sound production or reproduction device found in the table in section 7.34.040.
- (7) Leaf blowers.
  - a. The term "leaf blower" means any portable, hand-held or backpack, engine-powered device with a nozzle that creates a directable airstream which is capable of and intended for moving leaves and light materials.
  - b. No person shall operate a leaf blower in any residential zoned area between the hours of 7:00 p.m. and 8:00 a.m. on weekdays and 5:00 p.m. and 9:00 a.m. on weekends or on legal holidays.
  - c. No person may operate any leaf blower at a sound level in excess of 80 decibels measured at a distance of 50 feet or greater from the point of noise origin.
  - d. Leaf blowers shall be equipped with functional mufflers and an approved sound limiting device required to ensure that the leaf blower is not capable of generating a sound level exceeding any limit prescribed in this section.

(Code 1972, § 7.34.080; Ord. No. 1082, § 2(part), 2000)

Sec. 7.34.090. - Burglar alarms.

- (a) Audible burglar alarms for structures or motor vehicles are prohibited unless the operation of such burglar alarm can be terminated within 20 minutes of being activated.
- (b) Notwithstanding the requirements of this provision, any member of the county sheriff's department, Perris Division, shall have the right to take such steps as may be reasonable and necessary to disconnect any such alarm installed in any building, dwelling or motor vehicle at any time during the period of its activation. On or after 30 days from the effective date of the ordinance codified in this chapter, any building, dwelling or motor vehicle upon which a burglar alarm has been installed shall prominently display the telephone number at which communication may be made with the owner of such building, dwelling or motor vehicle.

(Code 1972, § 7.34.090; Ord. No. 1082, § 2(part), 2000)

Sec. 7.34.100. - Motor vehicles.

- (a) Off-highway.
  - (1) Except as otherwise provided for in this chapter, it shall be unlawful to operate any motor vehicle of any

type on any site, other than on a public street or highway as defined in the California Vehicle Code, in any manner so as to cause noise in excess of those noise levels permitted for on-highway motor vehicles as specified in the table for "45-mile-per-hour or less speed limits" contained in section 23130 of the California Vehicle Code and as corrected for distances set forth in subsection (a)(2) of this section.

(2) The maximum noise level as the on-highway vehicle passes may be measured at a distance of other than 50 feet from the centerline of travel, provided the measurement is further adjusted by adding algebraically the application correction as follows:

Distance (feet)	Correction (decibels)
25	-6
28	-5
32	-4
35	-3
40	-2
45	-1
50 (preferred distance)	0
56	+1
63	+2
70	+3
80	+4
90	+5
100	+6

(Code 1972, § 7.34.100; Ord. No. 1082, § 2(part), 2000)

<sup>(</sup>b) Nothing in this section shall apply to authorized emergency vehicles when being used in emergency situations including the blowing of sirens and/or horns.



APPENDIX 5.1:

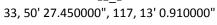
**STUDY AREA PHOTOS** 





## JN:11559 Rider 2 & 4

L1\_E





L1\_S 33, 50' 27.500000", 117, 13' 1.590000"



L2\_N 33, 50' 14.290000", 117, 12' 43.140000"



L2\_E 33, 50' 14.290000", 117, 12' 43.140000"



 $L1_N$ 33, 50' 27.500000", 117, 13' 1.320000"



L4\_N 33, 49' 52.100000", 117, 12' 31.110000"



L3\_S 33, 50' 8.580000", 117, 12' 31.190000"



L2\_S 33, 50' 14.200000", 117, 12' 43.170000"



L4\_NW 33, 49' 52.100000", 117, 12' 31.110000"



L3\_W 33, 50' 8.590000", 117, 12' 31.160000"



L3\_N 33, 50' 8.590000", 117, 12' 31.160000"



JN:11559 Rider 2 & 4

L5\_S 33, 49' 41.920000", 117, 12' 30.920000"



33, 49' 41.920000", 117, 12' 30.920000"



33, 49' 52.130000", 117, 12' 31.140000"



L4\_W

JN:11559 Rider 2 & 4



L5\_NW 33, 49' 41.920000", 117, 12' 30.920000"



33, 49' 52.130000", 117, 12' 31.140000"





L6\_S

33, 49' 43.390000", 117, 12' 43.360000"

L7\_E 33, 49' 48.060000", 117, 13' 1.240000"



L6\_W



33, 49' 43.390000", 117, 12' 43.360000"



L6\_E



L6\_N ,

84

## JN:11559 Rider 2 & 4



L7\_SW 33, 49' 48.060000", 117, 13' 1.240000"



L8\_W 33, 49' 48.080000", 117, 13' 1.270000"



APPENDIX 5.2:

**NOISE LEVEL MEASUREMENT WORKSHEETS** 





SSR

Date: ` Project:	Thursday, Jul Rider 2 and 4	<i>Date:</i> Thursday, July 19, 2018 oj <i>ect:</i> Rider 2 and 4			Location:		L1 - Located north of the Project site on Redlands Avenue adjacent to an existing RV park and industrial use.	he Project . RV park ar	ect site on Redlands k and industrial use.	lands Avei l use.	nue	Meter:	Meter: Piccolo I			JN Analyst	JN: 11559 Analyst: A. Wolfe
							Hourly L <sub>eq</sub> dBA Re	<sub>y</sub> dBA Read	eadings (unadjusted)	sted)							
( <b>A8b</b> )																	
									L.					S.	8	2.	
			T	2.(	8.			T'3	99 <sup>.</sup>	S.(	8.	+	<mark>5.4</mark> 8	29             	<b>: 59</b>	τ <sup>.</sup>	t
	6.42	:'LS :'LS	:'/S		85	85 88 88	) <sup>.</sup>			09	85	0.722 2.72 2.72 2.72		ZS		65	7 <b>.</b> 95
35.0		-															
	0	1 2	ŝ	4 5	9	7 8	6	10 11	11 12 Hour Beginning	13	14	15 16	17	18 19	20	21 22	23
Timeframe	Hour	L eq	L <sub>max</sub>	L <sub>min</sub>	11%	12%	<b>T5%</b>	%87	L25%		720%	%067	<i>1</i> 95%	%667	L eq	Adj.	Adj. L <sub>eq</sub>
	0	54.9	80.9	42.6	66.0	62.0	57.0	54.0	49.0		47.0	44.0	44.0	43.0	54.9	10.0	64.9
	1	57.3	80.8	42.5	70.0	66.0	60.0	57.0			47.0	45.0	44.0	43.0	57.3	10.0	67.3
	2	57.1	76.3	43.0	69.0	67.0	63.0	60.0			49.0	45.0	45.0	44.0	57.1	10.0	67.1
Night	ŝ	57.1	82.7	42.8	69.0	66.0	59.0	56.0			47.0	44.0	44.0	43.0	57.1	10.0	67.1
	4 1	60.2 22	82.3	44.1	72.0	69.0 69.0	66.0 65	64.0			51.0	46.0	46.0	45.0	60.2	10.0	70.2
	ъ с	64.0 58.8	94.8 87 0	44.8 46.4	72.0 69.0	69.0	65.0 63.0	63.0	55.0		50.0	46.0 48.0	46.0 48.0	45.0 47.0	64.0 58.8	10.0	74.0 68.8
	с С	58.4	82.2	43.5	0.69	67.0	63.0	60.0			48.0	45.0	45.0	44.0	58.4	0.0	58.4
	~ ∞	58.6	85.8	43.1	67.0	65.0	62.0	60.0			48.0	45.0	44.0	44.0	58.6	0.0	58.6
	6	57.0	76.9	44.1	68.0	65.0	61.0	60.0			48.0	45.0	45.0	44.0	57.0	0.0	57.0
	10	60.09	81.5	43.5	73.0	70.0	65.0	62.0			50.0	45.0	45.0	44.0	60.0	0.0	60.0
	11	61.3	77.9	43.7	73.0	72.0	68.0	65.0			51.0	46.0	45.0	44.0	61.3	0.0	61.3
Dav	12	66.7	89.8	44.0	80.0	74.0	68.0	66.0			52.0	46.0	46.0	45.0	66.7	0.0	66.7
	13	60.5	77.8	44.2	73.0	70.0	65.0	63.0			53.0	48.0	47.0	45.0	60.5	0.0	60.5
	14	58.8	76.8	45.0	70.0	68.0	65.0	62.0			52.0	47.0	47.0	46.0	58.8	0.0	58.8
	ст А	0.00 0.77	0.0/ 80.9	40.04 7.04	00.0	00.0 66.0	07.0 60.0	00.00 58.0	0.4c		0.06	47.U 46.0	40.U	45.0 45.0	0.72 0.72	0.0	0.0C
	17	64.5	95.0	43.7	70.0	67.0	62.0	59.0			49.0	46.0	45.0	44.0	64.5	0.0	64.5
	18	57.3 67 E	78.1 06 E	44.2	69.0 7E 0	66.0 72.0	62.0	60.0 6E 0	54.0		51.0	47.0 E0.0	47.0	45.0	57.3 67 E	0.0	57.3 77 E
Evening	20	65.3	84.9	44.4	75.0	73.0	71.0	69.0			58.0	51.0	49.0	46.0	65.3	5.0	70.3
	21	67.2	95.5	46.3	75.0	72.0	68.0	66.0			59.0	51.0	49.0	47.0	67.2	5.0	72.2
Night	22	59.1	82.2	43.9	70.0	68.0	63.0	61.0			49.0	46.0	46.0	45.0	59.1	10.0	69.1
0	23	56.4	79.6	43.4	68.0	66.0	61.0	58.0	-	_	47.0	45.0	45.0	44.0	56.4	10.0	66.4
Timeframe	Hour	L eq	L max	L min	11%	L2%	L5%	78%			150%	75 0 75 0	195%	%667		L <sub>eq</sub> (dBA)	
Day	Max	50.3 66.7	95.0	45.0	80.0	74.0	00.0 68.0	0.06	58.0		40.0 53.0	43.0	44.0	44.0	24-Hour	Daytime	Nighttime
Energy Average	Average	61.0		Average:	70.8	68.0	63.6	61.3			50.1	46.1	45.7	44.6			
	Min	65.3	84.9	44.4	75.0	72.0	67.0	65.0			54.0	50.0	49.0	46.0	01.4	02.7	27.2
Evening	Max	67.5	96.5	46.3	75.0	73.0	71.0	69.0	63.0		59.0	51.0	49.0	47.0	24	24-Hour CNEL (dBA)	dBA)
Energy A	Average	66.8		Average:	75.0	72.3	68.7	66.7			57.0	50.7	49.0	46.7			
Night	Min May	54.9 64.0	76.3 94.8	42.5 46.4	66.0 72.0	62.0 69.0	57.0 66.0	54.0 64.0	49.0		47.0 51.0	44.0 48.0	44.0 48.0	43.0	_	67.5	
Energy A	Energy Average	59.2		Average:	69.4	0. <i>e</i> 0 66.7	61.9	59.2			48.7	45.4	45.3	44.3		) , , )	

24-Hour Noise Level Measurement Summary

A. Wolfe		43.7	23	Adj. L <sub>eq</sub>	52.1 E0 0	51.0	53.1	53.1 56 2	59.3 59.3	51.9	45.0	49.3 50.6	48.5	62.0	48.7	54.7 53 3	51.1	50.7	54.7	62.6	49.8	56.7	<b>)35./</b>		Nighttime	0 77		BA)		
Analyst:		8. <mark>44</mark>	21 22	Adj.	10.0	10.0	10.0	10.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	5.0	5.0	10.0	1 (dBA)	format ba -	Daytime	52 Q		24-HOUF CNEL (aBA)	55.2	)
		9.72	20 2	L eq	42.1	41.0	43.1	43.1 16 2	40.3 49.3	51.9	45.0	49.3 50.6	48.5	62.0	48.7	54.7 53 3	51.1	50.7 50.8	49.7	57.6	44.8	46.7	43./		24-Hour	C 7 7	7.20	Z4-H		
		<mark>7.94</mark>	19	%667	38.0	38.0	40.0	40.0	41.0	42.0	41.0	40.0 38 0	38.0 38.0	40.0	41.0	44.0 43.0	44.0	45.0	43.0	43.0	38.0	38.0	38.U 199%			41.6		44.U 41 7	38.0 44.0	39.4
		8.02	18	1 T	(n) (n	n) (n)	4			7	V V	7 7	, m	4	4			4 4	1 4	4	(T)	(1) (		1 (1)		7	(1)			
		<mark>2.02</mark>	17	767	40.0	38.0 38.0	40.0	40.0	42.0 45.0	43.0	42.0	39.0	40.0	41.0	42.0	45.0 45.0	45.0	46.0	44.0	44.0	40.0	39.0	39.0 1 <b>95%</b>	39.0	46.0	42.8	40.0	44.0	38.0 38.0 45.0	40.1
ואוכובו .		T'TS	15 16	%067	40.0	38.0 38.0	40.0	41.0	42.0 45.0	43.0	42.0	41.U	40.0	41.0	43.0	46.0 45 0	46.0	46.0 4F 0	45.0	44.0	40.0	40.0	40.0 190%	40.0	46.0	43.2	40.0	45.0	38.0 45.0	40.4
		<mark>7.42</mark>	14	150%	41.0	40.0	42.0	42.0 45.0	47.0	45.0	43.0	42.0 41.0	42.0	43.0	46.0	50.0 49.0	50.0	49.0	47.0	47.0	42.0	41.0	41.0	41.0	50.0	45.7	42.0	47.U 15.2	40.0	42.1
iusted)		<mark>7.84</mark>	13 13	L25%	42.0	41.0	43.0	43.0 46.0	49.0	50.0	44.0	44.0	45.0	45.0	49.0	53.0	51.0	51.0	49.0	49.0	43.0	42.0	42.U	44.0	53.0	48.2	43.0	49.0	41.0	43.2
eadings (unadjusted)	0.4	29 5.84	11 12 Hour Beginning																		_									
dBA Read		9.02	10 11 Hour	%87	43.0	42.0	45.0	44.0	52.0	55.0	47.0	47.0 510	50.0	49.0	52.0	57.0	53.0	53.0	52.0	54.0	46.0	46.0	18%	47.0	57.0	51.8	46.0	50.7	42.0	45.2
ırk. Hourly L <sub>ea</sub> dBA R		<mark>£.04</mark>	- 6	<b>T5%</b>	44.0	43.0	45.0	45.0 40.0	49.0 53.0	56.0	48.0	49.0 55 0	52.0	53.0	53.0	59.0 58.0	54.0	54.0	54.0	58.0	48.0	49.0	46.U	48.0	59.0	53.7	48.0	58.0	43.0 53.0	46.3
ot Morgan Park. Ho		0 <sup>.</sup> 57	- ∞	12%	47.0	44.0	47.0	46.0 52.0	56.0	61.0	50.0	54.0 54.0	57.0	64.0	55.0	64.0 61.0	56.0	56.0	57.0	63.0	52.0	55.0	0.12	50.0	64.0	57.8	52.0	63.U 57 2	44.0 56.0	49.1
5		6'TS	6 7	L1%	48.0 4E.0	45.0	48.0	47.0 52.0	57.0	64.0	52.0 F8.0	58.U 63 D	59.0 59.0	77.0	57.0	66.0 64 0	58.0	58.0	0.10	69.0	55.0	60.0	54.U	52.0	77.0	61.4	55.0	69.U	45.0 60.0	50.9
		£.34	ъ	L min	38.3 20.7	30.2 38.2	39.6	40.0	41.2 43.8	41.4	41.2	9.95 28.3	38.3	39.9	40.8	43.0 47 8	43.1	43.8	42.9	42.8	38.2	38.2	38.3   .	38.3	43.8		38.2	42.9	38.2 13 8	
		£.2.2	- -	۲'	ñ ñ	ñ ñ	- m	4	4.4	4:	4 6		ňm	ŝ	4	4 4	4	4	4.4	4	ŝ			36	4	Average:	ŝ	Average:		Average:
		£.51	<del>ر</del>	L <sub>max</sub>	55.6	55.5	58.5	56.0 56.0	5.05 60.5	70.0	58.0	7.21	(.1.) 69.7	86.2	61.8 	73.5 69.6	62.1	65.7 60.6	65.1	84.1	60.2	65.0	02.3	- max 58.0	86.2		60.2	84.1	53.0	0.00
		40.14	5	L <sub>eq</sub>	42.1 40 0	40.0 41.0	43.1	43.1 16 2	40.3 49.3	51.9	45.0	49.3 50.6	48.5	62.0	48.7	54.7 53.3	51.1	50.7	49.7	57.6	44.8	46.7	43.7	- eq 45.0	62.0	54.0	44.8	57.6 53.7	40.8 40.8	44.9
Rider 2 and 4		1.24	0	Hour	0 7	7 7	e	4 u	9	7	∞ 0	ۍ د 1	11	12	13	14 15	16	17	19	20	21	22	23 Hour	Min	Max	ge	Min	Max	Min	ge
Project: Rider 2 and 4	اy L <sub>ee</sub> (A8b) 7.0000 7.0000 7.00000 7.00000000000000		-	Timeframe H			Night							Dav						Evening		Night	Timeframe		Day	Energy Average	Evening	Energy Average	Night N	Energy Average

24-Hour Noise Level Measurement Summary

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							24-H	24-Hour Noise Leve	Level Mea	<b>Measurement Summary</b>	Summary							
L Pro	<i>Date:</i> Thurs <i>Project:</i> Rider	Thursday, July Rider 2 and 4	Thursday, July 19, 2018 Rider 2 and 4			Location:		L3 - Located east of the Project site adj residential homes west of Evans Road.	e Project sité t of Evans Re	L3 - Located east of the Project site adjacent to existing residential homes west of Evans Road.	existing	Meter	Meter: Piccolo I				JN: 1 Analyst: I	11559 A. Wolfe
								Hourly L eq dBA		Readings (unadjusted)	d)							
(A8	85.0																	
ר <sub>פק</sub> (di	د 70.0 65.0 60.0																	
nulv i	50.0	0		z	s 90.3	T	8 8		┼┠	<mark>9'79</mark>	<b>0</b>		<b>2</b>	9	$+ \mathbb{T}$		Ţ.93	9.65
υΗ	45.0 40.0 70.0 7	.84	42.	·E7	• <b>∠</b> ₽	.84	.94	23.	TS ES		55 •67	. <u>64</u>	<b>.02</b>	<mark>.84</mark>	TS.	'9 <del>7</del> 		
	-	0	1 2	- M	4 5	9	7 8	6	10 11	12	13 14	15	16 17	18	19	20 21	22	23
									Hour	Hour Beginning								
Timeframe		Hour	L eq	L max	L <sub>min</sub>	11%	L2%	<b>L5%</b>	78%	125%	150%	767	L95%	%667		L eq	Adj.	Adj. L <sub>eq</sub>
		0,	48.0	81.4	40.6	50.0	48.0	46.0	45.0	44.0	43.0	41.0	41.0	40.0	_	48.0	10.0	58.0
			44.1 17 8	64.5 58.8	40.5	0.22 76.0	49.0	45.0	44.0	43.0	42.0	41.0	40.0	40.0	_	44.1 17 8	10.0	54.1 52.8
Night	_	v v	42.0	0.00 61.5	39.1	49.0	46.0	45.0	44.0	43.0	42.0	40.0	40.0	40.0		43.2	10.0	53.2
	_	4	60.3	89.2	40.2	70.0	61.0	50.0	46.0	44.0	43.0	42.0	42.0	41.0	_	60.3	10.0	70.3
		ы	47.5	62.9	42.0	56.0	53.0	50.0	49.0	47.0	46.0	43.0	43.0	42.0	_	47.5	10.0	57.5
		9	48.1	64.1 C2.1	43.8	53.0	52.0	20.0	49.0	48.0	47.0	46.0	45.0	44.0	+	48.1	10.0	58.1
		~ ¤	40.8 62 0	1.20 1.20	40.9 AD A	0.66	0.50 60.0	48.U	48.U	45.0	45.0	43.0	42.0	42.0		40.8 62 D	0.0	40.8 62 0
9		ი ი	53.3	76.2	40.5	65.0	63.0 63.0	54.0	50.0	45.0	43.0	41.0	41.0	40.0		02.0 53.3	0.0	02.0 53.3
1	-	10	53.0	75.2	39.1	67.0	61.0	54.0	51.0	46.0	43.0	41.0	41.0	40.0		53.0	0.0	53.0
	~1	11	51.0	71.3	40.4	63.0	60.0	55.0	53.0	46.0	44.0	42.0	41.0	40.0		51.0	0.0	51.0
Day		12	62.6 10.0	88.9	41.9	77.0	64.0	53.0	49.0	46.0	45.0	43.0	43.0	43.0		62.6 42.0	0.0	62.6 40.0
		13	49.U 55.4	6.20 76.3	42.8 43.4	0.7c 68.0	50.0 63.0	57.0	55.0	48.0 51.0	49.0	44.U 46.0	44.0	43.U 44.0		49.U 55.4	0.0	49.0 55.4
		15	49.9	65.1	42.9	59.0	57.0	53.0	52.0	49.0	47.0	45.0	44.0	44.0		49.9	0.0	49.9
	.1	16	60.4	89.8	43.0	60.0	58.0	54.0	52.0	49.0	48.0	45.0	45.0	44.0		60.4	0.0	60.4
	<b>τη τ</b>	17	50.2 40 6	68.3 71 1	42.9	59.0	55.0	52.0	51.0	49.0	48.0	45.0	45.0	44.0		50.2 40 c	0.0	50.2 40 6
		19	51.0	68.7	42.0	50.0 61.0	60.0	0'TC	54.0	49.0	47.0	45.0	44.0	44.0		40.0 51.0	5.0	56.0
Evening		20	51.9	68.7	43.2	63.0	61.0	57.0	54.0	50.0	47.0	45.0	44.0	44.0		51.9	5.0	56.9
		21	46.2	62.0	39.1	56.0	54.0	50.0	48.0	45.0	43.0	41.0	41.0	40.0		46.2	5.0	51.2
Night	_	22 77	59.1	90.3	41.4	65.0	60.0	55.0	52.0	49.0	47.0	43.0	42.0	42.0		59.1	10.0	69.1 60.6
Timeframe		Hour	0.60	7.1.2	27.7C	0.00	0.76	0.0c	40.0 18%	0.04 125%	45.0 150%	0.24 190%	4 1.0 195%	0.04 199%		7	L (dBA)	03.0
Ċ		Min	46.8	62.1	39.1	55.0	53.0	48.0	48.0	45.0	43.0	41.0	41.0	40.0				
рау		Max	62.6	92.3	43.4	77.0	64.0	57.0	55.0	51.0	49.0	46.0	45.0	44.0		24-Hour	Daytime	Nignttime
Ē	Energy Average	ge	56.8	Av	Average:	62.5	58.7	53.1	51.2	47.3	45.7	43.5	43.0	42.3		<u>с</u> 2	56 1	С С С
Evening		Min Max	46.2 51.9	62.0 68.7	39.1 43.2	56.0 63.0	54.0 61.0	50.0	48.0 54.0	45.0	43.0	41.0	41.0 44.0	40.0		24-Ho	24-Hour CNEL (dBA)	
Ē	Energy Average	ge	50.3		Average:	60.0	58.3	54.3	52.0	48.0	45.7	43.7	43.0	42.7				
Night		Min	42.8	58.8	39.1	46.0 -0.0	45.0	44.0	44.0	43.0	42.0	40.0	40.0	40.0		4	619	
	gv Aver	Max age	60.3 55.3	91.2 Ave	Average:	70.0	61.0 52.3	48.3	52.0 46.8	49.0	47.0	46.0	45.0	44.0		•	)	
1	Dana I Giai	, 0	0.00			0.00	01:0	2.01	0.01	1.01	2.04	T						

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							24-Hour	24-Hour Noise Level		Irement	Measurement Summary							
Date: Project:	<i>Date:</i> Thursday, July 19, 2018 <i>Project:</i> Rider 2 and 4	ly 19, 2018 1			Location:		Located ea	L4 - Located east of the Project site adjacent to existing residential homes north of Rider Street.	oject site a f Rider Stre	djacent to et.	existing	Mete	Meter: Piccolo I	-			JN: Analyst:	JN: 11559 Analyst: A. Wolfe
							Ħ	Hourly L <sub>eq</sub> dBA Re	A Readings	eadings (unadjusted)	4)							
<b>A)</b>																		
( <b>dB</b> )																		
										τ.								
				+	+			$\square$		<b>S9</b>	$\square$		+	+				
	43°2	7'TÞ 0'SÞ	t.94	9.74	τ·τς 	<mark>0.64</mark>	5.84	0'75 	τ <b>.02</b>		95 	<mark>5:05</mark>	S'TS 2'67	<b>20°9</b>	<b>20:3</b>	8'TS	6'TS 	9.64
35.0	0	1	m	4	9	~	∞	9 10	11	12	13 14	15	16 17	7 18	19	20	21 22	23
	I						I		Ĭ	ginning		1				1		
i										9								
Iımejrame	Hour	L eq	L max	L min	%17		12%	L5%	% <b>8</b> 7	125%	L50%	%067	L95%		L99%	L eq	AdJ.	AaJ. L <sub>eq</sub>
	0	43.7	60.7	37.9	53.0		51.0	47.0	46.0	43.0	41.0	38.0	38.0	0.	38.0	43.7	10.0	53.7
	← (	45.0	71.5	38.7	53.0		51.0	47.0	46.0	42.0	40.0	38.0	38.0	0.0	38.0	45.0	10.0	55.0
:	5	41.2	60.5	38.5	46.0		45.0	44.0	43.0	41.0	40.0	38.0	38.0	0, 0	38.0	41.2	10.0	51.2
Night	m ₹	46.1	62.9	38.8	56.0		53.0	49.0	48.0	45.0	43.0	40.0	40.0	0.0	40.0	46.1 47 C	10.0	56.1 57.5
	4 u	47.0 50.7	03.8 60.7	40.9	0.66		0.23.U	0.1C	0.05	48.U	40.0	42.0	42.0	<u> </u>	41.U	47.0 50.7	10.01	0./0
	n u	51.1	6.90 66.9	42.9	59.0 59.0		56.0	54.0	53.0 53.0	51.0	48.0	44.0	44.0		43.U 46.0	51.1	10.0 10.0	61.1
	5	49.0	66.1	40.6	58.0	ŀ	56.0	52.0	51.0	48.0	46.0	43.0	43.0	0	42.0	49.0	0.0	49.0
	8	48.5	66.4	40.5	58.0		55.0	52.0	51.0	47.0	45.0	42.0	41.0	0	41.0	48.5	0.0	48.5
	6	55.7	82.6	40.1	63.0		57.0	53.0	50.0	47.0	45.0	42.0	41.0	0	40.0	55.7	0.0	55.7
	10	54.0	74.6	38.8	68.0		60.0	55.0	53.0	48.0	45.0	41.0	40.0	0	40.0	54.0	0.0	54.0
	11	50.1	70.7	39.8	60.0		57.0	54.0	52.0	47.0	45.0	41.0	40.0	0	40.0	50.1	0.0	50.1
Day	12	65.1 	89.5	41.1	80.0 50.0		60.0	54.0	52.0 	48.0	47.0	43.0	42.0	0,0	41.0	65.1 	0.0	65.1 -0 -
	13	50.5 56 1	66.U	43.4	59.0 65 0		57.0 61.0	54.0	53.0 55.0	50.0	48.0	45.0	45.0	0,0	44.U	50.5 56.1	0.0	50.5 56.1
	4 7 4	1.05	6.00 65.8	47.1	0.00		01.U	0.76	0.00 53.0	50.0	0.00	46.0	45.0		40.0 44.0	1.05	0.0	1.05
	16	49.7	68.4	41.4	58.0		56.0	53.0	52.0	49.0	47.0	44.0	44.0	. 0	43.0	49.7	0.0	49.7
	17	51.5	72.2	43.5	62.0		58.0	53.0	52.0	50.0	48.0	45.0	45.0	0	44.0	51.5	0.0	51.5
	18	50.6	67.4	41.8	60.0		57.0	55.0	53.0	50.0	48.0	44.0	43.0	0	42.0	50.6	0.0	50.6
	19	50.3	69.3 70 1	41.6	60.0		58.0	55.0	53.0	49.0	47.0	44.0	43.0	0.0	42.0	50.3	5.0	55.3
	21	56.7	71.2	40.1	0.69		0.0 68.0	67.0	55.0	51.0	49.0	44.0	42.0	. 0	40.0 40.0	56.7	5.0	61.7
Nicht	22	51.9	69.1	38.8	63.0		60.0	56.0	55.0	50.0	47.0	43.0	41.0	0.	40.0	51.9	10.0	61.9
ואואוור	23	49.6	76.9	35.8	59.0		56.0	51.0	50.0	46.0	43.0	35.0	35.0	0	35.0	49.6	10.0	59.6
Timeframe	Hour	L <sub>eq</sub>	L <sub>max</sub>	L <sub>min</sub>	11%		12%	L5%	%81	L25%	150%	%067	195%		%661		L <sub>eq</sub> (dBA)	
Day	Min	48.5	65.8 00 r	38.8	57.0		55.0 64.0	52.0	50.0	47.0	45.0	41.0	40.0	0.0	40.0	24-Hour	Daytime	Nighttime
	INIAX	T.CO	C.98	44.9	80.0		01.0	0.73	0.66	0.20	0.00	47.0	47.0		40.0			
	Veldge	C.0C		AVEIABE.	02.20		0.10	00.0	C.2C	40.0	40.9	45.0	40 7		42.5	54.3	55.9	48.6
Evening	Max	50.3 56.7	76.5	40.1 41.6	0.95		0.05	67.0	55.0	49.0 51.0	47.0	44.0	42.0		40.0 42.0	24-	24-Hour CNEL (dBA)	dBA)
Energy A	Average	53.8	Ą	Average:	62.7		60.7	58.3	53.3	49.7	47.7	44.0	43.0	0	41.3			
Night	Min	41.2	60.5	35.8	46.0		45.0	44.0	43.0	41.0	40.0	35.0	35.0	0	35.0			
1.19.1	Max	51.9	76.9	44.5	63.0	_	60.0	56.0	55.0	51.0	49.0	47.0	47.0	0	46.0			
Energy Average	verage	48.6	A	Average:	55.9		53.6	50.4	49.3	46.2	44.0	40.6	40.3	3	39.9			

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V Meter: Piccolo I UN: 11559	Analyst:						2 2 4 9 2 9 2 4 9 2 4 7 7 7 9 4 2 4 9	· 6t	4         15         16         17         18         19         20         21         22         23		L3U/0 L33/0 L33/0 L eq AUJ. A	41.0 40.0 40.0 44.1 10.0	41.0 41.0 41.0 44.0 10.0	41.0 41.0 40.0 42.0 42.0 42.0	42.0 42.0 42.0 40.4 10.0 40.4 10.0	46.0 45.0 45.0 50.2 10.0	48.0 48.0 47.0 50.7 10.0	46.0 46.0 45.0 49.8 0.0	45.0 45.0 45.0 48.7	45.0 45.0 44.0 55.6 0.0	44.0 43.0 55.4 0.0	43.0 43.0 42.0 51.0 0.0		46.0 46.0 45.0 57.2 0.0	45.0 44.0 43.0 49.7 0.0	44.0 43.0 50.6 0.0	0 45.0 44.0 43.0 51.1 0.0 51.1 0 44.0 43.0 52.7 0.0 52.7	44.0 43.0 42.0 50.6 5.0	44.0 44.0 43.0 50.7 5.0	42.0 41.0 40.0 48.4 5.0	42.0 41.0 40.0 50.2 10.0	46.0	L30% L33% L33% L eq (uDA)	45.0 45.0 46.0	44.6 43.7 FAO FF C	42.0 41.0 40.0 <b>54.</b>	44.0 44.0	43.3 42.7 41.7		
24-Hour Noise Level Measurement Summary L5 - Located southeast of the Project site adjacent to		Hourly L <sub>eq</sub> dBA Readings (unadjusted)					9 9 0 9'!		8 9 10 11 12 13 14	Hour Beginning	L3 % L0 % L2 %	46.0 45.0 43.0	45.0 44.0 43.0	44.0 43.0 43.0 42.0 42.0 42.0 510 780 760 750	49.0 48.0 46.0 46.0	54.0 52.0 50.0	53.0 52.0 50.0	55.0 53.0 52.0 49.0 48.0	51.0		55.0 53.0 48.0	55.0 53.0 48.0	52.0 33.0 32.0 49.0 48.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 5	58.0 55.0 51.0	53.0 49.0	54.0 52.0 49.0	60.0 55.0 52.0 49.0 47.0 62.0 56.0 54.0 49.0 47.0	56.0 54.0 49.0	54.0 53.0 49.0	52.0 51.0 47.0	54.0 51.0 48.0	52.0	51 0 125% 51 0 18 0	58.0 55.0 51.0 48.0 51.0 58.0 51.0 51.0 51.0 51.0 51.0 51.0 51.0 51	54.5 52.6 48.9	52.0 51.0 47.0	56.0 54.0 49.0	54.0 52.7 48.3	44.0 43.0 43.0 42.0 42.0 58.0 54.0 52.0 50.0 42.0	0+in 07in 01in
Location:							2 2 9	· 05 · 97	2 3 4 5 6 7		L min	39.9	40.9	23.0 39.9 45.0 64.7 41.2 52.0	42.7	44.2	46.6	64.0 44.6 57.0	44.3		42.2	42.0	0.12 43.4 81.0	44.2		42.7	68.2 42.4 63.0 71.7 41.5 65.0	41.5	42.1	39.9	39.8		Lax Lmin L1%	6.14 64.6	Average:	39.9	71.5 42.1 60.0	Average:	53.6 39.8 45.0 57.7 A5.6 51.0	10.01
<i>Date</i> : Thursdav. July 19, 2018			85.0	(A8k)	eq (0	<b>1 1 1 1 1 1 1 1 1 1</b>	<b>0</b> 20.0	42.0 44.0 40.0 44.0 44.0 44.0 44.0 44.0	0			0 44.1		Niaht 2 42.3	_		6 50.7	7 49.8	8 48.7				Day 12 04./				17 51.1 18 52.7			_	_	23 Hour	IIIIIejranie Hour Lea Min 187			Min	×	_	Night Min 42.3	

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							24-Hou	ur Noise L	evel Meas	24-Hour Noise Level Measurement Summary	ummary						
	Date: T Project: R	<i>Date:</i> Thursday, July 19, 2018 <i>oject:</i> Rider 2 and 4	ıly 19, 2018 4			Location:		south of th <sub>i</sub> an existing r	L6 - Located south of the Project site acro adjacent to an existing residential home.	L6 - Located south of the Project site across Rider Street adjacent to an existing residential home.	Street	Meter:	<i>Meter:</i> Piccolo I			JN: Analyst:	<i>JN</i> : 11559 <i>yst</i> : A. Wolfe
	85 D			-				Hourly L <sub>eq</sub> dBA		Readings (unadjusted)					-	-	
	(Aai 75.00																
	ס.00 פסיס סיס ריים ריים ריים													8.1	2		
	20.0.0 20.0 20.0 20.0 20.0 20.0 20.0 20	0.		τ.,	6.Eð 8.76	8.23	<u>('E9</u>	<b>Z.92</b>	<b>6.62</b>	.99 .99	<b>E'E9</b>	7 <sup>-</sup> E9	<b>t</b> .100	6.09 2.09 2.09	<b></b>	<b>5.8</b> 2	£.08
	н 40.0 740.0 7		67	ÞS													
	2	0	1 2	- ന	4 5	- 9	7 8	- თ	10 11	12 13	3 14	15 16	5 17	18 19	20	21 22	2 23
									Hour B	Hour Beginning							
$\tau$	Timeframe	Hour	L <sub>eq</sub>	L <sub>max</sub>	L <sub>min</sub>	L1%	12%	L5%	<i>%8</i> 7	125%	150%	%067	767	%667	L eq	Adj.	Adj. L <sub>eq</sub>
		0	54.0	78.3	40.2	65.0	61.0	56.0	54.0	49.0	44.0	41.0	41.0	41.0	54.0	10.0	64.0
		1	52.1	79.5	40.2	63.0	58.0	54.0	52.0	47.0	43.0	41.0	41.0	40.0	52.1	10.0	62.1
	Nich+	7 C	49.6 54.4	74.7 76.7	40.2	60.0	56.0	52.0	49.0	44.0	42.0	41.0	41.0	40.0	49.6	10.0	59.6
	INIGNT	x 4	54.1 57.6	/0./ 80.6	40.7 42.2	0.00 69.0	63.U 67.0	59.U 63.0	0.03 60.0	49.0 55.0	45.U 51.0	42.0 45.0	42.0 44.0	41.0 43.0	54.1 57.6	10.0	64.1 67.6
		S I	63.3	92.3	44.5	72.0	0.69	65.0	63.0	58.0	54.0	48.0	47.0	45.0	63.3	10.0	73.3
		9	62.8 22 -	91.5	46.4	71.0	67.0	63.0	61.0	57.0	54.0	50.0	50.0	48.0	62.8	10.0	72.8
		~ ~	63.7 63.7	91.2 90.2	43.5 47 9	74.0	0.69 69 0	64.0 65.0	62.0 62.0	55.0	52.0	47.0 45.0	46.0 44.0	45.0 43.0	63.7 63.7	0.0	63./ 63.7
9,		റ	59.2	30.2 83.2	41.7	70.0	68.0 68.0	64.0	61.0	54.0	49.0	44.0	43.0	42.0	59.2	0.0	59.2
4		10	59.9	82.0	41.3	72.0	70.0	65.0	62.0	55.0	50.0	44.0	43.0	42.0	59.9	0.0	59.9
		11	58.4	88.1	39.9	70.0	67.0	61.0	59.0	52.0	48.0	43.0	42.0	41.0	58.4	0.0	58.4
	Day	12	66.0 66.7	89.9 06.2	41.0 42.6	80.0	71.0	64.0 65.0	61.0 62.0	53.0 E6.0	49.0 52.0	44.0	43.0 45.0	41.0	66.0 66.7	0.0	66.0 66.7
		14	00.7 63.3	91.8	44.5	73.0	70.0	0.2.0 66.0	02.0 64.0	58.0	55.0	40.0 50.0	49.0	47.0	00.7 63.3	0.0	63.3
		15	65.0	94.5	41.6	74.0	70.0	65.0	62.0	56.0	52.0	47.0	46.0	43.0	65.0	0.0	65.0
		16	63.4 54 4	90.1 22.2	40.8	75.0	71.0	66.0 63.0	64.0	57.0	54.0	48.0	46.0	43.0	63.4	0.0	63.4
		1/ 18	67.8	02.0 95.1	42.7 42.7	75.0	72.0	07.0 68.0	65.0	59.0	56.0	50.0 50.0	40.0	45.0	67.8 67.8	0.0	67.8 67.8
		19	6.09	79.8	42.0	72.0	70.0	66.0	64.0	59.0	56.0	50.0	47.0	45.0	60.9	5.0	62.9
	Evening	20 21	64.2 59 5	93.3 86.7	42.1 37.6	73.0	71.0 68.0	67.0 64.0	64.0 62.0	59.0 56.0	56.0 52.0	49.0	47.0	45.0	64.2 59 5	5.0	69.2 64 5
		22	58.3	80.4	37.9	70.0	67.0	63.0	61.0	53.0	49.0	42.0	41.0	39.0	58.3	10.0	68.3
	Night	23	60.1	89.7	39.3	69.0	65.0	60.0	57.0	52.0	48.0	43.0	42.0	41.0	60.1	10.0	
T	Timeframe	Hour	L <sub>eq</sub>	L <sub>max</sub>	L <sub>min</sub>	L1%	L2%	<b>75%</b>	<i>%8</i> 7	125%	150%	%067	767	%667		L <sub>eq</sub> (dBA)	)
	Day	Min	58.4 67 8	82.0 of 2	39.9 44 5	70.0	67.0 72.0	61.0 68.0	59.0 65 0	52.0 59.0	48.0 56.0	43.0 F0.0	42.0	41.0	24-Hour	Daytime	Nighttime
	Energy Average	verage	64.1		Average:	73.6	69.8	65.0	62.3	55.8	52.0	46.5	45.3	43.3			
	Evening	Min	59.5			70.0	68.0	64.0	62.0	56.0	52.0	46.0	43.0	40.0	C.20	03./	<b>0.</b> 9C
		Max	64.2	93.3	42.1	73.0	71.0	67.0	64.0	59.0	56.0	50.0	47.0	45.0	21	24-Hour CNEL (dBA)	(dBA)
	Energy A	Average	62.0 19.6	Aver 7/7	Average:	71.7 60.0	69.7 56.0	65.7 52.0	63.3	58.0	54.7 42.0	48.3	45.7	43.3			
	Night	Max	63.3	92.3	46.4	72.0	0.02	65.0	63.0	58.0	54.0	50.0	50.0	48.0		66.9	Т
	Energy Average	verage	59.0	Ave	Average:	67.2	63.7	59.4	57.0	51.6	47.8	43.7	43.2	42.0			

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9 <b>.</b> 28	ì	Adj. L <sub>eq</sub>	69.6	68.1 C2 C	0.60 7.05	72.9	76.1	74.4	65.7	66.0	64.9	65.0	65.4	70.1	66.6	68.0	68.2	67.2	69.3	68.4	76.6	72.1 69 7	76.3	75.6		Nighttime		63.4	BA)			
۲.99 ۲.		Adj.	10.0	10.0	10.0	10.0	10.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	5.0 2	10.0	10.0	L eq (dBA)	Daytime		67.7	24-Hour CNEL (dBA)		71.4	
21 21 21 21 21 21 21 21 21 21 21 21 21 2																							┢		7				24-Ho			
<b>T.7</b> 3 5		L eq	59.6	58.1	0.00 7 09	62.9	66.1	64.4	65.7	66.0	64.9	65.0	65.4	70.1	66.6	68.0	68.2	67.2	69.3	68.4	71.6	67.1 64.7	66.3	65.6		24-Hour		60.5				
<b>4.89</b> 85 <b>61</b>		%667	36.0	36.0	0.00	42.0	46.0	52.0	51.0	51.0	49.0	47.0	44.0	47.0	49.0	48.0	45.0	46.0	45.0	47.0	44.0	46.0 40.0	40.0	39.0	%667	44.0 51.0	0.10	40.0	46.0	43.3	36.0	40.9
<b>E.6</b> 3	ì	767	36.0	36.0	0.66 0.05	44.0	48.0	53.0	53.0	52.0	50.0	50.0	47.0	50.0	51.0	52.0	48.0	49.0	48.0	50.0	48.0	49.0 42.0	42.0	41.0	<b>762%</b>	47.0	0.02	42.0	49.0	46.3	36.0 72.0	42.0
13     14     15     15       14     15     15     15       15     15     15     15       16     15     15     15       17     15     15     15 <th></th> <th>%067</th> <th>37.0</th> <th>36.0</th> <th>39.0</th> <th>46.0</th> <th>49.0</th> <th>54.0</th> <th>54.0</th> <th>53.0</th> <th>51.0</th> <th>51.0</th> <th>49.0</th> <th>52.0</th> <th>52.0</th> <th>55.0</th> <th>50.0</th> <th>52.0</th> <th>50.0</th> <th>53.0</th> <th>51.0</th> <th>51.0 44 0</th> <th>45.0</th> <th>42.0</th> <th>%067</th> <th>49.0 FF 0</th> <th>0.00 8 1 3</th> <th>44.0</th> <th>51.0</th> <th>48.7</th> <th>36.0</th> <th>43.0</th>		%067	37.0	36.0	39.0	46.0	49.0	54.0	54.0	53.0	51.0	51.0	49.0	52.0	52.0	55.0	50.0	52.0	50.0	53.0	51.0	51.0 44 0	45.0	42.0	%067	49.0 FF 0	0.00 8 1 3	44.0	51.0	48.7	36.0	43.0
0.89		150%	43.0	39.0	0.66	56.0	59.0	59.0	60.0	59.0	57.0	59.0	58.0	59.0	61.0	63.0	61.0	62.0	63.0	62.0	61.0	61.0 57.0	56.0	49.0	<b>L50%</b>	57.0	0.60	57.0	61.0	59.7	39.0	49.3
<b>1.07</b>		L25%	50.0	46.0	42.0 53.0	62.0	65.0	64.0	64.0	64.0	63.0	64.0	64.0	64.0	66.0	67.0	66.0	67.0	67.0	67.0	66.0	66.0 64.0	63.0	58.0	L25%	63.0 67.0	07.U 65.3	64.0	66.0	65.3	42.0	55.9
<b>7.23</b>	ur Begir	<i>%8</i> 7	62.0	58.0	0.4.0 63.0	67.0	69.0	68.0	68.0	69.0	68.0	68.0	69.0	69.0	70.0	71.0	70.0	71.0	71.0	71.0	70.0	0.07	68.0	66.0	78%	68.0 71.0	0.11.0	0.69	70.0	69.7	54.0	63.9
<b>0.2</b> 3 5		%	0			0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	20	0 0		0	0	0	0 0	3
<b>6'79</b> ග	)	r5%	65.0	61.0	0.96.	0.00	70.0	70.0	70.0	70.0	0.69	70.0	70.0	71.0	71.0	72.0	71.0	72.0	72.0	72.0	72.0	71.0	70.0	69.0	<b>L5%</b>	69.0	70.8	70.0	72.0	71.0	58.0	66.3
∞ 0		12%	0.69	66.0 Cr.0	0.00	71.0	73.0	72.0	73.0	74.0	73.0	73.0	72.0	78.0	75.0	75.0	74.0	75.0	76.0	76.0	74.0	72.0	73.0	72.0	L2%	72.0	74.5	72.0	74.0	73.3	65.0 32.0	70.0
ۍ ۲.,42	)	L1%	71.0	68.0	0.10	73.0	75.0	74.0	75.0	77.0	76.0	76.0	74.0	84.0	77.0	78.0	76.0	77.0	78.0	79.0	78.0	0.77	75.0	77.0	L1%	74.0	04.0	74.0	78.0	76.3	67.0 77 0	72.2
<del>م</del> و7.9 م		L <sub>min</sub>	36.4	36.4	30.4	42.1	45.1	49.4	48.7	49.8	46.8	42.8	42.4	45.0	46.8	45.9	43.9	42.5	42.3	43.3	43.4	43.9 39 3	39.3	39.2	L <sub>min</sub>	42.3 40.8			43.9		36.4	
S.08 w		L <sub>max</sub>	83.3	87.6	74.9 88.8	80.1	93.2	81.9	89.2	87.2	85.0	84.7	90.8	91.7	86.6	89.1	97.0	85.4	92.7	89.2	102.4	89.7 87 3	93.6	90.5	L <sub>max</sub>	84.7		87.3	102.4	Average	74.9	93.0 Average
9.52 ~		L eq	59.6	58.1	0.50 60 5	62.9	66.1	64.4	65.7	66.0	64.9	65.0	65.4	70.1	66.6	68.0	68.2	67.2	69.3	68.4	71.6	67.1 64.7	66.3	65.6	L <sub>eq</sub>	64.9 70.1	1.07	64.7	71.6	68.8	53.6	63.4
		Hour	0	<del>,</del> ,	7 6	0 4	IJ	6	7	8	6	10	11	12	13	14	15	16	17	18	19	20	22	23	Hour	Min		Min	Max	age	Min	lyliax age
8885 866700000 84050000000 8405000000000000000000																						50					Aver			rgy Average		Energy Average
(A8b) թյ <b>լγլոսօ</b> Η ∞∞∠∟©@Շրյնգգա		Timeframe			Night	0								Dav	600							Evening		Night	Timeframe	Day	Fnerøv		Evening	Energy	Night	Ener

JN: 11559 Analyst: A. Wolfe

Meter: Piccolo I

L7 - Located south of the Project site on the southeast corner of Redlands Avenue and Rider Street near existing residential

Date: Thursday, July 19, 2018

Project: Rider 2 and 4

Hourly L <sub>eq</sub> dBA Readings (unadjusted)

homes.

**24-Hour Noise Level Measurement Summary** 

U:\Uclobs\\_11100-11500\\_11500\11559\Fieldwork\11559\_L7\_Summary

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S'S9	23	Adj. L <sub>ea</sub>	68.5	68.5	65.4	71.7	74.9	76.5	75.6	65.9	67.0	65.6	66.4	67.0	70.2	67.5	68.5	67.3	68.3	68.7	68.4 	12.7	73.0 70.4	74.9	75.5		Nighttime		7 22	1.00	3A)			
6'79	22	Adj.	10.0	10.0	10.0	10.0	10.0	10.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	5.0	10.0	10.0	L <sub>eq</sub> (dBA)	Davtime		67 G	0.10	24-Hour CNEL (dBA)		71.4	
<b>7.29</b>	21																													ר ר	24-Hou			
0.89	20	L ea	58.5	58.5	55.4	61.7	64.9	66.5	65.6	62.9	67.0	65.6	66.4	67.0	70.2	67.5	68.5	67.3	68.3	68.7	68.4 6	6/./	68.0 65.4	64.9	65.5		24-Hour		RG D					
<u>L.Ta</u>	19	%661	36.0	36.0	36.0	36.0	40.0	43.0	51.0	50.0	52.0	49.0	48.0	42.0	49.0	49.0	46.0	44.0	44.0	44.0	44.0	44.0	43.0 39.0	39.0	38.0	%667	42.0	52.0	46.8	39.0	44.0	42.0	36.0 51 0	39.4
<b>7.89</b>	18		_																							Γ								
<b>Z.8</b> 9	17	<b>L95%</b>	37.0	36.0	36.0	36.0	42.0	46.0	53.0	54.0	54.0	50.0	50.0	45.0	52.0	51.0	49.0	46.0	47.0	47.0	47.0	46.0	46.0 41.0	40.0	39.0	<b>762%</b>	45.0	54.0	49.3	41.0	46.0	44.3	36.0 53.0	40.6
<mark>8.83</mark>	16	20	0			0			0																	> <b>o</b>		0	1		0	_	0.0	
<mark>. ٤<sup>.</sup>૮9</mark>	15	%061	38.0	37.0	36.0	37.0	43.0	48.0	55.0	55.0	55.0	51.0	51.0	47.0	53.0	53.0	53.0	48.0	49.0	49.0	49.0	47.0	48.0	43.0	40.0	%067	47.0	55.0	51.1	43.0	48.0	46.0	36.0	41.9
<b>S.8</b> 3	14	150%	40.0	40.0	39.0	43.0	56.0	60.0	59.0	61.0	60.0	58.0	59.0	57.0	60.0	62.0	64.0	61.0	63.0	63.0	62.0	61.0	61.0 56.0	55.0	48.0	<b>720%</b>	57.0	64.0	60.8	56.0	61.0	59.3	39.0 60.0	48.9
<mark>5.78</mark>	13																											_						
<b>2.07</b>	11 12 Hour Beginning	L25%	47.0	45.0	41.0	52.0	64.0	66.0	65.0	65.0	65.0	64.0	65.0	64.0	65.0	67.0	68.0	68.0	68.0	0.69	68.0	0./9 67.0	67.0 65.0	64.0	57.0	L25%	64.0	69.0	66.3	65.0	67.0	66.3	41.0 66.0	55.7
0.76	11 Hour Be	78%	61.0	59.0	54.0	64.0	69.0	71.0	70.0	70.0	70.0	69.0	70.0	70.0	71.0	72.0	72.0	72.0	72.0	73.0	/2.0	/2.0	72.0 70.0	70.0	68.0	%8T	0.69	73.0	71.1	70.0	72.0	71.3	54.0 71.0	65.1
<b>*</b> '99	10		-						_																							_		
9'59	ი	<b>T5%</b>	65.0	63.0	60.0	66.0	71.0	72.0	71.0	71.0	72.0	71.0	72.0	72.0	72.0	73.0	74.0	73.0	74.0	74.0	/4.0	/3.0	73.0	71.0	70.0	<b>T5%</b>	71.0	74.0	72.7	72.0	73.0	72.7	60.0 72.0	67.7
0.76	∞	L2%	69.0	69.0	67.0	70.0	73.0	75.0	74.0	73.0	75.0	74.0	75.0	74.0	77.0	75.0	76.0	75.0	76.0	76.0	/6.0	0.c/ 0. <u></u>	75.0 74.0	73.0	73.0	12%	73.0	77.0	75.2	74.0	75.0	74.7	67.0 דה ח	71.4
<mark>6.29</mark>	2				_	_	_		_												+				_							_		
9'59	9	11%	72.0	72.0	69.0	72.0	75.0	77.0	76.0	75.0	77.0	77.0	77.0	76.0	84.0	77.0	78.0	77.0	78.0	78.0	/8.0	0.//	77.0 75.0	75.0	76.0	11%	75.0	84.0	7.77	75.0	77.0	76.3	69.0 77 0	73.8
S*99	ഹ	L min	36.0	36.0	36.0	36.0	39.0	41.9	49.5	48.7	50.8	48.0	43.5	40.8	45.9	46.7	44.1	42.0	43.6	42.4	42.0	42.1	41.9 36.0	37.7	36.0	L <sub>min</sub>	40.8	50.8		36.0	42.1		36.0 49 5	2
6.43	4		(1)	(1)	(1)	(1)	(1)	7	7	7		7	7	7	7	7	7	7	7	7		<u> </u>	<b>v</b> (1)	(1)	(1)	7	7	.,	Average:	(1)		Average:		Average:
2.13	ς	L <sub>max</sub>	77.5	81.4	76.1	90.0	82.1	83.9	83.2	85.7	88.7	85.1	85.9	93.7	90.5	85.2	84.9	83.2	86.9	89.1	87.3	86.4	91.7 83.0	85.0	91.5	L <sub>max</sub>	83.2	93.7	A	83.0	91.7		76.1 91 5	A
<b>7.22</b>	7	L ea	58.5	58.5	55.4	61.7	64.9	66.5	65.6	65.9	67.0	65.6	66.4	67.0	70.2	67.5	68.5	67.3	68.3	68.7	68.4 6	6/./	68.0 65.4	64.9	65.5	L <sub>eq</sub>	65.6	70.2	67.8	65.4	68.0	67.2	55.4 66.5	63.7
5.82	1	7	58	55	5	.9	9	64	6	61	9:	61	0f	( <u>)</u>	7	<u>.</u> 9	62	(9	6	9	õ			9	65	7	9	7	(9	6	6	9	ii d	6.
S.82	0	Hour	0	1	2	c	4	Ŋ	9	7	∞	6	10	11	12	13	14	15	16	17	18	19 19	20	22	23	Hour	Min	Max	Average	Min	Мах	Average	Min	rerage
(A8b) թ <sub>9</sub> J γhuoH ೫೫೭೭೧ Թթд ۲۹۹۹ ೧೦೦೦೦೦೦೦೦೦೦೦೦೦ ೧೦೦೦೦೦೦೦೦೦೦೦೦		Timeframe				Night									Dav	ζaγ						L	Evening	:	Nignt	Timeframe	Dav		Energy Av	Evaning	9	Energy Av	Night	Energy Average

JN: 11559 Analyst: A. Wolfe

Meter: Piccolo I

L8 - Located southwest of the Project site adjacent to Rider Street and nearby residential homes.

> Date: Thursday, July 19, 2018 Project: Rider 2 and 4

Hourly L <sub>eq</sub> dBA Readings (unadjusted)

24-Hour Noise Level Measurement Summary

U:\Uclobs\\_11100-11500\\_11500\11559\Fieldwork\11559\_L8\_Summary

APPENDIX 7.1:

**OFF-SITE TRAFFIC NOISE CONTOURS AT RIGHT-OF-WAY** 





FHWA	-RD-77-108 HIGH	IWAY N	IOISE PF	REDICTIO	N MODEL	•	
Scenario: Existing With Road Name: Perris Bl. Road Segment: n/o Harley Kn				Project N Job Nun	ame: Ride nber: 115		
SITE SPECIFIC INP	UT DATA			NO	ISE MOI	DEL INPUT	3
Highway Data		5	Site Con	ditions (H	ard = 10,	Soft = 15)	
Peak Hour Percentage:	7,951 vehicles 6.83% ,592 vehicles			dium Truci avy Trucks		s): 15	
Vehicle Speed:	45 mph	1	Vehicle I	liv			
Near/Far Lane Distance:	80 feet	F		cleType	Dav	Evening	Night Daily
Site Data			1011	Au			19.6% 91.21%
Barrier Height:	0.0 feet		Me	edium Truc	ks: 69.	3% 8.8%	21.4% 6.78%
Barrier Type (0-Wall, 1-Berm):	0.0		ŀ	leavy Truc	cks: 58.	3% 5.1%	36.6% 2.01%
Centerline Dist. to Barrier:	64.0 feet	1	Voise So	urce Elev	ations (ir	feet)	
Centerline Dist. to Observer:	64.0 feet	-		Autos:	0.000		
Barrier Distance to Observer:	0.0 feet		Mediur	n Trucks:	2.297		
Observer Height (Above Pad):	5.0 feet			y Trucks:	8.004	Grade Adi	ustment: 0.0
Pad Elevation:	0.0 feet						
Road Elevation:	0.0 feet	1	Lane Equ	uivalent D		n feet)	
	0.0%			Autos:	50.210		
Left View: Right View:	-90.0 degrees 90.0 degrees			n Trucks: y Trucks:	50.033 50.050		
FHWA Noise Model Calculations	ě						
VehicleType REMEL 1	raffic Flow Dis	stance	Finite	Road	Fresnel	Barrier Atte	en Berm Atten
Autos: 68.46	1.90	-0.13	3	-1.20	-4.7	0.0	00 0.00
Medium Trucks: 79.45	-9.39	-0.1	1	-1.20	-4.8	8 0.0	00.00
Heavy Trucks: 84.25	-14.66	-0.1	1	-1.20	-5.3	1 0.0	00.00
Unmitigated Noise Levels (without	t Topo and barrie	er atten	uation)				
VehicleType Leq Peak Hour	Leq Day	Leq Ev	/ening	Leg Ni		Ldn	CNEL
Autos: 69.0	68.2		66.8		64.1	71.3	
Medium Trucks: 68.8	68.1		65.1		64.2	71.3	
Heavy Trucks: 68.3	66.8		62.2		66.0	72.5	
Vehicle Noise: 73.5	72.5		69.9		69.6	76.5	76.
Centerline Distance to Noise Con	tour (in feet)						
		70 c		65 dB		60 dBA	55 dBA
	Ldn:		173		373	804	1,732
	CNEL		180		388	835	1.799

	FHWA	-RD-77-108 HIG	SHWAY I	NOISE PR	EDICTIC	N MOD	EL			
Scenario: E Road Name: P	erris Bl.				Project N Job Nui	lame: Ri nber: 11		& 4		
Road Segment: ni		,								
	CIFIC INPU	JT DATA		04-0				INPUT	5	
Highway Data				Site Con	aitions (r			,		
Average Daily Traff	, ,	,741 vehicles					utos:	15		
Peak Hour Perc		6.83%			dium Truc		,	15		
Peak Hour \		963 vehicles		Hea	avy Truck	s (3+ Ax	(les):	15		
	Speed:	45 mph	ŀ	Vehicle N	lix					
Near/Far Lane D	istance:	80 feet	Ē		cleType	D	ay	Evening	Night	Daily
Site Data					AL	tos: 6	8.2%	12.3%	19.6%	91.219
Barrier	Height:	0.0 feet		Me	dium Tru	cks: 6	9.8%	8.8%	21.4%	6.78%
Barrier Type (0-Wall, 1		0.0		H	leavy Tru	cks: 5	8.3%	5.1%	36.6%	2.019
Centerline Dist. to		64.0 feet	ŀ							
Centerline Dist. to Ol	oserver:	64.0 feet	-	Noise So				et)		
Barrier Distance to Ol	oserver:	0.0 feet			Autos:	0.00				
Observer Height (Abov	e Pad):	5.0 feet			n Trucks:			O		
	evation:	0.0 feet		Heav	y Trucks:	8.00	)4	Grade Adj	ustment.	0.0
Road El	evation:	0.0 feet		Lane Equ	ivalent L	istance	e (in fe	eet)		
Road	Grade: (	0.0%			Autos:	50.21	10			
Le	ft View:	90.0 degrees		Mediun	n Trucks:	50.03	33			
Rigi	ht View:	90.0 degrees		Heav	y Trucks:	50.05	50			
FHWA Noise Model Ca										
			listance	Finite		Fresne		Barrier Atte		m Atten
Autos:	68.46	0.69	-0.1	-	-1.20		4.70	0.0		0.00
Medium Trucks:	79.45	-10.60	-0.1		-1.20		4.88		00	0.00
Heavy Trucks:	84.25	-15.87	-0.1	1	-1.20	-8	5.31	0.0	00	0.00
Unmitigated Noise Lev			T. C.	,						
	Peak Hour	Leq Day		vening	Leq N	•		Ldn		VEL
Autos:	67.8	67.0		65.6		62.9		70.1		70.
Medium Trucks:	67.5	66.8		63.9		63.0		70.1		70.
Heavy Trucks:	67.1	65.6		61.0		64.8		71.3		71.
Vehicle Noise:	72.3	71.3	3	68.6		68.4		75.3	5	75.
Centerline Distance to	Noise Cont	our (in feet)								
				dBA	65 dE		60	) dBA	55	dBA
		Ldn		144 149		310 322		668 694		1,439 1,499
		CNEL								

Monday, August 10, 2020

	FHW	A-RD-77-108	HIGHWA	Y NOI	SE PF	REDICTI	ON MOD	DEL			
Scenario: E Road Name: F Road Segment: s	Perris Bl.	hout Project nox Bl.					Name: F umber: 1				
	CIFIC INI	PUT DATA							L INPUTS	;	
Highway Data				Site	e Con	ditions	(Hard = )	10, S	oft = 15)		
Average Daily Trat	fic (Adt):	29,867 vehicle	s				A	utos:	15		
Peak Hour Per	centage:	6.83%			Med	dium Tru	icks (2 A	xles):	15		
Peak Hour	Volume:	2,040 vehicles			Hea	avy Truc	:ks (3+ A	xles):	15		
Vehicle	e Speed:	45 mph		Vot	nicle N	Aiv					
Near/Far Lane D	Distance:	80 feet		Ver		cleType		Day	Evening	Night	Daily
Site Data								58.2%		19.6%	91.21%
Barrio	· Heiaht:	0.0 feet			Me	edium Tr	ucks: (	59.8%	6 8.8%	21.4%	6.78%
Barrier Type (0-Wall,		0.0			H	leavy Tr	ucks:	58.3%	5.1%	36.6%	2.01%
Centerline Dist. to	,	64.0 feet		Noi		uree El	evations	ling	a a fi		
Centerline Dist. to C	bserver:	64.0 feet		NOI	se 30	Autos			eelj		
Barrier Distance to C	bserver:	0.0 feet			Andiur	n Trucks					
Observer Height (Abo	ve Pad):	5.0 feet		~		y Trucks			Grade Adju	istment	0.0
Pad E	levation:	0.0 feet						-			0.0
Road E	levation:	0.0 feet		Lan	ie Equ		Distanc		feet)		
Roa	d Grade:	0.0%				Autos					
-	eft View:	-90.0 degree		٨		n Trucks					
Rig	ght View:	90.0 degree	s		Heav	y Trucks	s: 50.0	)50			
FHWA Noise Model C	alculations										
VehicleType F	REMEL	Traffic Flow	Distan	e	Finite	Road	Fresne	e/	Barrier Atte	n Ber	m Atten
Autos:	68.46	0.86		0.13		-1.20		4.70	0.0	00	0.00
Medium Trucks:	79.45	-10.43		0.11		-1.20	-	4.88	0.0	00	0.00
Heavy Trucks:	84.25	-15.70		0.11		-1.20		5.31	0.0	00	0.00
Unmitigated Noise Le	vels (witho	ut Topo and I	oarrier a	tenuat	tion)						
VehicleType Leo	r Peak Hour	<ul> <li>Leq Day</li> </ul>	Le	q Even	ing	Leq	Night		Ldn	CI	VEL
Autos:	68.0		67.2		65.8		63.0		70.3		70.
Medium Trucks:	67.		67.0		64.0		63.1		70.2		70.
Heavy Trucks:	67.3		65.8		61.2		65.0		71.4		71.
Vehicle Noise:	72.4	4 7	1.5		68.8		68.6		75.4		75.
Centerline Distance to	o Noise Coi	ntour (in feet)									
				70 dBA		65 0			60 dBA	55	dBA
		L	.dn:		148		318		685		1,476
			IEL:		153		330		712		1.534

Medium Trucks:         79.45         -11.37         -0.11         -1.20         -4.88         0.000         0.000           Heavy Trucks:         84.25         -16.65         -0.11         -1.20         -5.31         0.000         0.000           Unnitigated Noise Levels (without Topo and barrier attenuation)		FHV	VA-RD-77-108 HIG	HWAY	NOISE PF	REDICTI	ON MOE	DEL				
Highway Data         Site Conditions (Hard = 10, Soft = 15)           Average Daily Traffic (Adt):         24,036 vehicles         Autos:         15           Peak Hour Percentage:         68,3%         Medium Trucks (24,8ks):         15           Peak Hour Volume:         1,642 vehicles         Heavy Trucks (3+ Axles):         15           Vehicle Speed:         45 mph         Vehicle Mix         Vehicle Type         Day         Evening         Night         Daily           Site Data         0.0 feet         Autos:         68,2%         12,3%         19,6%         91,21%           Barrier Height:         0.0 feet         Medium Trucks:         68,2%         12,3%         19,6%         91,21%           Barrier Distance to Observer:         64.0 feet         Autos:         6,000         40,000         67,8%           Barrier Distance to Observer:         0.0 feet         Moise Source Elevations:         (in feet)         Vehicle Mix         40,000         0,000         Medium Trucks:         2,97         Heavy Trucks:         50,210         Heavy Trucks:         50,210         Medium Trucks:         50,31         61,20         <	Road Nam	e: Perris Bl.							& 4			
Average Daily Traffic (Adt):         24,036 vehicles           Average Daily Traffic (Adt):         24,036 vehicles           Peak Hour Percentage:         6.83%           Peak Hour Percentage:         6.83%           Peak Hour Vences (2 Axles):         15           Vehicle Speed:         45 mph           Near/Far Lane Distance:         80 feet           Barrier Height:         0.0 feet           Barrier Type (0-Wall, 1-Berm):         0.0           Centerline Dist to Desrver:         64.0 feet           Barrier Distance to Observer:         0.0 feet           Road Grade:         0.0%           Road Grade:         0.0%           Road Grade:         0.0%           Left View:         -90.0 degrees           Right View:         90.0 degrees           Righ	SITE	SPECIFIC IN	PUT DATA			N	OISE M	ODE		5		
Barrier Height         0.0         Medium Trucks (2 Axles):         15           Vehicle Speed:         45 mph         Vehicle Mix         Vehicle Mix           Site Data         Vehicle Type         Day         Evening         Night         Daily           Site Data         Vehicle Mix         Autos:         68.2%         12.3%         19.6%         91.21%           Barrier Height:         0.0         Centerline Dist. to Dserver:         64.0 feet         Medium Trucks:         68.3%         5.1%         36.6%         2.01%           Centerline Dist. to Dserver:         64.0 feet         Autos:         0.00         Medium Trucks:         8.3%         5.1%         36.6%         2.01%           Observer Height (Above Pad):         5.0 feet         Medium Trucks:         8.004         Grade Adjustment:         0.0           Road Elevation:         0.0 feet         Lane Equivalent Distance (in feet)         Lane Equivalent Distance (in feet)         1	Highway Data				Site Con	ditions	Hard = 1	10, So	ft = 15)			
Peak Hour Volume:         1.642 vehicles           Vehicle Speed:         45 mph           Near/Far Lane Distance:         80 feet         Vehicle Type         Day         Evening         Night         Dail           Site Data         Autos:         69.2%         12.3%         91.6%         91.21%           Barrier Height:         0.0 feet         Medium Trucks:         69.8%         8.8%         21.4%         6.78%           Barrier Type (0-Wall, 1-Berm):         0.0         Medium Trucks:         69.3%         5.1%         36.6%         2.0%           Centerline Dist. to Doserver:         64.0 feet         Moles Source         64.0 feet         Moles Cource Elevations (in feet)         Moles Cource           Observer Height (Above Pad):         5.0 feet         Autos:         0.000         Medium Trucks:         2.03         Grade Adjustment:         0.0           Road Elevation:         0.0 feet         Autos:         5.0.03         Heavy Trucks:         5.0.03         Heavy Trucks:         5.0.03           Heavy Trucks:         79.45         -11.37         -0.11         -1.20         -4.70         0.000         0.000           Medium Trucks:         79.45         -11.37         -0.11         -1.20         -4.70         0.000 </td <td></td> <td>, ,</td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>		, ,	1									
Vehicle Speed:         45 mph 80 feet         Vehicle Mix           Site Data         Vehicle Mix         Vehicle Type         Day         Evening         Night         Daliy           Site Data         Autos:         68.2%         12.3%         19.6%         91.21%           Barrier Height:         0.0 feet         Medium Trucks:         68.2%         21.4%         6.7%           Barrier Type (0-Wall, 1-Berm):         0.0         feet         Medium Trucks:         68.2%         21.4%         6.7%           Centerline Dist. to Desrver:         64.0 feet         Medium Trucks:         58.3%         5.1%         36.6%         2.01%           Deserver Height (Above Pad):         5.0 feet         Noise Source Elevations (in feet)         Medium Trucks:         8.004         Grade Adjustment:         0.0           Road Grade:         0.0%         Left View:         -90.0 degrees         Medium Trucks:         50.210         Medium Trucks:         50.033           FHWA Noise Model Calculations         Vehicle Type         Remet         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         68.46         -0.08         -0.13         -120         -4.70         0.000         0.000	Peak Hour	Percentage:	6.83%					/				
Near/Far Lane Distance:         80 feet         Vehicle Type         Day         Evening         Night         Daily           Site Data         Autos:         68.2%         12.3%         19.6%         91.21%           Barrier Height:         0.0 feet         Medium Trucks:         68.2%         12.3%         19.6%         91.21%           Barrier Height:         0.0 feet         Medium Trucks:         68.2%         12.3%         19.6%         91.21%           Barrier Height:         0.0 feet         Medium Trucks:         68.2%         12.3%         19.6%         91.21%           Centerline Dist. to Dserver:         64.0 feet         Moise Source Elevations (in feet)         68.2%         2.4%         6.78%           Observer Height (Above Pad):         5.0 feet         Autos:         0.000         Medium Trucks:         2.97           Pad Elevation:         0.0 feet         Autos:         50.210         Medium Trucks:         50.210           Lane Equivalent Distance (in feet)         Autos:         50.210         Medium Trucks:         50.050           FHWA Noise Model Calculations         VehicleType         ReMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atten <t< td=""><td>Peak H</td><td>lour Volume:</td><td>1,642 vehicles</td><td></td><td>He</td><td>avy Truc</td><td>ks (3+ A</td><td>xles):</td><td>15</td><td></td><td></td></t<>	Peak H	lour Volume:	1,642 vehicles		He	avy Truc	ks (3+ A	xles):	15			
Near/Far Lane Distance:         80 feet           Site Data         Autos:         68.2%         1.23%         19.6%         91.21%           Barrier Height:         0.0 feet         Medium Trucks:         68.2%         1.23%         19.6%         91.21%           Barrier Type (0-Wall, 1-Berm):         0.0         Medium Trucks:         68.2%         1.23%         19.6%         91.21%           Barrier Type (0-Wall, 1-Berm):         0.0         Centerline Dist. to Daserver:         64.0 feet         Medium Trucks:         58.3%         5.1%         36.6%         2.01%           Centerline Dist. to Doserver:         0.0 feet         Moise Source Elevations (in feet)         Moise Source Elevations (in feet)         Medium Trucks:         2.000           Barrier Atten         0.0%         Laft View:         90.0 feet         Medium Trucks:         50.210           Road Grade:         0.0%         Laft View:         90.0 degrees         Medium Trucks:         50.033           FIWAN Noise Model Calculations         VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         68.46         -0.08         -0.11         -1.20         -5.31         0.000         0.000 <td>Ve</td> <td>hicle Speed:</td> <td>45 mph</td> <td></td> <td>Vehicle I</td> <td>Nix</td> <td></td> <td></td> <td></td> <td></td> <td></td>	Ve	hicle Speed:	45 mph		Vehicle I	Nix						
Barrier Height:         0.0 feet         Medium Trucks:         69.8%         8.8%         21.4%         6.78%           Barrier Type (0-Wall, 1-Berm):         0.0	Near/Far La	ne Distance:	80 feet				L	Day	Evening	Night	Daily	
Barrier Type         Context         Heavy Trucks:         58.3%         5.1%         36.6%         2.01%           Centerline Dist. to Doserver:         64.0 feet         Noise Source Elevations (in feet)         Noise Source Elevations (in feet)           Barrier Type         10.0 feet         Autos:         0.000         Medium Trucks:         2.297           Observer:         0.0 feet         Medium Trucks:         2.000         Medium Trucks:         2.000           Road Elevation:         0.0 feet         Autos:         5.0.210         Medium Trucks:         5.0.210           Road Elevation:         0.0 feet         Autos:         5.0.210         Medium Trucks:         50.033           Heavy Trucks:         50.033         Heavy Trucks:         50.050         FHWA Noise Model Calculations           VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         68.46         -0.08         -0.11         -1.20         -4.70         0.000         0.000           Medium Trucks:         79.45         -11.37         -0.11         -1.20         -5.31         0.000         0.000           Medium Trucks:         66.2         64.8	Site Data					A	utos: 6	, 58.2%	12.3%	19.6%	91.21%	
Barrier Type (0-Wall, 1-Berm):         0.0         Heavy Trucks:         58.3%         5.1%         36.6%         2.01%           Centerline Dist to Desriver:         64.0 feet         Autos:         0.00         Molse Source Elevations (in feet)           Observer Height (Above Pad):         5.0 feet         Autos:         0.00         Molse Source (in feet)           Road Cirade:         0.0%         Left View:         9.0 feet         Molse Source (in feet)           Noise Model Calculations         0.0 feet         Medium Trucks:         50.033         Earrier Atten         Bern Atten           Vehicle Type         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Bern Atten           Autos:         68.4         -0.08         -0.13         -1.20         -4.70         0.000         0.000           MoliteType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         68.46         -0.08         -0.13         -1.20         -4.70         0.000         0.000           Medium Trucks:         79.45         -11.37         -0.11         -1.20         -4.70         0.000         0.000	Bai	rrier Heiaht:	0.0 feet		Me	edium Tr	ucks: 6	69.8%	8.8%	21.4%	6.78%	
Centerline Dist. to Observer:         64.0 feet         Noise Source Devators (in reet)           Barrier Distance to Observer:         0.0 feet         Autos:         0.000           Deserver Height (Above Pad):         5.0 feet         Medium Trucks:         2.297           Pad Elevation:         0.0 feet         Medium Trucks:         2.000           Road Elevation:         0.0 feet         Lane Equivalent Distance (in feet)           Road Crack:         0.0%         Autos:         50.210           Medium Trucks:         50.210         Medium Trucks:         50.033           Heavy Trucks:         50.000         Medium Trucks:         50.000           Vehicle Type         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         60.08         -0.13         -1.20         -4.70         0.000         0.000           Medium Trucks:         79.45         -11.37         -0.11         -120         -5.31         0.000         0.000           Medium Trucks:         66.3         66.1         63.1         62.2         69.3         69.7           Medium Trucks:         66.3         64.8         60.2         64.0         70.5			0.0		ŀ	leavy Tr	ucks: 8	58.3%	5.1%	36.6%	2.01%	
Centerline Dist. to Observer:         64.0 feet           Barrier Distance to Observer:         0.0 feet           Deserver Height (Above Pad):         5.0 feet           Pad Elevation:         0.0 feet           Road Clevation:         0.0 feet           Road Clevation:         0.0 feet           Road Clevation:         0.0 feet           Road Clevation:         0.0 feet           Road Clavation:         0.0 feet           Autos:         50.210           Medium Trucks:         50.033           Heavy Trucks:         50.050           FHWA Noise Model Calculations         VehicleType           VehicleType         REMEL         Traffic Flow           Distance         Finite Road         Fresnel           Autos:         68.46         -0.08           -0.11         -1.20         -4.70           Medium Trucks:         79.45         -11.37           -0.11         -1.20         -4.88           Medium Trucks:         66.5         -0.11           VehicleType         Leq Paek Hour         Leq Day           VehicleType         Leq Day         Leq Evening         Leq Night           Medium Trucks:         66.3         64.8         6	Centerline Dis	st. to Barrier:	64.0 feet		Noise So	urce El	vations	(in fe	et)			
Barrier Distance to Observer:         0.0 feet           Medium Trucks:         2.297           Medium Trucks:         2.297           Medium Trucks:         2.297           Medium Trucks:         2.297           Medium Trucks:         8.004         Grade Adjustment:         0.0           Read Elevation:         0.0 feet           Read Elevation:         0.0 degrees           Medium Trucks:         50.033           FHWA Noise Model Calculations           Vehicle Type         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         68.46         -0.11         -1.20         -4.70         0.000         0.000           Medium Trucks:         79.45         -16.65         -0.11         -1.20         -4.70         0.000         0.000           Uericke:         66.2 <th colspa<="" td=""><td>Centerline Dist.</td><td>to Observer:</td><td>64.0 feet</td><td></td><td></td><td></td><td></td><td></td><td>- 1</td><td></td><td></td></th>	<td>Centerline Dist.</td> <td>to Observer:</td> <td>64.0 feet</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>- 1</td> <td></td> <td></td>	Centerline Dist.	to Observer:	64.0 feet						- 1		
Observer Height (Above Pad):         5.0 feet         Heavy Trucks:         8.004         Grade Adjustment:         0.0           Pad Elevation:         0.0 feet         Heavy Trucks:         8.004         Grade Adjustment:         0.0           Road Elevation:         0.0 feet         Lane Equivalent Distance (in feet)         Lane Equivalent Distance (in feet)           Road Grade:         0.0%         Autos:         50.210           Right View:         90.0 degrees         Medium Trucks:         50.050           FHWA Noise Model Calculations         VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         68.46         -0.08         -0.13         -1.20         -4.70         0.000         0.000           Medium Trucks:         79.45         -11.37         -0.11         -1.20         -5.31         0.000         0.000           Unnitigated Noise Levels (without Topo and barrier attenuation)         VehicleType         Leg Peak Hour         Leg Day         Leg Evening         Leg Night         Ldn         CNEL           Medium Trucks:         66.3         66.1         63.1         62.2         69.3         66.6           Heavy Trucks: <td< td=""><td>Barrier Distance</td><td>to Observer:</td><td>0.0 feet</td><td></td><td>Mediu</td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	Barrier Distance	to Observer:	0.0 feet		Mediu							
Pad Elevation:         0.0 feet         Lane Equivalent Distance (in feet)           Road Cievation:         0.0 feet         Lane Equivalent Distance (in feet)           Road Cirade:         0.0 feet         Autos:         50.210           Left View:         -90.0 degrees         Medium Trucks:         50.033           Right View:         -90.0 degrees         Medium Trucks:         50.050           FHWA Noise Model Calculations           VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         68.46         -0.08         -0.13         -1.20         -4.70         0.000         0.000           Medium Trucks:         79.45         -11.37         -0.11         -1.20         -4.88         0.000         0.000           Medium Trucks:         79.45         -11.37         -0.11         -1.20         -5.31         0.000         0.000           Medium Trucks:         66.65         -66.2         -64.8         62.1         69.3         69.7           Medium Trucks:         66.3         64.8         60.2         64.0         70.5         70.6           Medium Trucks:         66.3         6	Observer Height (	Above Pad):	5.0 feet						Grade Ad	iustment	0.0	
Road Grade:         0.0%         Autos:         50.210           Left View:         -90.0 degrees         Medium Trucks:         50.033           Right View:         90.0 degrees         Medium Trucks:         50.050           FHWA Noise Model Calculations         VehicleType         RelMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         68.46         -0.08         -0.13         -120         -4.70         0.000         0.000           Medium Trucks:         79.45         -11.37         -0.11         -1.20         -4.78         0.000         0.000           Medium Trucks:         79.45         -11.37         -0.11         -1.20         -5.31         0.000         0.000           Medium Trucks:         66.65         -0.61         62.1         69.3         69.7           VehicleType         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Medium Trucks:         66.3         64.8         60.2         64.0         70.5         70.6           Medium Trucks:         66.3         64.8         60.2         64.0         70.5         70.6      V	Pa	ad Elevation:	0.0 feet					-				
Left View:         -90.0 degrees         Medium Trucks:         50.033           Heavy Trucks:         50.050           FHWA Noise Model Calculations         Environmentation         Finite Road         Fresnel         Barrier Atten         Berm Atten           Vehicle Type         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         68.46         -0.08         -0.13         -1.20         -4.70         0.000         0.000           Medium Trucks:         79.45         -11.37         -0.11         -1.20         -4.78         0.000         0.000           Medium Trucks:         79.45         -11.37         -0.11         -1.20         -5.31         0.000         0.000           Unnitigated Noise Levels (without Topo and barrier attenuation)         -4.70         0.000         0.000           Unnitigated Noise Levels (without Topo and barrier attenuation)         -4.70         0.000         0.000           Medium Trucks:         66.8         66.1         63.1         62.2         69.3         69.7           Medium Trucks:         66.3         64.8         60.2         64.0         70.5         70.6           Wehicle Noise:	Roa	ad Elevation:	0.0 feet		Lane Equ	uivalent	Distanc	e (in f	eet)			
Right View:         90.0 degrees         Heavy Trucks:         50.050           FHWA Noise Model Calculations         Environmentation         Barrier Atten         Berri Atten           VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berri Atten           Autos:         68.46         -0.08         -0.13         -1.20         -4.70         0.000         0.000           Medium Trucks:         79.45         -11.37         -0.11         -1.20         -4.88         0.000         0.000           Heavy Trucks:         84.25         -16.65         -0.11         -1.20         -5.31         0.000         0.000           Unnitigated Noise Levels (without Topo and barrier attenuation)         VehicleType         Leg Peak Hour         Leg Day         Leg Evening         Leg Night         Ldn         CNEL           Autos:         67.0         66.2         64.8         60.2         69.3         69.7           Medium Trucks:         66.8         66.1         63.1         62.2         69.3         69.7           Medium Trucks:         66.3         64.8         60.2         64.0         70.5         70.6           Vehicle Noise:         71.	I	Road Grade:	0.0%									
FHWA Noise Model Calculations           VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         68.46         -0.08         -0.13         -1.20         -4.70         0.000         0.000           Medium Trucks:         79.45         -11.37         -0.11         -1.20         -4.70         0.000         0.000           Medium Trucks:         79.45         -11.37         -0.11         -1.20         -5.31         0.000         0.000           Unnitigated Noise Levels (without Topo and barrier attenuation)		Left View:	-90.0 degrees									
VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         68.46         -0.08         -0.13         -1.20         -4.70         0.000         0.000           Medium Trucks:         79.45         -11.37         -0.11         -1.20         -4.70         0.000         0.000           Heavy Trucks:         84.25         -16.65         -0.11         -1.20         -5.31         0.000         0.000           Unnitigated Noise Levels (without Topo and barrier attenuation)         VehicleType         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Autos:         67.0         66.2         64.8         62.1         69.3         69.6           Medium Trucks:         66.8         66.1         63.1         62.2         69.3         69.6           Heavy Trucks:         66.3         64.8         60.2         64.0         70.5         70.6           Vehicle Noise:         71.5         70.5         67.9         67.6         74.5         74.8           Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA		Right View:	90.0 degrees		Heav	y Trucks	50.0	)50				
Autos:         68.46         -0.08         -0.13         -1.20         -4.70         0.000         0.000           Medium Trucks:         79.45         -11.37         -0.11         -1.20         -4.70         0.000         0.000           Heavy Trucks:         79.45         -11.37         -0.11         -1.20         -4.70         0.000         0.000           Unnitigated Noise Levels (without Topo and barrier attenuation)         -1.20         -5.31         0.000         0.000           VehicleType         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Autos:         67.0         66.2         64.8         62.1         69.3         69.7           Medium Trucks:         66.3         64.8         60.2         64.0         70.5         70.6           Vehicle Noise:         71.5         70.5         67.9         67.6         74.5         74.8           Centerline Distance to Noise Contour (in feet)         -0.05         70.48         65 dBA         60 dBA         55 dBA	FHWA Noise Mode	el Calculations	s									
Medium Trucks:         79.45         -11.37         -0.11         -1.20         -4.88         0.000         0.000           Heavy Trucks:         84.25         -16.65         -0.11         -1.20         -5.31         0.000         0.000           Unmitgated Noise Levels (without Topo and barrier attenuation)         Leq Night         Lan         CNEL           VehicleType         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Lan         0.000           Autos:         67.0         66.2         64.8         60.2         69.3         69.7           Medium Trucks:         66.3         64.8         60.2         64.0         70.5         70.6           Vehicle Noise:         71.5         70.5         67.9         67.6         74.5         74.8           Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA	VehicleType	REMEL	Traffic Flow D	istance	Finite				Barrier Atte	en Ber	m Atten	
Heavy Trucks:         84.25         -16.65         -0.11         -1.20         -5.31         0.000         0.000           Unnitigated Noise Levels (without Topo and barrier attenuation)         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Autos:         67.0         66.2         64.8         60.2         69.3         69.6         69.7         69.3         69.6         69.7         69.3         69.6         69.7         60.2         64.8         60.2         64.0         70.5         70.6         74.5         70.6         74.5         74.8           Vehicle Noise:         71.5         70.5         67.9         67.6         67.4         74.8 <td></td> <td>68.46</td> <td>-0.08</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>		68.46	-0.08									
Unmitigated Noise Levels (without Topo and barrier attenuation)           VehicleType         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Autos:         67.0         66.2         64.8         62.1         69.3         69.7           Medium Trucks:         66.8         66.1         63.1         62.2         69.3         68.6           Heavy Trucks:         66.3         64.8         60.2         64.0         70.5         70.6           Vehicle Noise:         71.5         70.5         67.9         67.6         74.5         74.8           Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA												
Vehicle Type         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Autos:         67.0         66.2         64.8         62.1         69.3         69.7           Medium Trucks:         66.8         66.1         63.1         62.2         69.3         69.6           Heavy Trucks:         66.3         64.8         60.2         64.0         70.5         70.6           Vehicle Noise:         71.5         70.5         67.9         67.6         74.5         74.8           Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA	Heavy Trucks:	84.25	-16.65	-0.1	11	-1.20	-	5.31	0.0	000	0.000	
Autos:         67.0         66.2         64.8         62.1         69.3         69.7           Medium Trucks:         66.8         66.1         63.1         62.2         69.3         69.6           Heavy Trucks:         66.3         64.8         60.2         64.0         70.5         70.6           Vehicle Noise:         71.5         70.5         67.9         67.6         74.5         74.8           Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA	Unmitigated Noise	e Levels (with										
Medium Trucks:         66.8         66.1         63.1         62.2         69.3         69.6           Heavy Trucks:         66.3         64.8         60.2         64.0         70.5         70.6           Vehicle Noise:         71.5         70.5         67.9         67.6         74.5         74.8           Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA					•	Leq I						
Heavy Trucks:         66.3         64.8         60.2         64.0         70.5         70.6           Vehicle Noise:         71.5         70.5         67.9         67.6         74.5         74.8           Centerline Distance to Noise Contour (in feet)           70 dBA         65 dBA         60 dBA         55 dBA				-								
Vehicle Noise:         71.5         70.5         67.9         67.6         74.5         74.8           Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA												
Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA			-									
70 dBA 65 dBA 60 dBA 55 dBA	Vehicle Noise:	71	.5 70.5	5	67.9		67.6		74.5	5	74.8	
	Centerline Distance	ce to Noise Co	ontour (in feet)									
					-	65 0		6				
Ldn: 128 275 593 1,277											'	
CNEL: 133 286 616 1,327			CNEL	:	133		286		616		1,327	

	FHV	VA-RD-	77-108 H	IIGHWAY	NOISE F	PREDICTIC	N MOD	EL			
Scenario: Road Name: Road Segment:			oject			Project N Job Nu			& 4		
SITE SP	ECIFIC IN	IPUT D	ATA			NC	DISE M	ODE		3	
Highway Data					Site Co	nditions (H	lard = 1	0, So	ft = 15)		
Average Daily Tra Peak Hour Pe Peak Hour	rcentage:	25,640 6.83% 1,751 v		•		edium Truc eavy Truck	ks (2 A	,	15 15 15		
Vehic	e Speed:	45 r	nph		Vehicle	Mise					
Near/Far Lane	Distance:	80 f	eet			hicleType	1	Dav	Evening	Night	Daily
Site Data					ve			38.2%	12.3%	19.6%	,
						Aedium Tru		9.8%	8.8%	21.4%	
	r Height:		feet			Heavy Tru		58.3%		36.6%	
Barrier Type (0-Wall,		0.0				neavy na	UND. C	/0.0/0	0.170	50.070	2.017
Centerline Dist. to Centerline Dist. to		64.0			Noise S	Source Ele	vations	(in fe	et)		
		64.0				Autos:	0.0	00			
Barrier Distance to			feet		Medi	um Trucks:	2.2	97			
Observer Height (Ab	,		feet		Hea	avy Trucks:	8.0	04	Grade Adj	ustment	0.0
	Elevation:		feet		Long E	quivalent L	Viotono	o lin f	ootl		
	Elevation:		feet		Lane E	Autos:			eelj		
	d Grade:	0.0%			11-1		50.2				
	.eft View: ght View:		degrees degrees			um Trucks: avy Trucks:	50.0 50.0				
FHWA Noise Model C	alculation	s									
VehicleType	REMEL	Traffic	Flow	Distance	e Finit	e Road	Fresne	e/ 1	Barrier Atte	en Ber	m Atten
Autos:	68.46		0.20	-0	.13	-1.20	-	4.70	0.0	00	0.00
Medium Trucks:	79.45		11.09	-0	.11	-1.20	-	4.88	0.0	00	0.00
Heavy Trucks:	84.25		16.37	-0	.11	-1.20	-	5.31	0.0	00	0.00
Unmitigated Noise L	evels (with	out Top	o and b	arrier att	enuation)	1					
	q Peak Hou		eq Day		Evening	Leq N	•		Ldn		NEL
Autos:	67			6.5	65.		62.4		69.6		70.0
	67	1	6	6.3	63.	4	62.5		69.6		69.8
Medium Trucks:	•								70.8		70.9
Medium Trucks: Heavy Trucks:	66		6	5.1	60.	5	64.3		70.8		10.5
	•	.6		5.1 0.8	60. 68.	-	64.3 67.9		70.8		
Heavy Trucks:	66 71	.6 .8	7			-					
Heavy Trucks: Vehicle Noise:	66 71	.6 .8	7	0.8	68.: 0 dBA	2 65 dl	67.9	6	74.8 0 dBA		75.0 dBA
Heavy Trucks: Vehicle Noise:	66 71	.6 .8	7 in feet)	0.8	68.	2 65 dl	67.9	6	74.8		75.0

		RD-77-108 HIG	HWAT	NOISE PR								
Scenario: Existing		it Project		Project Name: Rider 2 & 4								
Road Name: Redland					Job Nun	nber: 1155	9					
Road Segment: s/o Harl	ey Kno	KBI.										
SITE SPECIFIC	: INPU	T DATA					EL INPUT	S				
Highway Data				Site Con	ditions (H	ard = 10, S	Soft = 15)					
Average Daily Traffic (Ad	): 4,	829 vehicles				Autos						
Peak Hour Percentage	e: 6.	83%		Mee	dium Truck	ks (2 Axles	): 15					
Peak Hour Volum	e: 3	30 vehicles		Hei	avy Trucks	s (3+ Axles	): 15					
Vehicle Spee		40 mph		Vehicle N	Aix							
Near/Far Lane Distance	e:	56 feet			cleType	Day	Evening	Night	Daily			
Site Data					Aut	tos: 68.2	% 12.3%	19.6%	91.219			
Barrier Heigh	t:	0.0 feet		Me	dium Truc	ks: 69.8	% 8.8%	21.4%	6.789			
Barrier Type (0-Wall, 1-Berm		0.0		H	leavy Truc	ks: 58.3	% 5.1%	36.6%	2.019			
Centerline Dist. to Barrie		7.0 feet										
Centerline Dist. to Observe	er: 4	7.0 feet		Noise So		ations (in	feet)					
Barrier Distance to Observe	er:	0.0 feet			Autos:	0.000						
Observer Height (Above Pac		5.0 feet			n Trucks:	2.297	0					
Pad Elevatio	n:	0.0 feet		Heav	y Trucks:	8.004	Grade Ad	usuneni	0.0			
Road Elevatio	n:	0.0 feet		Lane Equ	ivalent D	istance (ir	feet)					
Road Grad	e: 0.	.0%			Autos:	38.079						
Left View	<i>v:</i> -9	0.0 degrees		Mediur	n Trucks:	37.846						
Right View	<i>v:</i> 9	0.0 degrees		Heav	y Trucks:	37.869						
FHWA Noise Model Calculat	ions											
VehicleType REMEL	Tra	affic Flow D	listance	Finite		Fresnel	Barrier Att	en Ber	m Atten			
Autos: 66	.51	-6.54	1.6	67	-1.20	-4.63	8 0.0	000	0.00			
Medium Trucks: 77	.72	-17.83	1.3	71	-1.20	-4.87	° 0.0	000	0.00			
Heavy Trucks: 82	.99	-23.10	1.1	71	-1.20	-5.46	6 0.0	000	0.00			
Unmitigated Noise Levels (w	-			,								
VehicleType Leq Peak		Leq Day		vening	Leq Nig		Ldn		VEL			
Autos:	60.4	59.6		58.2		55.5	62.		63			
Medium Trucks:	60.4	59.7		56.7		55.8	62.9	-	63.			
Heavy Trucks:	60.4	58.9		54.3		58.1	64.		64.			
Vehicle Noise:	65.2	64.2	2	61.5		61.4	68.3	3	68			
Centerline Distance to Noise	e Conto	ur (in feet)						-				
				dBA	65 dB		60 dBA		dBA			
		Ldn.		36		77	167		36			
		CNEL		37		80	173		373			

Monday, August 10, 2020

I	ΉŴ	A-RD-77-108	HIGI	HWAYI	NOISE PR	REDICTIO	ON MOD	EL			
Scenario: Existing Road Name: Perris B Road Segment: s/o Ride	Ι.	out Project				Project I Job Nu	Vame: Ri mber: 11				
SITE SPECIFIC	INP	UT DATA				N	DISE M	ODE	L INPUTS		
Highway Data					Site Con	ditions (	Hard = 1	0, Sc	oft = 15)		
Average Daily Traffic (Adt,	: 2	7,553 vehicle	s				A	utos:	15		
Peak Hour Percentage	e:	6.83%			Me	dium Tru	cks (2 Ax	(les):	15		
Peak Hour Volume	e 1	,882 vehicles			He	avy Truci	(3+ Ax	(les):	15		
Vehicle Speed	l:	45 mph		ŀ	Vehicle I	Mix					
Near/Far Lane Distance	e:	80 feet		ŀ		icleType	D	ay	Evening	Night	Daily
Site Data								8.2%	•	19.6%	
Barrier Heigh	f.	0.0 feet			Me	edium Tru	icks: 6	9.8%	8.8%	21.4%	6.78%
Barrier Type (0-Wall, 1-Berm		0.0			ŀ	leavy Tru	icks: 5	8.3%	5.1%	36.6%	2.01%
Centerline Dist. to Barrie		64.0 feet				-					
Centerline Dist. to Observe		64.0 feet		-	Noise Sc				eet)		
Barrier Distance to Observe	r:	0.0 feet				Autos					
Observer Height (Above Pad	):	5.0 feet				n Trucks			Grade Adju	otmont	
Pad Elevation	n:	0.0 feet			Heav	y Trucks	8.00	J4	Grade Adju	isuneni.	0.0
Road Elevation	n:	0.0 feet		[	Lane Eq	uivalent	Distance	e (in :	feet)		
Road Grade	e:	0.0%				Autos.	50.2	10			
Left View	<i>r</i> :	-90.0 degree	s		Mediur	n Trucks	50.03	33			
Right View	<i>r</i> :	90.0 degree	s		Heav	y Trucks	50.05	50			
FHWA Noise Model Calculati	ons										
VehicleType REMEL		Traffic Flow	Dis	stance	Finite	Road	Fresne	1	Barrier Atte	n Ber	m Atten
Autos: 68	46	0.51		-0.1	13	-1.20	-4	4.70	0.00	00	0.00
Medium Trucks: 79	45	-10.78		-0.1	11	-1.20	-4	4.88	0.00	00	0.00
Heavy Trucks: 84	25	-16.05		-0.1	11	-1.20	-{	5.31	0.00	00	0.00
Unmitigated Noise Levels (w					,						
VehicleType Leq Peak I				Leq E	vening	Leq N	•		Ldn	CI	NEL
Autos:	67.6		6.8		65.4		62.7		69.9		70.
Medium Trucks:	67.4		56.7		63.7		62.8		69.9		70.2
Heavy Trucks:	66.9		55.4		60.8		64.6		71.1		71.
	72.1		71.1		68.5		68.2		75.1		75.3
Vehicle Noise:											
Centerline Distance to Noise	Con	tour (in feet)		70	dBA	65 d	RΔ	,	50 dBA	55	dBA
	Con	, ,	Ldn:	70	<i>dBA</i> 140	65 d	BA 301	(	60 dBA 649	55	dBA 1.399

FH	WA-RD-77-108 H	IIGHWAY	NOISE PI	REDICT	ION MOI	DEL			
Scenario: Existing W Road Name: Redlands Road Segment: s/o Markh	Av.				t Name: F lumber: 1		2 & 4		
SITE SPECIFIC I	NPUT DATA				IOISE N	IODE	L INPUTS	5	
Highway Data			Site Con	ditions	(Hard =	10, So	oft = 15)		
Average Daily Traffic (Adt):	5,338 vehicles	;			A	Autos:	15		
Peak Hour Percentage:	6.83%		Me	dium Tr	ucks (2 A	xles):	15		
Peak Hour Volume:	365 vehicles		He	avy Tru	cks (3+ A	xles):	15		
Vehicle Speed:	40 mph		Vehicle	Mix					
Near/Far Lane Distance:	56 feet			icleType		Day	Evening	Night	Daily
Site Data						68.2%		19.6%	
Barrier Height:	0.0 feet		M	edium T	rucks:	69.8%	8.8%	21.4%	6.78%
Barrier Type (0-Wall, 1-Berm):	0.0		1	leavy T	rucks:	58.3%	5.1%	36.6%	2.01%
Centerline Dist. to Barrier:	47.0 feet		Noise So	urco E	lovation	(in f	aati		
Centerline Dist. to Observer:	47.0 feet		NOISE 30	Auto		000	eey		
Barrier Distance to Observer:	0.0 feet		Madiu	m Truck					
Observer Height (Above Pad):	5.0 feet			y Truck		.97 )04	Grade Adj	iustmont	
Pad Elevation:	0.0 feet		near	y muck	.s. o.u	104	Graue Auj	usunen	. 0.0
Road Elevation:	0.0 feet		Lane Eq	uivalen	t Distanc	e (in	feet)		
Road Grade:	0.0%			Auto	s: 38.0	)79			
Left View:	-90.0 degrees		Mediu	m Truck	s: 37.8	346			
Right View:	90.0 degrees	5	Heav	y Truck	s: 37.8	369			
FHWA Noise Model Calculation	ıs								
VehicleType REMEL	Traffic Flow	Distance	Finite	Road	Fresn	e/	Barrier Atte	en Ber	m Atten
Autos: 66.51	-6.11	1	.67	-1.20		-4.63	0.0	000	0.000
Medium Trucks: 77.72	-17.40	1	.71	-1.20		-4.87	0.0	000	0.000
Heavy Trucks: 82.99	-22.67	1	.71	-1.20		-5.46	0.0	000	0.000
Unmitigated Noise Levels (with	nout Topo and b	arrier atte	enuation)						
VehicleType Leq Peak Ho			Evening	Leq	Night		Ldn		NEL
Autos: 6	0.9 6	0.1	58.6		55.9		63.1		63.5
		0.1	57.2		56.3		63.4		63.6
		9.4	54.8		58.6		65.0		65.1
Vehicle Noise: 6	5.6 6	4.6	61.9		61.9		68.7	7	68.9
Centerline Distance to Noise C	ontour (in feet)								
			) dBA	65	dBA	(	60 dBA	55	dBA
		dn:	38		83		178		384
	CN	EL:	40		86		185		399

	FHV	VA-RD-77-108	HIGHW	AY NO	DISE PI	REDICTIO	N MODEL			
	e: Existing Wi e: Redlands A t: s/o Ramon	IV.					ame: Ride nber: 115			
SITE S	PECIFIC IN	IPUT DATA			-	NO	ISE MOD	EL INPUT	s	
Highway Data				S	ite Con	ditions (H	lard = 10,	Soft = 15)		
Average Daily T Peak Hour F Peak Ho	. ,	1,882 vehicle 6.83% 129 vehicle				dium Truc avy Truck		s): 15		
Veh	icle Speed:	40 mph		V	ehicle I	Mix				
Near/Far Lan	e Distance:	56 feet				icleType	Dav	Evening	Night	Daily
Site Data							tos: 68.2		19.6%	,
Par	ier Heiaht:	0.0 feet			Me	edium Truc	cks: 69.8	8% 8.8%	21.4%	6.78%
Barrier Type (0-Wa	ull, 1-Berm):	0.0			ŀ	Heavy True	cks: 58.3	3% 5.1%	36.6%	2.01%
Centerline Dist		47.0 feet		N	oise Sc	ource Elev	ations (in	feet)		
Centerline Dist. to		47.0 feet				Autos:	0.000			
Barrier Distance to		0.0 feet			Mediu	m Trucks:	2.297			
Observer Height (A Pa	bove Pad): d Elevation:	5.0 feet 0.0 feet				y Trucks:	8.004	Grade Ad	justment	: 0.0
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalent D	istance (i	n feet)		
R	oad Grade:	0.0%				Autos:	38.079			
	Left View:	-90.0 degree	es		Mediui	m Trucks:	37.846			
	Right View:	90.0 degre			Heav	y Trucks:	37.869			
FHWA Noise Mode	Calculation	s								
VehicleType	REMEL	Traffic Flow	Distai		Finite		Fresnel	Barrier Att		m Atten
Autos:	66.51	-10.64		1.67		-1.20	-4.6		000	0.00
Medium Trucks:	77.72	-21.92		1.71		-1.20	-4.8		000	0.00
Heavy Trucks:	82.99	-27.20		1.71		-1.20	-5.4	6 0.	000	0.00
Unmitigated Noise					<i></i>					
	leq Peak Hou			eq Eve		Leq Ni	-	Ldn		NEL
Autos:	56		55.5		54.1		51.4	58.	-	59.
Medium Trucks:	56		55.6		52.6		51.7	58.	-	59.
Heavy Trucks:	56	-	54.8		50.2		54.1	60.		60.
Vehicle Noise:	61	.1	60.1		57.4		57.3	64.:	2	64.4
Centerline Distance	e to Noise Co	ontour (in feet	)							
				70 dl		65 dE		60 dBA		dBA
			Ldn:		19		41	89		192
			NEL:		20		43	92		199

	FHWA	-RD-77-108 HIC	GHWAY	NOISE PE	REDICTIO	N MODEL						
Scenario: Existi	ng Witho	ut Project		Project Name: Rider 2 & 4								
Road Name: Harle	/ Knox B	Ι.			Job Nur	nber: 115	59					
Road Segment: e/o W	estern V	/y.										
SITE SPECIF	IC INPU	JT DATA					DEL INPUT	S				
Highway Data				Site Con	ditions (H	ard = 10,	Soft = 15)					
Average Daily Traffic (A	<i>dt):</i> 20	,457 vehicles				Auto	os: 15					
Peak Hour Percenta	ge: 6	.83%		Me	dium Truck	(s (2 Axle	s): 15					
Peak Hour Volu	me: 1,3	397 vehicles		He	avy Trucks	; (3+ Axle	s): 15					
Vehicle Spe	ed:	45 mph		Vehicle I	liv							
Near/Far Lane Distar	ice:	80 feet		-	cleType	Day	Evening	Night	Daily			
Site Data				10.11	Aut				91.21%			
	u hái	0.0 feet		Me	edium Truc			21.4%				
Barrier Heig		0.0 feet			leavy Truc			36.6%				
Barrier Type (0-Wall, 1-Be Centerline Dist. to Bar		0.0 64.0 feet										
Centerline Dist. to Obser		64.0 feet		Noise So	ource Elev	ations (ir	i feet)					
Barrier Distance to Obser		0.0 feet			Autos:	0.000						
Observer Height (Above P		5.0 feet		Mediur	n Trucks:	2.297						
Pad Eleval	,	0.0 feet		Heav	y Trucks:	8.004	Grade Ad	iustment.	0.0			
Road Eleval				Lane Fou	uivalent D	istanco (	n foot)					
Road Eleval Road Gra		0.0 feet		Lune Ly	Autos:	50.210	meey					
Left Vi				Modiu	n Trucks:	50.033						
Right Vi		90.0 degrees			y Trucks:	50.055						
Right Vi	ew.	90.0 degrees		1 icav	y mucks.	50.050						
FHWA Noise Model Calcul												
VehicleType REME			Distance			Fresnel	Barrier Att		m Atten			
	68.46	-0.78	-	.13	-1.20	-4.7		000	0.00			
	9.45	-12.07		.11	-1.20	-4.8		000	0.00			
Heavy Trucks: 8	34.25	-17.35	-0	.11	-1.20	-5.3	1 0.0	000	0.00			
Unmitigated Noise Levels	· · · · ·		1	,				Т				
VehicleType Leq Pea		Leq Day		Evening	Leq Nig		Ldn		VEL			
Autos:	66.3	65.		64.1		61.4	68.6		69.			
Medium Trucks:	66.1	65.4		62.4		61.5	68.6	-	68.			
Heavy Trucks:	65.6	64.		59.5		63.3	69.8		69.			
Vehicle Noise:	70.8	69.8	В	67.2		66.9	73.8	3	74.			
Centerline Distance to Noi	se Cont	our (in feet)							_			
				) dBA	65 dB		60 dBA		dBA			
		Ldr	N:	115		247	532		1,14			
		CNEL		119		257	553		1.192			

Monday, August 10, 2020

Scenario: Existing Road Name: Redlands Road Segment: s/o Rider	s Av.						Name: F umber: 1				
SITE SPECIFIC Highway Data	INP	UT DATA			Site Con				EL INPUTS oft = 15)	6	
Average Daily Traffic (Adt) Peak Hour Percentage Peak Hour Volume Vehicle Speed		3,872 vehicle 6.83% 264 vehicles 40 mph			Me	dium Tru avy Truc		lutos. xles).	15 15		
Near/Far Lane Distance		56 feet			Vehi	cleType		Day	•	Night	Daily
Site Data Barrier Height Barrier Type (0-Wall, 1-Berm)		0.0 feet 0.0				ہ dium Tr leavy Tr	ucks: 6	58.2% 59.8% 58.3%	6 8.8%	19.6% 21.4% 36.6%	6.78
Centerline Dist. to Barrier		47.0 feet		Ē	Noise So	urce El	evations	(in f	eet)		
Centerline Dist. to Observer Barrier Distance to Observer Observer Height (Above Pad) Pad Elevation Road Elevation		47.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet				Autos n Trucks y Trucks <b>uivalent</b>	a: 2.2 a: 8.0	97 04	Grade Adju feet)	ustment	: 0.0
Road Grade		0.0%		F		Autos					
Left View Right View		-90.0 degree 90.0 degree				n Trucks y Trucks					
FHWA Noise Model Calculation	_										
VehicleType REMEL		Fraffic Flow	Di	stance	Finite		Fresne		Barrier Atte		m Atte
Autos: 66.		-7.50		1.6		-1.20		4.63	0.0		0.0
Medium Trucks: 77.3 Heavy Trucks: 82.9	99	-18.79 -24.06		1.7 1.7	'1	-1.20 -1.20		4.87 5.46	0.0		0.0 0.0
Unmitigated Noise Levels (wi VehicleType Leg Peak H			barri		vening	Leg	line la d		Ldn	0	NEL
	59.5		68.7	Leq E	57.3	Legi	54.5		61.7	-	NEL 62
	59.4	-	58.7		55.8		54.9		62.0		62
	59.4	-	58.0		53.4		57.2		63.6		63
	64.2		3.2		60.5		60.5		67.3		67
Centerline Distance to Noise	Con	tour (in feet)									
				70	dBA	65 0	1BA		60 dBA	55	dBA
		_	dn:		31		67		144		31
		CN	IEL:		32		69		149		32

	FHV	/A-RD-77-108	HIGHWA	Y NOISE	PREDICT	ION MOD	DEL			
Scenario: E: Road Name: H. Road Segment: el	arley Kno>	BI.				Name: F umber: 1		2 & 4		
SITE SPE	CIFIC IN	PUT DATA			N	IOISE M	ODE	L INPUTS	3	
Highway Data				Site Co	onditions	(Hard = :	10, So	oft = 15)		
Average Daily Traffi	ic (Adt):	18,343 vehicle	s			A	lutos:	15		
Peak Hour Perc	entage:	6.83%		N	ledium Tru	ucks (2 A	xles):	15		
Peak Hour V	/olume:	1,253 vehicles	5	F	leavy Truc	cks (3+ A	xles):	15		
Vehicle	Speed:	45 mph		Vehicle	Mix					
Near/Far Lane Di	istance:	80 feet			hicleType		Day	Evening	Night	Daily
Site Data							58.2%	•	19.6%	
	11-1-1-4-	0.0 feet		_	Medium Ti		59.8%		21.4%	
Barrier I Barrier Type (0-Wall, 1		0.0 reet 0.0			Heavy Ti	rucks: {	58.3%	5.1%	36.6%	2.01%
Centerline Dist. to	,	64.0 feet								
Centerline Dist. to Ot		64.0 feet		Noise 3	Source El			eet)		
Barrier Distance to Ot		0.0 feet			Autos					
Observer Height (Abov		5.0 feet			um Truck					
	evation:	0.0 feet		He	avy Truck	s: 8.0	04	Grade Adj	ustment	: 0.0
Road Ele		0.0 feet		Lane E	quivalent	Distanc	e (in f	eet)		
	Grade	0.0%			Auto:	s: 50.2	210	,		
	ft View:	-90.0 degree	19	Med	um Truck	s: 50.0	33			
	ht View:	90.0 degree			avy Truck					
FHWA Noise Model Ca	Iculations	;		-						
VehicleType Ri	EMEL	Traffic Flow	Distan	ce Finit	e Road	Fresne	e/	Barrier Atte	en Bei	m Atten
Autos:	68.46	-1.26		-0.13	-1.20	-	4.70	0.0	00	0.00
Medium Trucks:	79.45	-12.55		-0.11	-1.20	-	4.88	0.0	00	0.00
Heavy Trucks:	84.25	-17.82		-0.11	-1.20	-	5.31	0.0	00	0.00
Unmitigated Noise Lev										
	Peak Hou			q Evening		Night		Ldn		NEL
Autos:	65.	-	55.1	63.	-	60.9		68.1		68.5
Medium Trucks:	65.		54.9	61.		61.0		68.1		68.4
Heavy Trucks:	65.		53.6	59.		62.9		69.3		69.4
Vehicle Noise:	70.	3	69.4	66.	.7	66.5		73.3	5	73.6
	Noise Co	ntour (in feet)								
	Noise Co			70 dBA		dBA	6	0 dBA	55	dBA
Centerline Distance to	Noise Co		Ldn:	70 dBA 10	7	dBA 230 239	6	0 dBA 495 514	55	dBA 1,067 1,108

	FH\	VA-RD-77-108	HIGHW	AY N	OISE PI	REDICTIO	N MODE	L		
Road Nam	io: Existing Wi e: Harley Kno nt: e/o Webste	x Bl.				Project N Job Nur	ame: Rio nber: 11			
SITE	SPECIFIC IN	IPUT DATA				NO	ISE MO	DEL INPU	JTS	
Highway Data				S	ite Con	ditions (H	lard = 10	), Soft = 15)		
Average Daily	Traffic (Adt):	17,217 vehicl	es				Au	tos: 15		
Peak Hour	Percentage:	6.83%			Me	dium Truc	ks (2 Axl	es): 15		
Peak H	our Volume:	1,176 vehicle	s		He	avy Truck	s (3+ Axl	es): 15		
Ve	hicle Speed:	45 mph		v	ehicle l	Mix				
Near/Far La	ne Distance:	80 feet		ŀ		icleType	Da	ay Evenin	g Nig	ht Daily
Site Data					10/1			3.2% 12.3	•	.6% 91.21%
Bar	rier Height:	0.0 feet			M	edium Truc	cks: 69	.8% 8.8	% 21	.4% 6.78%
Barrier Type (0-W		0.0			ŀ	leavy True	cks: 58	3.3% 5.1	% 36	.6% 2.01%
Centerline Dis		64.0 feet								
Centerline Dist		64.0 feet		N	loise So	ource Elev		,		
Barrier Distance	to Observer:	0.0 feet				Autos:	0.00			
Observer Height (		5.0 feet				m Trucks:	2.29		A	
	ad Elevation:	0.0 feet			Heav	ry Trucks:	8.00	4 Grade	Aajustri	nent: 0.0
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalent D	istance	(in feet)		
1	Road Grade:	0.0%				Autos:	50.21	0		
	Left View:	-90.0 degre	es		Mediu	m Trucks:	50.03	3		
	Right View:	90.0 degre	es		Heav	y Trucks:	50.05	0		
FHWA Noise Mode	el Calculation	s								
VehicleType	REMEL	Traffic Flow	Distar	псе	Finite	Road	Fresnel		Atten	Berm Atten
Autos:	68.46	-1.53		-0.13		-1.20			0.000	0.00
Medium Trucks:	79.45	-12.82		-0.11		-1.20		.88	0.000	0.00
Heavy Trucks:	84.25	-18.10		-0.11		-1.20	-5	.31	0.000	0.00
Unmitigated Noise										
	Leq Peak Hou			eq Ev	•	Leq Ni		Ldn		CNEL
Autos:	65		64.8		63.4		60.6		57.9	68.
Medium Trucks:	65		64.6		61.7		60.7	-	57.8	68.
Heavy Trucks:	64	-	63.4		58.8		62.6		9.0	69.
Vehicle Noise:	70		69.1		66.4		66.2	7	'3.1	73.
Centerline Distance	e to Noise Co	ontour (in fee	)	-						
			🖵	70 di		65 dE		60 dBA	7.5	55 dBA
			Ldn:		102		220		75	1,023
		C	NEL:		106		229	4	93	1,062

F	HWA-F	D-77-108 HI	GHW	AY NO	DISE PR	REDICTIC	N MO	DEL				
Scenario: Existing		Project		Project Name: Rider 2 & 4								
Road Name: Harley K						Job Nu	mber:	11559				
Road Segment: e/o Perri	s Bl.											
SITE SPECIFIC	INPU	DATA							L INPUT	S		
Highway Data				S	ite Con	ditions (H	lard =	10, Sc	oft = 15)			
Average Daily Traffic (Adt)	: 4,9	06 vehicles						Autos:	15			
Peak Hour Percentage	6.8	3%			Med	dium Truc	:ks (2 A	Axles):	15			
Peak Hour Volume	: 33	5 vehicles			Hea	avy Truck	s (3+ A	(xles	15			
Vehicle Speed	: 4	5 mph		V	ehicle N	Aix						
Near/Far Lane Distance	e 8	0 feet				cleType		Day	Evening	Night	Daily	
Site Data					-			68.2%		19.6%		
Barrier Height		).0 feet			Me	dium Tru	cks:	69.8%	8.8%	21.4%	6.789	
Barrier Type (0-Wall, 1-Berm)		).0			h	leavy Tru	cks:	58.3%	5.1%	36.6%	2.019	
Centerline Dist. to Barrie		1.0 feet		-								
Centerline Dist. to Observer	-	4.0 feet		N	oise So	urce Ele			et)			
Barrier Distance to Observe	-	0.0 feet				Autos:		000				
Observer Height (Above Pad		5.0 feet				n Trucks:		297				
Pad Elevation		0.0 feet			Heav	y Trucks:	8.0	004	Grade Ad	ustment	0.0	
Road Elevation	. (	0.0 feet		Li	ane Equ	ivalent E	Distand	ce (in i	eet)			
Road Grade	e: 0.0	0%				Autos:	50.3	210				
Left View	9	0.0 degrees			Mediun	n Trucks:	50.	033				
Right View	. 9	0.0 degrees			Heav	y Trucks:	50.	050				
FHWA Noise Model Calculati	ons											
VehicleType REMEL	Tra	ffic Flow	Dista	nce	Finite	Road	Fresn	el	Barrier Att	en Ber	m Atten	
Autos: 68.	46	-6.99		-0.13		-1.20		-4.70	0.0	000	0.00	
Medium Trucks: 79.	45	-18.27		-0.11		-1.20		-4.88	0.0	000	0.00	
Heavy Trucks: 84.	25	-23.55		-0.11		-1.20		-5.31	0.0	000	0.00	
Unmitigated Noise Levels (w			-							1		
VehicleType Leq Peak H		Leq Day	_	.eq Eve		Leq N	•		Ldn		NEL	
Autos:	60.1	59.			57.9		55.2		62.4		62.	
Medium Trucks:	59.9	59.			56.2		55.3		62.4		62.	
Heavy Trucks:	59.4	57.			53.3		57.1		63.		63.	
Vehicle Noise:	64.6	63.	6		61.0		60.7	·	67.	3	67.	
Centerline Distance to Noise	Conto	ır (in feet)										
			L	70 dl		65 dI		6	0 dBA		dBA	
		Ldi			44		95		206		44	
		CNE			46		99		214		460	

Monday, August 10, 2020

0	Eviatia - Mi	have Designed				Ducies	Manage Dia			
		thout Project					Name: Ric umber: 11!			
Road Name: Road Segment.						<i>JUD I</i>	uniber. 11:	228		
SITE SI Highway Data	PECIFIC IN	PUT DATA			0:4- 0			DEL INPUTS Soft = 15)	5	
					Sile Con	unions				
Average Daily Tr	. ,	10,660 vehicle	es					tos: 15		
Peak Hour P		6.83%					ucks (2 Axl	,		
	ur Volume:	728 vehicles	5		He	avy iru	cks (3+ Axl	es): 15		
	cle Speed:	50 mph			Vehicle I	/ix				
Near/Far Lane	e Distance:	80 feet			Vehi	cleType	Da	y Evening	Night	Daily
Site Data							Autos: 68	.2% 12.3%	19.6%	91.21%
Barri	er Height:	0.0 feet			Me	edium Ti	rucks: 69	.8% 8.8%	21.4%	6.78%
Barrier Type (0-Wai		0.0			F	leavy Ti	rucks: 58	.3% 5.1%	36.6%	2.01%
Centerline Dist.		64.0 feet		H	N 0-		evations (I	- f 4)		
Centerline Dist. to	Observer:	64.0 feet		Ľ.	NUISE SU	Auto		,		
Barrier Distance to	Observer:	0.0 feet				n Truck				
Observer Height (A	bove Pad):	5.0 feet				y Truck			ictment	0.0
Pad	Elevation:	0.0 feet			neav	y muck	5. 0.004	Grade Aujo	Journeriu	0.0
Road	Elevation:	0.0 feet		1	Lane Equ	uivalent	Distance	(in feet)		
Ro	oad Grade:	0.0%				Auto	s: 50.21	)		
	Left View:	-90.0 degree	es		Mediur	n Truck	s: 50.03	3		
F	Right View:	90.0 degree	es		Heav	y Truck	s: 50.05	)		
FHWA Noise Model	Calculation	5								
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresnel	Barrier Atte	n Ber	m Atten
Autos:	70.20	-4.07		-0.1	3	-1.20	-4.	70 0.0	00	0.00
Medium Trucks:	81.00	-15.36		-0.1	1	-1.20	-4.	88 0.0	00	0.00
Heavy Trucks:	85.38	-20.63		-0.1	1	-1.20	-5.	31 0.0	00	0.00
Unmitigated Noise I	Levels (with			er atten	nuation)					
VehicleType L	eq Peak Hou	r Leq Day		Leq E	vening	Leq	Night	Ldn	CI	VEL
Autos:	64	.8	64.0		62.6		59.8	67.1		67.
Medium Trucks:	64	.3	63.6		60.7		59.8	66.9		67.
Heavy Trucks:	63	.4	62.0		57.4		61.2	67.6		67.
Vehicle Noise:	69	.0	68.1		65.5		65.1	72.0		72.3
Centerline Distance	to Noise Co	ontour (in feet)	)							
			L	70 0	dBA	65	dBA	60 dBA 401	55	dBA 865
			Ldn: VEL:		86 90		186 194	401		900

	FHW	A-RD-77-108	HIGHWA	Y NOISE	PREDICT	ION MOD	EL			
Scenario:   Road Name:   Road Segment: \		. ,				Name: R lumber: 1		& 4		
	ECIFIC INF	PUT DATA						L INPUTS	6	
Highway Data				Site Co	onditions	(Hard = 1	10, So	ft = 15)		
Average Daily Tra	ffic (Adt):	679 vehicles	6				utos:	15		
Peak Hour Per		6.83%				ucks (2 A	,	15		
Peak Hour	Volume:	46 vehicles		1	leavy Tru	cks (3+ A)	xles):	15		
	e Speed:	35 mph		Vehicl	e Mix					
Near/Far Lane I	Distance:	56 feet		V	hicleType	e L	Day	Evening	Night	Daily
Site Data						Autos: 6	8.2%	12.3%	19.6%	91.219
Barrie	r Height:	0.0 feet			Medium T	rucks: 6	69.8%	8.8%	21.4%	6.78%
Barrier Type (0-Wall,		0.0			Heavy T	rucks: 5	58.3%	5.1%	36.6%	2.01%
Centerline Dist. to	,	47.0 feet		Noine	Course E	levations	lin fo	ofi		
Centerline Dist. to C	Observer:	47.0 feet		Noise	Auto			elj		
Barrier Distance to C	Observer:	0.0 feet		Maa	Auto ium Truck					
Observer Height (Abo	ove Pad):	5.0 feet			avy Truck			Grade Adj	ustment	. 0 0
Pad E	levation:	0.0 feet					-		usument	. 0.0
Road E	levation:	0.0 feet		Lane E	quivalen	t Distance	e (in f	eet)		
Roa	d Grade:	0.0%			Auto	s: 38.0	79			
L	eft View:	-90.0 degree			ium Truck					
Ri	ght View:	90.0 degree	5	He	avy Truck	s: 37.8	69			
FHWA Noise Model C	alculations									
VehicleType I	REMEL	Traffic Flow	Distand	e Fini	te Road	Fresne	e/ 1	Barrier Atte	en Ber	m Atten
Autos:	64.30	-14.48		1.67	-1.20		4.63	0.0		0.00
Medium Trucks:	75.75	-25.77		1.71	-1.20		4.87	0.0		0.00
Heavy Trucks:	81.57	-31.04		1.71	-1.20	-	5.46	0.0	00	0.00
Unmitigated Noise Le					, ,					
VehicleType Leo Autos:	Peak Hour		9.5	q Evening 48		Night 45.3		Ldn 52.6		NEL
Autos: Medium Trucks:	50.3 50.5	-	9.5 9.8	48 46		45.3 45.9		52.6		53. 53.
	50.8	-	9.8 9.6	46		45.9 48.8		53.0		
Heavy Trucks: Vehicle Noise:	51.0	-	9.6 4.4	44		48.8		55.2		55. 58.
			4.4	51	.0	51.7		58.5		58.
Centerline Distance to	o Noise Cor	ntour (in feet)		70 dBA	65	dBA	6	0 dBA	55	dBA
		,	dn:		8 8	ава 17	0	<i>и ава</i> 37	55	<i>aba</i> 81
		L	un.			17		37		81
		Ch	EL:		B	18		39		84

Fi	HWA-RD-77-108	BHIGHWA	Y NOISE P	REDICTION	N MODEL		
Scenario: Existing N Road Name: Ramona Road Segment: w/o Neva	Exwy.				ame: Rider aber: 11559		
SITE SPECIFIC	INPUT DATA			NO	ISE MODE	EL INPUTS	
Highway Data			Site Col	nditions (Ha	ard = 10, S	oft = 15)	
Average Daily Traffic (Adt): Peak Hour Percentage: Peak Hour Volume:	6.83%			edium Truck eavy Trucks		15	
Vehicle Speed:	50 mph		Vehicle	Mix			
Near/Far Lane Distance:	102 feet			nicleType	Dav	Evening	Night Daily
Site Data			VCI	Aut		•	19.6% 91.21
Barrier Height:	0.0 feet		N	ledium Truc	ks: 69.8%		21.4% 6.78
Barrier Type (0-Wall, 1-Berm):				Heavy Truc	ks: 58.3%	6 5.1%	36.6% 2.01
Centerline Dist. to Barrier.			Noise S	ource Elev	ations (in f	eet)	
Centerline Dist. to Observer.	02.0 1001			Autos:	0.000		
Barrier Distance to Observer.	0.0 feet		Medii	im Trucks:	2.297		
Observer Height (Above Pad): Pad Elevation				vy Trucks:	8.004	Grade Adji	istment: 0.0
Road Elevation:	0.0 1001		Lane Ec	uivalent Di	istance (in	feet)	
Road Grade	0.0 1001			Autos:	76.733	,	
Left View		es	Mediu	im Trucks:	76.618		
Right View:			Hea	vy Trucks:	76.629		
FHWA Noise Model Calculation	ons		_				
VehicleType REMEL	Traffic Flow	Distan	ce Finite	Road	Fresnel	Barrier Atte	n Berm Atter
Autos: 70.2	0 2.25		2.89	-1.20	-4.76	0.0	0.00
Medium Trucks: 81.0	0 -9.04		2.88	-1.20	-4.88	0.0	0.00
Heavy Trucks: 85.3	8 -14.31		2.88	-1.20	-5.18	0.0	0.00
Unmitigated Noise Levels (wi		barrier a	tenuation)				
VehicleType Leq Peak H			q Evening	Leq Nig		Ldn	CNEL
	58.4	67.6	66.1		63.4	70.6	71
	67.9	67.2	64.2		63.3	70.4	
	67.0	65.5	60.9		64.7	71.2	
Vehicle Noise:	72.5	71.6	69.0	)	68.6	75.5	75
Centerline Distance to Noise	Contour (in fee						
			70 dBA	65 dB.	4	60 dBA	55 dBA
		Ldn:	214		462	995	2,14
	С	NEL:	223		481	1,035	2,23

	FHV	VA-RD-77-108 HI	GHWAY	NOISE PR	REDICTIO	N MODEL			
Scenario	p: Existing Wit	thout Project			Project Na	ame: Ride	r 2 & 4		
	e: Ramona Ex				Job Nun	nber: 1155	9		
Road Segmen	t: e/o Webste	r Av.							
	SPECIFIC IN	PUT DATA	_				EL INPUT	S	
Highway Data				Site Con	ditions (H	ard = 10, :	Soft = 15)		
Average Daily 1	Traffic (Adt):	38,445 vehicles				Auto	s: 15		
Peak Hour F	Percentage:	6.83%		Me	dium Truck	(s (2 Axles	;): 15		
Peak Ho	our Volume:	2,626 vehicles		He	avy Trucks	: (3+ Axles	;): 15		
Veh	nicle Speed:	50 mph		Vehicle I	Mix				
Near/Far Lan	e Distance:	102 feet			icleType	Day	Evening	Night	Daily
Site Data					Aut	os: 68.2	% 12.3%	19.6%	91.219
Ban	rier Height:	0.0 feet		Me	edium Truc	ks: 69.8	% 8.8%	21.4%	6.78
Barrier Type (0-Wa	•	0.0		F	leavy Truc	ks: 58.3	% 5.1%	36.6%	2.019
Centerline Dis		92.0 feet		Naina C.	ource Elev	ationa /!	faati		
Centerline Dist. t	o Observer:	92.0 feet		Noise Sc			reet)		
Barrier Distance t	o Observer:	0.0 feet			Autos:	0.000			
Observer Height (A	Above Pad):	5.0 feet			m Trucks:	2.297	Grade Ad	ivetment	
Pa	d Elevation:	0.0 feet		Heav	y Trucks:	8.004	Grade Ad	Justinent	0.0
Roa	d Elevation:	0.0 feet		Lane Eq	uivalent D	istance (ii	n feet)		
R	Road Grade:	0.0%			Autos:	76.733			
	Left View:	-90.0 degrees		Mediu	m Trucks:	76.618			
	Right View:	90.0 degrees		Heav	y Trucks:	76.629			
FHWA Noise Mode	I Calculations	5							
VehicleType	REMEL	Traffic Flow	Distance	e Finite		Fresnel	Barrier Att	en Ber	m Atten
Autos:	70.20	1.50		2.89	-1.20	-4.7		000	0.00
Medium Trucks:	81.00	-9.79	-	2.88	-1.20	-4.8		000	0.00
Heavy Trucks:	85.38	-15.06	-2	2.88	-1.20	-5.1	8 0.0	000	0.00
Unmitigated Noise				,				1	
	Leq Peak Hou		-	Evening	Leq Nig	-	Ldn		VEL
Autos:	67			65.4		62.6	69.9		70.
Medium Trucks:	67			63.5		62.6	69.		69.
Heavy Trucks:	66			60.1		64.0	70.4		70
Vehicle Noise:	71		9	68.3		67.9	74.	В	75
Centerline Distance	e to Noise Co	ntour (in feet)	-						
				0 dBA	65 dB		60 dBA		dBA
		Ldi		191		412	887		1,91
		CNE		199		428	922		1.98

Monday, August 10, 2020

FH	WA-RD-77-108 H	HIGHWAY	<u>Y NOISE P</u>	REDICTI		EL	
Scenario: Existing W Road Name: Ramona E Road Segment: e/o Nevad	Exwy.				Name: Ri Imber: 11	der 2 & 4 559	
SITE SPECIFIC I	NPUT DATA					DEL INPUT	s
Highway Data			Site Cor	ditions (	Hard = 1	0, Soft = 15)	
Average Daily Traffic (Adt):	42,502 vehicles	6			AL	<i>itos:</i> 15	
Peak Hour Percentage:	6.83%				cks (2 Ax	,	
Peak Hour Volume:	2,903 vehicles		He	avy Truc	ks (3+ Ax	les): 15	
Vehicle Speed:	50 mph		Vehicle	Mix			
Near/Far Lane Distance:	102 feet			icleType	D	ay Evening	Night Dail
Site Data						8.2% 12.3%	19.6% 91.2
Barrier Height:	0.0 feet		M	edium Tr	ucks: 6	9.8% 8.8%	21.4% 6.7
Barrier Type (0-Wall, 1-Berm):	0.0			Heavy Tr	ucks: 5	B.3% 5.1%	36.6% 2.0
Centerline Dist. to Barrier:	92.0 feet		Noice S	ourco Ek	evations	(in foot)	
Centerline Dist. to Observer:	92.0 feet		NOISE 3	Autos		, ,	
Barrier Distance to Observer:	0.0 feet		Mediu	m Trucks		-	
Observer Height (Above Pad):	5.0 feet			/y Trucks			iustment: 0.0
Pad Elevation:	0.0 feet			·			
Road Elevation:	0.0 feet		Lane Eq		Distance	. ,	
Road Grade:	0.0%			Autos			
Left View:	-90.0 degrees			m Trucks			
Right View:	90.0 degrees	5	Hea	/y Trucks	76.62	29	
FHWA Noise Model Calculation	ns						
VehicleType REMEL	Traffic Flow	Distance	e Finite	Road	Fresnel	Barrier Atte	en Berm Atte
Autos: 70.20	) 1.93	-2	2.89	-1.20	-4	1.76 0.0	0.0 0.0
Medium Trucks: 81.00		-	2.88	-1.20			0.0 0.0
Heavy Trucks: 85.38	3 -14.63	-2	2.88	-1.20	-5	5.18 0.0	0.0 0.0
Unmitigated Noise Levels (with	hout Topo and b	arrier att	enuation)				
VehicleType Leq Peak Ho			Evening	Leq I		Ldn	CNEL
		7.2	65.8		63.1	70.3	
		6.9	63.9		63.0	70.1	
		5.2	60.6		64.4	70.9	
Vehicle Noise: 7	2.2 7	1.3	68.7		68.3	75.2	2 7
Centerline Distance to Noise C	Contour (in feet)						
			0 dBA	65 c		60 dBA	55 dBA
		dn:	204		440	948	1.
		EL:	212		458	986	2.1

Medium Trucks:         81.00         -9.69         -2.88         -1.20         -4.88         0.000         0.000           Heavy Trucks:         85.38         -14.97         -2.88         -1.20         -5.18         0.000         0.000           Unnitigated Noise Levels (without Topo and barrier attenuation)         Use Vering         Leq Pair         Leq Night         Ldn         CNEL           VehiceType         Leq Peak Hour         Leq Day         Leq Night         Ldn         CNEL           Autos:         67.7         66.9         65.5         62.7         70.0         70.4           Medium Trucks:         67.2         66.5         63.6         62.6         69.7         70.0           Heavy Trucks:         66.3         64.8         60.2         64.1         70.5         70.6           Vehicle Noise:         71.9         71.0         68.4         68.0         74.9         75.1           Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         194         418         900         1.339		FHV	VA-RD-77-108 HI	GHWAY	NOISE PF	REDICTI	ON MODE			
Highway Data         Site Conditions (Hard = 10, Soft = 15)           Average Daily Traffic (Adt):         39,309 vehicles         Autos::         15           Peak Hour Procentage:         6,83%         Medium Trucks: (2,4ke):         15           Peak Hour Volume:         2,685 vehicles         Medium Trucks: (2,4ke):         15           Vehicle Speed:         50 mph         Vehicle Mix         Vehicle Mix           Site Data         Autos:         68,2%         12,3%         91,6%         91,21%           Site Data	Road Nam	e: Ramona Ex	wy.							
Average Daily Traffic (Adt):         39,309 vehicles         Autos:         15           Peak Hour Percentage:         6.83%         Medium Trucks (2 Axles):         15           Peak Hour Volume:         2,685 vehicles         Medium Trucks (2 Axles):         15           Vehicle Speed:         50 mph         Heavy Trucks (3 Axles):         15           Site Data         Autos:         68.2%         12.3%         19.6% pl.21%           Barrier Height:         0.0 feet         Might Trucks:         68.2%         12.3%         19.6% pl.21%           Barrier Type (0-Wall, 1-Berm):         0.0         Centerline Dist. to Barrier:         92.0 feet         Medium Trucks:         68.3%         5.1%         36.6%         201%           Centerline Dist. to Deserver:         9.0 feet         Autos:         0.00         Medium Trucks:         8.004         Grade Adjustment:         0.0           Barrier Distance to Observer:         0.0 feet         Autos:         70.20         159         -2.48         -120         -4.76         0.000         0.000           Medium Trucks:         81.30         -9.69         -2.88         -1.20         -5.18         0.000         0.000           Medium Trucks:         85.38         -14.97         -2.88         -1.	SITE	SPECIFIC IN	PUT DATA			N	OISE MO	DEL INPUT	5	
Barler Hour Percentage:         6.83%         Medium Trucks (2 Atles):         15           Peak Hour Volume:         2.885 vehicles         Heavy Trucks (3 + Axles):         15           Vehicle Speed:         50 mph         Vehicle Irype         Daily         Daily           Site Data         Autos:         68.2%         12.3%         19.6%         91.21%           Barrier Height:         0.0 feet         Autos:         68.2%         12.3%         19.6%         91.21%           Barrier Height:         0.0 feet         Autos:         68.2%         12.3%         19.6%         91.21%           Centerline Dist. to Diserver:         92.0 feet         Autos:         68.2%         12.3%         19.6%         91.21%           Centerline Dist. to Observer:         92.0 feet         Autos:         0.000         Medium Trucks:         2.97           Observer Height (Above Pad):         5.0 feet         Autos:         76.73         Medium Trucks:         76.618           Road Elevation:         0.0 feet         Autos:         76.73         Medium Trucks:         76.629           FHWA Noise Model Calculations         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         70.20         1.59         <	Highway Data				Site Con	ditions (	'Hard = 10,	Soft = 15)		
Peak Hour Volume:         2.685 vehicles           Vehicle Speed:         50 mph           Near/Far Lane Distance:         102 feet           Barrier Height:         0.0 feet           Barrier Height:         0.0 feet           Barrier Jype (0-Wall, 1-Berm):         0.0           Centerline Dist. to Dserver:         92.0 feet           Deserver Height (Above Pad):         5.0 feet           Barrier Distance to Observer:         92.0 feet           Road Grade:         0.0%           Left View:         90.0 feet           Road Grade:         0.0%           Left View:         90.0 degrees           Right View:         90.0 degrees           FHWA Noise Model Calculations         Vehicle Type         Barrier Atten         Bernier Atten           VehicleType         Remay Trucks:         76.618           Heavy Trucks:         81.00         9.68         2.28         -1.20         -4.76         0.000         0.000           Medium Trucks:         81.00         9.69         2.28         -1.20         -4.76         0.000         0.000           Heavy Trucks:         81.00         9.69         2.88         -1.20         -4.76         0.000         0.000 <t< td=""><td></td><td>, ,</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>		, ,								
Vehicle Speed: Near/Far Lane Distance:         50 mph 102 feet         Vehicle Mix           Site Data         Autos:         68.2%         12.3%         19.6%         91.21%           Barrier Height:         0.0 feet         Medium Trucks:         68.2%         12.3%         19.6%         91.21%           Barrier Type (0-Wall, 1-Berm):         0.0         feet         Medium Trucks:         68.3%         21.4%         6.7%           Centerline Dist to Dsarrier:         92.0 feet         Noise Source Elevations (in feet)         0.0         60.0%         Medium Trucks:         20.0%         Medium Trucks:         0.00         Medium Trucks:         8.004         Grade Adjustment:         0.0           Barrier Distance to Observer:         0.0 feet         Autos:         0.00         Medium Trucks:         8.004         Grade Adjustment:         0.0           Pad Elevation:         0.0 feet         Autos:         76.733         Medium Trucks:         76.618           Heavy Trucks:         81.00         -9.69         -2.88         -1.20         -4.76         0.000         0.000           Medium Trucks:         85.38         -14.97         -2.88         -1.20         -5.18         0.000         0.000           Medium Trucks:         85.38	Peak Hour	Percentage:	6.83%					-)		
Near/Far Lane Distance:         102 feet         Verificite Type         Day         Evening         Night         Daily           Site Data         Autos:         68.2%         12.3%         19.6%         91.21%           Barrier Height:         0.0 feet         Autos:         68.2%         12.3%         19.6%         91.21%           Barrier Type (0-Wall, 1-Berm):         0.0         0.0         Heavy Trucks:         68.2%         5.1%         36.6%         2.01%           Centerline Dist. to Barrier:         92.0 feet         Moles Source Elevations (in feet)         Moles Source Elevations:         0.000           Barrier Type (0-Wall, 1-Berm):         0.0 feet         Autos:         0.000         Medium Trucks:         2.01%           Barrier Jack cold Elevation:         0.0 feet         Autos:         7.73         Medium Trucks:         76.618           Road Elevation:         0.0 feet         Issace         Finite Road         Fresnel         Barrier Atten         Berrier Atten           Medium Trucks:         70.20         1.59         -2.89         -1.20         -4.76         0.000         0.000           Medium Trucks:         81.30         -9.69         -2.88         -1.20         -5.18         0.000         0.000 <tr< td=""><td>Peak H</td><td>our Volume:</td><td>2,685 vehicles</td><td></td><td>He</td><td>avy Truc</td><td>ks (3+ Axle</td><td>s): 15</td><td></td><td></td></tr<>	Peak H	our Volume:	2,685 vehicles		He	avy Truc	ks (3+ Axle	s): 15		
Near/Far Lane Distance:         102 feet           Site Data         VehicleType         Day         Evening         Night         Dally           Site Data         Autos:         68.2%         1.23%         19.6%         91.21%           Barrier Type (0-Wall, 1-Berm):         0.0         Medi/imm Trucks:         68.2%         1.23%         19.6%         91.21%           Centerline Dist. to Doserver:         0.0         Medi/imm Trucks:         68.2%         1.23%         19.6%         91.21%           Barrier Type (0-Wall, 1-Berm):         0.0         Medi/imm Trucks:         68.2%         1.23%         19.6%         2.14%         6.7%           Centerline Dist. to Doserver:         92.0 feet         Medi/imm Trucks:         68.3%         5.1%         36.6%         2.01%           Deserver Height (Nove Pad):         5.0 feet         Autos:         0.00         Medium Trucks:         8.004         Grade Adjustment:         0.0           Road Elevation:         0.0 feet         Left View:         90.0 degrees         Medium Trucks:         76.618           Heavy Trucks:         81.00         -9.69         -2.88         -1.20         -4.76         0.000         0.000           Medium Trucks:         85.38         -14.97	Ve	hicle Speed:	50 mph		Vehicle I	Nix				
Site Data         Autos:         68.2%         12.3%         19.6%         91.21%           Barrier Height:         0.0 feet         Medium Trucks:         69.8%         8.8%         21.4%         6.78%           Barrier Dist         Dobserver:         92.0 feet         Medium Trucks:         69.8%         8.8%         21.4%         6.78%           Barrier Dist to Barrier:         92.0 feet         Moise Source Ilevations (in feet)         Autos:         0.00           Centerline Dist to Doserver:         0.0 feet         Autos:         0.000         Medium Trucks:         2.97           Observer Height (Above Pad):         0.0 feet         Autos:         76.733         Medium Trucks:         76.618           Road Crade:         0.0%         Autos:         76.733         Medium Trucks:         76.629           FHWA Noise Model Calculations         Vehicle Type         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Bern Atten           Autos:         70.20         1.59         -2.89         -1.20         -4.76         0.000         0.000           Medium Trucks:         81.00         -9.69         -2.88         -1.20         -4.76         0.000         0.000	Near/Far La	ne Distance:	102 feet				Da	y Evening	Night	Daily
Barrier Triger Height:         0.0 teet         Heavy Truck:         58.3%         5.1%         36.6%         2.01%           Centerline Dist. to Doserver:         92.0 feet         Noise Source Elevations (in feet)         Moise Source Elevations (in feet)           Barrier Tisger         0.0 feet         Autos:         0.000         Medium Trucks:         2.97           Barrier Tisger         0.0 feet         Autos:         76.618         Medium Trucks:         76.618           Road Grade:         0.0%         Left View:         90.0 degrees         Medium Trucks:         76.618           WeikileType         REMEL Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Bern Atten           Autos:         70.20         1.59         -2.88         -1.20         -4.76         0.000         0.000           Medium Trucks:         85.38         -14.97         -2.88         -1.20         -4.76         0.000         0.000           Medium Trucks:         85.38         -14.97         -2.88         -1.20         -4.76         0.000         0.000           Medium Trucks:         67.7         66.9         65.5         62.7         70.0         70.4           Medium Trucks:         67.2	Site Data					A			19.6%	91.21%
Barrier Type (0-Wall, 1-Berm):         0.0         Heavy Trucks:         58.3%         5.1%         36.6%         2.01%           Centerline Dist. to Dserver:         92.0 feet         Noise Source Elevations (in feet)         Autos:         0.00           Barrier Distance to Observer:         92.0 feet         Noise Source Elevations (in feet)         0.0           Observer Height (Above Pad):         5.0 feet         Autos:         0.00         Medium Trucks:         2.297           Pad Elevation:         0.0 feet         Autos:         0.00 feet         Autos:         0.0           Road Grade:         0.0%         Left View:         90.0 degrees         Medium Trucks:         76.618           WeikeType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Bern Atten           Autos:         70.20         1.59         -2.88         -1.20         -4.76         0.000         0.000           Medium Trucks:         81.90         -9.69         -2.88         -1.20         -4.76         0.000         0.000           Medium Trucks:         85.38         -14.97         -2.88         -1.20         -5.18         0.000         0.000           Medium Trucks:         66.5	Bai	rier Heiaht:	0.0 feet		Me	edium Tr	ucks: 69.	8% 8.8%	21.4%	6.78%
Centerline Dist. to Observer:         92.0 feet         Noise Source Devators (in reet)           Barrier Distance to Observer:         0.0 feet         Matrix:         0.000           Observer Height (Above Pad):         5.0 feet         Matrix:         0.000           Road Elevation:         0.0 feet         Matrix:         0.000           Road Elevation:         0.0 feet         Lane Equivalent Distance (in feet)           Road Grade:         0.0%         Autos::         76.33           Left View:         -90.0 degrees         Medium Trucks:         76.629           FHWA Noise Model Calculations         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos::         70.20         1.59         -2.89         -1.20         -4.76         0.000         0.000           Medium Trucks:         81.00         -9.69         -2.88         -1.20         -4.76         0.000         0.000           Medium Trucks:         85.38         -14.97         -2.88         -1.20         -4.76         0.000         0.000           Unnitigated Noise Levels (without Topo and barrier attenuation)         Up and barrier attenuation)         CNEL         CNEL           Autos:         67.7         66.9         65.5         62.7 <td></td> <td></td> <td>0.0</td> <td></td> <td>ŀ</td> <td>leavy Tr</td> <td>ucks: 58.</td> <td>3% 5.1%</td> <td>36.6%</td> <td>2.01%</td>			0.0		ŀ	leavy Tr	ucks: 58.	3% 5.1%	36.6%	2.01%
Centerline Dist. to Observer:         92.0 feet           Barrier Distance to Observer:         0.0 feet           Doserver Height (Above Pad):         5.0 feet           Pad Elevation:         0.0 feet           Road Elevation:         0.0 feet           Road Elevation:         0.0 feet           Road Elevation:         0.0 feet           Road Elevation:         0.0 feet           Autos:         76.73           Medium Trucks:         76.73           Medium Trucks:         76.73           Medium Trucks:         76.629           FHWA Noise Model Calculations         Pad Elevation:           Vehicle Type         REMEL         Traffic Flow           Justance         Finite Road         Fresnel           Autos:         70.20         1.59           -2.89         -1.20         -4.76           Medium Trucks:         81.00         -9.69           -2.88         -120         -5.18         0.000           Medium Trucks:         67.7         66.9         65.5         62.7         70.0           Vehicle Type         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Autos: <t< td=""><td>Centerline Dis</td><td>st. to Barrier:</td><td>92.0 feet</td><td></td><td>Noise So</td><td>ource Ele</td><td>evations (i</td><td>n feet)</td><td></td><td></td></t<>	Centerline Dis	st. to Barrier:	92.0 feet		Noise So	ource Ele	evations (i	n feet)		
Barrier Distance to Observer:         0.0 feet           Observer Height (Above Pad):         5.0 feet           Pad Elevation:         0.0 feet           Road Elevation:         0.0 feet           Road Grade:         0.0%           Left View:         90.0 degrees           Right View:         90.0 degrees           WehiceType         Remet         Traffic Flow         Distance           VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         70.20         1.59         -2.89         -1.20         -4.76         0.000         0.0000           Medium Trucks:         81.00         -9.69         -2.88         -1.20         -4.76         0.000         0.0000           Medium Trucks:         81.00         -9.69         -2.88         -1.20         -4.76         0.000         0.0000           Medium Trucks:         85.38         -14.97         -2.88         -12.0         -4.76         0.000         0.0000           Medium Trucks:         67.7         66.9         65.5         62.7         70.0         70.4           Medium Trucks:         67.2         66.5	Centerline Dist.	to Observer:	92.0 feet					,		
Observer Height (Above Pad):         5.0 feet         Heavy Trucks:         8.0.04         Grade Adjustment:         0.0           Road Elevation:         0.0 feet         Lane Equivalent Distance (in feet)         Lane Equivalent Distance (in feet)           Road Grade:         0.0%         Autos:         76.33           Left View:         90.0 degrees         Medium Trucks:         76.618           Weikine Trucks:         76.618         Barrier Atten         Bernier Atten           Autos:         70.20         1.59         -2.89         -1.20         -4.76         0.000         0.000           Medium Trucks:         85.38         -14.97         -2.88         -1.20         -4.76         0.000         0.000           Medium Trucks:         85.38         -14.97         -2.88         -1.20         -4.76         0.000         0.000           Medium Trucks:         85.38         -14.97         -2.88         -1.20         -4.76         0.000         0.000           Umitigated Noise Levels (without Topo and barrier attenuation)         Vehicle Noise         67.7         66.9         65.5         62.7         70.0         70.4           Medium Trucks:         67.2         66.5         63.6         62.6         68.7         70.0<	Barrier Distance	to Observer:	0.0 feet		Mediu					
Pad Elevation:         0.0 feet         Lane Equivalent Distance (in feet)           Road Clevation:         0.0 feet         Lane Equivalent Distance (in feet)           Road Grade:         0.0%         Autos:         76.733           Left View:         -90.0 degrees         Medium Trucks:         76.618           Right View:         90.0 degrees         Medium Trucks:         76.629           FHWA Noise Model Calculations           VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Bern Atten           Autos:         70.20         1.59         -2.89         -1.20         -4.76         0.000         0.000           Medium Trucks:         81.00         -9.69         -2.88         -1.20         -4.78         0.000         0.000           Medium Trucks:         85.38         -14.97         -2.88         -1.20         -4.78         0.000         0.000           Umitigate Moise Levels (without Topo and barrier attenuation)         -4.76         0.000         0.000           Umitigate Moise Levels (without Topo and barrier attenuation)         -4.88         0.000         0.000           Umitigate Moise Levels (without Topo and barrier attenuation)         -4.76	Observer Height (	Above Pad):	5.0 feet						iustment	0.0
Road Grade:         0.0% bit         Autos:         76.733           Left View:         -90.0 degrees         Medium Trucks:         76.618           Right View:         90.0 degrees         Medium Trucks:         76.629           FHWA Noise Model Calculations           VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         70.20         1.59         -2.89         -1.20         -4.76         0.000         0.000           Medium Trucks:         81.00         -9.69         -2.88         -120         -4.78         0.000         0.000           Medium Trucks:         81.00         -9.69         -2.88         -120         -5.18         0.000         0.000           Umitigated Noise Levels (without Topo and barier attenuation)         Medium Trucks:         67.7         66.9         65.5         62.7         70.0         70.4           Autos:         67.7         66.9         65.5         62.6         69.7         70.0           Medium Trucks:         66.3         64.8         60.2         64.1         70.5         70.6           Vehicle Noise:         71.9         71.0	Pa	ad Elevation:	0.0 feet							
Left View:         -90.0 degrees         Medium Trucks:         76.618           Right View:         90.0 degrees         Heavy Trucks:         76.629           FHWA Noise Model Calculations         Email Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atten           Vehicle Type         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         70.20         1.59         -2.89         -1.20         -4.76         0.000         0.000           Medium Trucks:         81.00         -9.69         -2.88         -1.20         -4.76         0.000         0.000           Unnitigated Noise Levels (without Topo and barrier attenuation)         -5.18         0.000         0.000           VehicleType         Leq Day         Leq Zee Noing         Leq Night         Ldn         CNEL           Autos:         67.7         66.9         65.5         62.7         70.0         70.4           Medium Trucks:         66.3         63.6         62.6         69.7         70.0         70.0           Heavy Trucks:         66.3         64.8         60.2         64.1         70.5         70.6 <td>Roa</td> <td>ad Elevation:</td> <td></td> <td></td> <td>Lane Equ</td> <td></td> <td></td> <td>,</td> <td></td> <td></td>	Roa	ad Elevation:			Lane Equ			,		
Right View:         90.0 degrees         Heavy Trucks:         76.629           FHWA Noise Model Calculations         Distance         Finite Road         Fresnel         Barrier Atten         Bern Atten           VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Bern Atten           Autos:         70.20         1.59         -2.88         -1.20         -4.76         0.000         0.000           Medium Trucks:         85.38         -14.97         -2.88         -1.20         -4.78         0.000         0.000           Unnitigated Noise Levels (without Topo and barrier attenuation)         VehicleType         Leq Peak Hour         Leq Day         Leq Right         Ldn         CNEL           Vehicle Type         66.3         63.6         62.6         68.7         70.0         70.4           Medium Trucks:         67.7         66.9         63.6         62.6         68.7         70.0           Medium Trucks:         67.2         66.5         63.6         62.6         68.7         70.0           Vehicle Noise:         71.9         71.0         68.4         68.0         74.9         75.1           Centerline Distance to Noise Contour (in fee	I	Road Grade:	0.0%							
FHWA Noise Model Calculations           FHWA Noise Model Calculations         End of the calculations           VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         70.20         1.59         -2.89         -1.20         -4.76         0.000         0.000           Medium Trucks:         81.00         -9.69         -2.88         -1.20         -4.76         0.000         0.000           Heavy Trucks:         85.38         -14.97         -2.88         -1.20         -5.18         0.000         0.000           Unnitigated Noise Levels (without Topo and barrier attenuation)         VehicleType         Leg Peak Hour         Leg Day         Leg Evening         Leq Night         Ldn         CNEL           Autos:         67.7         66.9         65.5         62.7         70.0         70.4           Medium Trucks:         66.3         64.8         60.2         64.1         70.5         70.6           Heavy Trucks:         66.3         64.8         60.2         64.1         70.5         70.6           Vehicle Noise:         71.9         71.0         68.4         68.0         74.9         75.1<		Left View:	-90.0 degrees							
VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         70.20         1.59         -2.89         -1.20         -4.76         0.000         0.000           Medium Trucks:         81.00         -9.69         -2.88         -1.20         -4.76         0.000         0.000           Heavy Trucks:         85.38         -14.97         -2.88         -1.20         -5.18         0.000         0.000           Unnittigated Noise Levels (without Topo and barrier attenuation)         VehicleType         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Autos:         67.7         66.9         65.5         63.6         62.6         69.7         70.0           Heavy Trucks:         66.3         64.8         60.2         64.1         70.5         70.6           Vehicle Noise:         71.9         71.0         68.4         68.0         74.9         75.1           Centerline Distance to Noise Contour (in feet)         10         10         55 dBA         60 dBA         55 dBA           Ldn:         194         418         900         1,939         1,939<		Right View:	90.0 degrees		Heav	y Trucks	76.629			
Autos:         70.20         1.59         -2.89         -1.20         -4.76         0.000         0.000           Medium Trucks:         81.00         -9.69         -2.88         -1.20         -4.76         0.000         0.000           Heavy Trucks:         81.00         -9.69         -2.88         -1.20         -4.76         0.000         0.000           Unnitigate Moise Levels (without Topo and barier attenuation)         -2.88         -1.20         -5.18         0.000         0.000           Unnitigate Moise Levels (without Topo and barier attenuation)         -2.88         -1.20         -5.18         0.000         0.000           VehicleType         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Autos:         67.7         66.9         65.5         62.7         70.0         70.4           Medium Trucks:         67.2         66.5         63.6         62.6         69.7         70.0           Heavy Trucks:         66.3         64.8         60.2         64.1         70.5         70.6           Vehicle Noise:         71.9         71.0         68.4         68.0         74.9         75.1           Centerline Distance to Noise Contour (in feet	FHWA Noise Mode	el Calculations	5	1						
Medium Trucks:         81.00         -9.69         -2.88         -1.20         -4.88         0.000         0.000           Heavy Trucks:         85.38         -14.97         -2.88         -1.20         -5.18         0.000         0.000           Unnitigated Noise Levels (without Topo and barrier attenuation)         Leq Night         Ldn         CNEL           VehiceType         Leq Peak Hour         Leq Day         Leq Vening         Leq Night         Ldn         CNEL           Autos:         67.7         66.9         65.5         62.7         70.0         70.4           Medium Trucks:         67.2         66.5         63.6         62.6         69.7         70.0           Vehicle Noise:         71.9         71.0         68.4         60.0         74.9         75.1           Centerline Distance to Noise Contour (in feet)         Image: Contour (in feet)         Image: Contour (in feet)         Contour (in feet)         Contour (in 94         418         900         1,339	VehicleType	REMEL	Traffic Flow	Distance	Finite				en Ber	m Atten
Heavy Trucks:         85.38         -14.97         -2.88         -1.20         -5.18         0.000         0.000           Unnitigated Noise Levels (without Topo and barrier attenuation)         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           VehicleType         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Medium Trucks:         67.7         66.9         65.5         62.7         70.0         70.4           Medium Trucks:         66.3         64.8         60.2         64.1         70.5         70.6           Vehicle Noise:         71.9         71.0         68.4         68.0         74.9         75.1           Centerline Distance to Noise Contour (in feet)	Autos:	70.20	1.59	-2.8	39	-1.20	-4.	76 0.0	000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)           VehicleType         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Autos:         67.7         66.9         65.5         62.7         70.0         70.4           Medium Trucks:         67.2         66.5         63.6         62.6         69.7         70.0           Heavy Trucks:         66.3         64.8         60.2         64.1         70.5         70.6           Vehicle Noise:         71.9         71.0         68.4         68.0         74.9         75.1           Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         194         418         900         1,339										
VehicleType         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Autos:         67.7         66.9         65.5         62.7         70.0         70.4           Medium Trucks:         67.2         66.5         63.6         62.6         69.7         70.0           Heavy Trucks:         66.3         64.8         60.2         64.1         70.5         70.6           Vehicle Noise:         71.9         71.0         68.4         68.0         74.9         75.1           Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA           Ldm:         194         418         900         1,339	Heavy Trucks:	85.38	-14.97	-2.8	38	-1.20	-5.	18 0.0	000	0.000
Autos:         67.7         66.9         65.5         62.7         70.0         70.4           Medium Trucks:         67.2         66.5         63.6         62.6         69.7         70.0           Heavy Trucks:         66.3         64.8         60.2         64.1         70.5         70.6           Vehicle Noise:         71.9         71.0         68.4         68.0         74.9         75.1           Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA           Ldm:         194         418         900         1,939	Unmitigated Noise	e Levels (with								
Medium Trucks:         67.2         66.5         63.6         62.6         69.7         70.0           Heavy Trucks:         66.3         64.8         60.2         64.1         70.5         70.6           Vehicle Noise:         71.9         71.0         68.4         68.0         74.9         75.1           Centerline Distance to Noise Contour (in feet)		,		,	•	Leq I				
Heavy Trucks:         66.3         64.8         60.2         64.1         70.5         70.6           Vehicle Noise:         71.9         71.0         68.4         68.0         74.9         75.1           Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA           Ldm:         194         418         900         1,939				-						
Vehicle Noise:         71.9         71.0         68.4         68.0         74.9         75.1           Centerline Distance to Noise Contour (in feet)		•••		-						
Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         194         418         900         1,939										
TO dBA         65 dBA         60 dBA         55 dBA           Ldn:         194         418         900         1,939	Vehicle Noise:	71	.9 71.	0	68.4		68.0	74.9	)	75.1
Ldn: 194 418 900 1,939	Centerline Distance	e to Noise Co	ntour (in feet)							
					-	65 0				
CNEL: 202 435 936 2,017			CNEL	.:	202		435	936		2,017

	FH\	WA-RD-77-108	HIGHWA	Y NOI	SE PI	REDICTIO	N MOD	EL			
Road Nam	io: Existing Wi le: Ramona E nt: e/o Perris B	xwy.				Project N Job Nur			& 4		
SITE	SPECIFIC IN	NPUT DATA				NO	ISE M	ODEI		3	
Highway Data				Site	e Con	ditions (H	lard = 1	0, So	ft = 15)		
Average Daily	Traffic (Adt):	35,282 vehicl	es				A	utos:	15		
Peak Hour	Percentage:	6.83%			Me	dium Truc	ks (2 A)	kles):	15		
Peak H	lour Volume:	2,410 vehicle	s		He	avy Truck	s (3+ A)	kles):	15		
Ve	hicle Speed:	50 mph		Vet	nicle I	Mix					
Near/Far La	ne Distance:	102 feet				icleType	Г	Dav	Evening	Night	Daily
Site Data								8.2%	12.3%	19.6%	
	rrier Height:	0.0 feet			M	edium Truc	cks: 6	9.8%	8.8%	21.4%	
Barrier Type (0-W		0.0			F	leavy True	cks: 5	58.3%	5.1%	36.6%	2.01%
Centerline Di		92.0 feet									
Centerline Dist		92.0 feet		Noi	se So	ource Elev			et)		
Barrier Distance		0.0 feet				Autos:	0.0				
Observer Height (		5.0 feet		٨		m Trucks:	2.2				
	ad Elevation:	0.0 feet			Heav	ry Trucks:	8.0	04	Grade Adj	ustment	: 0.0
Roi	ad Elevation:	0.0 feet		Lan	e Eq	uivalent D	istance	e (in f	eet)		
	Road Grade:	0.0%				Autos:	76.7	33			
	Left View:	-90.0 degre	es	٨	/lediu	m Trucks:	76.6	18			
	Right View:	90.0 degre	es		Heav	y Trucks:	76.6	29			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distan	ce i	Finite	Road	Fresne		Barrier Atte	en Ber	m Atten
Autos:	70.20			-2.89		-1.20		4.76	0.0		0.000
Medium Trucks:	81.00			-2.88		-1.20		4.88	0.0		0.000
Heavy Trucks:	85.38			-2.88		-1.20	-	5.18	0.0	00	0.00
Unmitigated Noise											
VehicleType	Leq Peak Hou			q Even	•	Leq Ni	•		Ldn		NEL
Autos:	•••	7.2	66.4		65.0		62.3		69.5		69.9
Medium Trucks:		3.8	66.1		63.1		62.2		69.3		69.5
Heavy Trucks:		5.9	64.4		59.8		63.6		70.0		70.2
Vehicle Noise:		1.4	70.5		67.9		67.5		74.4		74.6
Centerline Distant	ce to Noise C	ontour (in feet			_						
				70 dBA		65 dE		6	0 dBA	55	dBA
		-	Ldn:		180		389		838		1,805
		С	NEL:		188		404		871		1,877

	FHV	VA-RD-77-108	HIGI	HWAY N	OISE PRI	EDICT	ON MO	DEL			
Scenario	Existing Wit	thout Project			F	Project	Name: I	Rider 2	2 & 4		
Road Name	Ramona Ex	wy.				Job N	umber:	11559			
Road Segment	e/o Redland	is Av.									
	PECIFIC IN	PUT DATA								5	
Highway Data				S	Site Cond	itions	(Hard =	10, So	oft = 15)		
Average Daily T	raffic (Adt):	41,716 vehicle	es					Autos:	15		
Peak Hour P	ercentage:	6.83%			Med	ium Tru	icks (2 A	Axles):	15		
Peak Ho	ur Volume:	2,849 vehicles	5		Hea	vy Truc	:ks (3+ A	Axles):	15		
Vehi	cle Speed:	50 mph		v	ehicle M	ix					
Near/Far Lane	e Distance:	102 feet		F		leType		Dav	Evening	Night	Daily
Site Data								68.2%	•	19.6%	
Barr	ier Height:	0.0 feet			Med	dium Ti	ucks:	69.8%	8.8%	21.4%	6.78%
Barrier Type (0-Wa		0.0			He	eavy Ti	ucks:	58.3%	5.1%	36.6%	2.01%
Centerline Dist		92.0 feet		-							
Centerline Dist. to		92.0 feet		^	loise Sou				eet)		
Barrier Distance to		0.0 feet				Autos		000			
Observer Height (A		5.0 feet			Medium			297			
÷ (	Elevation:	0.0 feet			Heavy	Truck	s: 8.0	004	Grade Ad	ustment	0.0
Road	Elevation:	0.0 feet		L	ane Equi	ivalent	Distand	ce (in i	feet)		
R	oad Grade:	0.0%				Auto	s: 76.	733			
	Left View:	-90.0 degree	s		Medium	Truck	s: 76.	618			
1	Right View:	90.0 degree	es		Heavy	Truck	s: 76.	629			
FHWA Noise Model	Calculations	5		-							
VehicleType	REMEL	Traffic Flow	Di	stance	Finite F	Road	Fresn	iel	Barrier Att	en Ber	m Atten
Autos:	70.20	1.85		-2.89	)	-1.20		-4.76	0.0	000	0.00
Medium Trucks:	81.00	-9.43		-2.88		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	85.38	-14.71		-2.88	3	-1.20		-5.18	0.0	000	0.00
Unmitigated Noise			-	er attenu	uation)						
	eq Peak Hou.			Leq Ev		Leq	Night		Ldn		VEL
Autos:	68.	-	67.2		65.7		63.0		70.2	-	70.0
Medium Trucks:	67.		66.8		63.8		62.9		70.0		70.3
Heavy Trucks:	66.	-	65.1		60.5		64.3		70.8		70.9
Vehicle Noise:	72.	.2	71.2		68.6		68.2	2	75.1	1	75.4
Centerline Distance	to Noise Co	ntour (in feet,	)			-	-				
				70 d		65	dBA		0 dBA		dBA
			Ldn:		202		435		937		2,018
			VEL		210		452		974		2,098

Monday, August 10, 2020

	FHV	VA-RD-77-108	HIGH	WAY N	IOISE PF	REDICT	ION MODE	EL		
Scenario: Ex Road Name: Ra Road Segment: w/o	amona Ex	wy.					Name: Ri umber: 11			
	CIFIC IN	IPUT DATA						DEL INPUT	S	
Highway Data				3	Site Con	ditions	(Hard = 10	), Soft = 15)		
Average Daily Traffic	c (Adt):	37,257 vehicle	es				Au	<i>itos:</i> 15		
Peak Hour Perce	entage:	6.83%					ucks (2 Ax	,		
Peak Hour V	'olume:	2,545 vehicle	S		Hea	avy Truc	cks (3+ Ax	les): 15		
Vehicle 3		50 mph		1	Vehicle N	<i>lix</i>				
Near/Far Lane Dis	stance:	102 feet		F	Vehi	cleType	Di	ay Evening	Nig	ht Daily
Site Data							Autos: 68	3.2% 12.3%	19	.6% 91.21%
Barrier H	leiaht:	0.0 feet			Me	edium Ti	rucks: 69	9.8% 8.8%	21	.4% 6.78%
Barrier Type (0-Wall, 1-		0.0			H	leavy Ti	rucks: 58	3.3% 5.1%	36	.6% 2.01%
Centerline Dist. to E	Barrier:	92.0 feet			Noico So	urco El	evations (	(in foot)		
Centerline Dist. to Ob	server:	92.0 feet		-	10/36 30	Auto				
Barrier Distance to Ob	server:	0.0 feet			Mediur	n Truck				
Observer Height (Above	e Pad):	5.0 feet				y Truck			liustn	ent:00
Pad Ele	evation:	0.0 feet							,	
Road Ele	evation:	0.0 feet		1	Lane Equ		Distance	. ,		
	Grade:	0.0%				Auto		-		
	ft View:	-90.0 degre				n Truck		-		
Righ	t View:	90.0 degre	es		Heav	y Truck	s: 76.62	9		
FHWA Noise Model Cal	culation	s								
VehicleType RE	MEL	Traffic Flow	Dist	tance	Finite	Road	Fresnel	Barrier At	ten	Berm Atten
Autos:	70.20	1.36		-2.89	9	-1.20	-4	.76 0.	000	0.00
Medium Trucks:	81.00	-9.93		-2.88	В	-1.20	-4	.88 0.	000	0.00
Heavy Trucks:	85.38	-15.20		-2.88	В	-1.20	-5	.18 0.	000	0.00
Unmitigated Noise Leve	els (with	out Topo and	barrie	r atten	uation)					
VehicleType Leq F	Peak Hou	ir Leq Day	·	Leq Ev	/ening	Leq	Night	Ldn		CNEL
Autos:	67	.5	66.7		65.2		62.5	69.	7	70.
Medium Trucks:	67		66.3		63.3		62.4	69.	-	69.
Heavy Trucks:	66		64.6		60.0		63.8	70.	-	70.
Vehicle Noise:	71	.7	70.7		68.1		67.7	74.	6	74.
			)							
Centerline Distance to I	Noise Co	ontour (in feet	<u> </u>							
Centerline Distance to I	Noise Co			70 c		65	dBA	60 dBA		55 dBA
Centerline Distance to I	Noise Co		Ldn:	70 c	<i>IBA</i> 187 195	65	403 419	60 dBA 869 903		55 dBA 1,871 1,946

	FHW	A-RD-77-108	HIGH	NAY N	NOISE PF	REDICTI	ON MOD	EL			
Scenario: Road Name: Road Segment:		,					Name: R umber: 1		2&4		
SITE SP	ECIFIC INF	PUT DATA				N	OISE M	ODE	L INPUTS	5	
Highway Data					Site Con	ditions	(Hard = 1	0, Sc	oft = 15)		
Average Daily Tra	affic (Adt):	1,311 vehicle	es				A	utos:	15		
Peak Hour Pe	ercentage:	6.83%			Me	dium Tru	icks (2 A	(les):	15		
Peak Hou	r Volume:	90 vehicle	6		He	avy Truc	ks (3+ A)	(les):	15		
Vehic	le Speed:	40 mph		-	Vehicle I	<i>liv</i>					
Near/Far Lane	Distance:	56 feet		-		cleType	1	Day	Evening	Night	Daily
Site Data					10.11			8.2%	•	19.6%	
Parrie	er Height:	0.0 feet			Me	edium Tr	ucks: 6	9.8%	8.8%	21.4%	6.78%
Barrier Type (0-Wall		0.0			F	leavy Tr	ucks: 5	8.3%	5.1%	36.6%	2.01%
Centerline Dist.	· ,	47.0 feet		-							
Centerline Dist. to		47.0 feet		-	Noise So				eet)		
Barrier Distance to	Observer:	0.0 feet				Autos					
Observer Height (Ab	ove Pad):	5.0 feet				n Trucks			0		
Pad	Elevation:	0.0 feet			Heav	y Trucks	8: 8.0	04	Grade Adj	JSUITEIT	. 0.0
Road	Elevation:	0.0 feet			Lane Equ	uivalent	Distance	e (in i	feet)		
Ro	ad Grade:	0.0%		Γ		Autos	: 38.0	79			
	Left View:	-90.0 degree	es		Mediur	n Trucks	37.8	46			
R	light View:	90.0 degree	es		Heav	y Trucks	37.8	69			
FHWA Noise Model	Calculations										
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresne	:/	Barrier Atte	en Be	rm Atten
Autos:	66.51	-12.21		1.6	67	-1.20	-	4.63	0.0	00	0.000
Medium Trucks:	77.72	-23.49		1.7	'1	-1.20	-	4.87	0.0	00	0.000
Heavy Trucks:	82.99	-28.77		1.7	'1	-1.20	-	5.46	0.0	00	0.000
Unmitigated Noise L											
	eq Peak Hour			Leq E	vening	Leq I	•		Ldn		NEL
Autos:	54.8	-	54.0		52.5		49.8		57.0		57.4
Medium Trucks:	54.		54.0		51.1		50.2		57.3		57.5
	54.1		53.3		48.7		52.5		58.9		59.0
Heavy Trucks:	<b>6</b> - 1				55.8		55.8		62.6		62.8
Vehicle Noise:	59.5		58.5		55.0		55.6				
Vehicle Noise:				70							
Vehicle Noise:		ntour (in feet	)	70	dBA	65 0	IBA	e	0 dBA	55	i dBA
		ntour (in feet,		70		65 0		6	0 dBA 70 73	55	<i>dBA</i> 151 156

	FHV	VA-RD-77-108	HIGH	IWAY	NOISE PI	REDICTIO	N MODEL			
Scenario: E Road Name: F Road Segment: e	Rider St.	thout Project 81.					ame: Rider nber: 11559			
SITE SPE	CIFIC IN	IPUT DATA				NO	ISE MODI	EL INPUTS	5	
Highway Data					Site Con	ditions (H	lard = 10, S	oft = 15)		
Average Daily Traf	fic (Adt):	12,357 vehicl	es				Autos			
Peak Hour Per		6.83%					ks (2 Axles)			
Peak Hour		844 vehicle	s		He	avy Truck	s (3+ Axles)	: 15		
	Speed:	45 mph			Vehicle	Mix				
Near/Far Lane D	istance:	56 feet		Ē	Veh	icleType	Day	Evening	Night	Daily
Site Data						Au	tos: 68.29	6 12.3%	19.6%	91.21%
Barrier	Heiaht:	0.0 feet			М	edium Truc	cks: 69.89	6 8.8%	21.4%	6.78%
Barrier Type (0-Wall,		0.0			I	Heavy True	cks: 58.39	6 5.1%	36.6%	2.01%
Centerline Dist. to		47.0 feet		F	Noise Se	ource Elev	ations (in i	eet)		
Centerline Dist. to O		47.0 feet		f		Autos:	0.000	,		
Barrier Distance to O		0.0 feet			Mediu	m Trucks:	2.297			
Observer Height (Abo	,	5.0 feet			Heav	y Trucks:	8.004	Grade Adj	iustment	0.0
	levation: levation:	0.0 feet		-	Lano Ea	uivalont D	istance (in	foot		
	d Grade:	0.0 feet 0.0%		-	Lane Ly	Autos:	38.079	ieeŋ		
	eft View:		~~		Mediu	m Trucks:	37.846			
_	ht View:	-90.0 degre 90.0 degre				/y Trucks:	37.869			
FHWA Noise Model Ca	alculation	s								
VehicleType F	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresnel	Barrier Atte	en Ber	m Atten
Autos:	68.46	-2.97		1.6	67	-1.20	-4.63	0.0	000	0.000
Medium Trucks:	79.45	-14.26		1.7	71	-1.20	-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-19.54		1.7	71	-1.20	-5.46	0.0	000	0.000
Unmitigated Noise Le	vels (with	out Topo and	barri	er attei	nuation)					
	Peak Hou			Leq E	vening	Leq Ni	-	Ldn		NEL
Autos:	66		65.2		63.7		61.0	68.2	-	68.6
Medium Trucks:	65		65.0		62.0		61.1	68.2	-	68.5
Heavy Trucks:	65		63.7		59.1		63.0	69.4		69.5
Vehicle Noise:	70		69.4		66.8		66.6	73.4	ŀ	73.7
Centerline Distance to	Noise Co	ontour (in feet	)							
			L	70	dBA	65 dE		60 dBA	55	dBA
		-	Ldn:		80		171	369		795
		С	NEL:		83		178	383		826

		A-RD-77-108	HIGH	IVVATN							
	Existing With	out Project					Name: I		2 & 4		
Road Name: F						Job N	umber:	11559			
Road Segment: e	o Redlands	s Av.									
	CIFIC INF	PUT DATA								S	
Highway Data				4	Site Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily Traf	fic (Adt): 1	5,258 vehicle	s					Autos:	15		
Peak Hour Per	centage:	6.83%			Med	dium Tru	icks (2 A	Axles):	15		
Peak Hour	Volume: '	1,042 vehicles			Hea	avy Truc	:ks (3+ A	Axles):	15		
Vehicle	e Speed:	45 mph			Vehicle N	lix					
Near/Far Lane D	Distance:	56 feet				cleType		Day	Evening	Night	Dailv
Site Data							utos:	68.2%	12.3%	19.6%	91.219
Barrier	Height:	0.0 feet			Me	dium Tr	ucks:	69.8%	8.8%	21.4%	6.789
Barrier Type (0-Wall,	•	0.0			h	leavy Tr	ucks:	58.3%	5.1%	36.6%	2.019
Centerline Dist. to		47.0 feet		H							
Centerline Dist. to C	bserver:	47.0 feet		1	Noise So				eet)		
Barrier Distance to C	bserver:	0.0 feet				Autos		000			
Observer Height (Abo	ve Pad):	5.0 feet				n Trucks		297	0		
	levation:	0.0 feet			Heav	y Trucks	5. 8.0	004	Grade Ad	justment.	0.0
Road E	levation:	0.0 feet		1	Lane Equ	iivalent	Distand	ce (in i	feet)		
Roa	d Grade:	0.0%				Autos	: 38.	079			
L	eft View:	-90.0 degree	s		Mediun	n Trucks	: 37.	846			
Rig	ght View:	90.0 degree	s		Heav	y Trucks	37.	869			
FHWA Noise Model C	alculations										
VehicleType F	REMEL	Traffic Flow	Dis	tance	Finite		Fresn	el	Barrier Att	en Ber	m Atter
Autos:	68.46	-2.06		1.6		-1.20		-4.63		000	0.00
Medium Trucks:	79.45	-13.35		1.7		-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	84.25	-18.62		1.7	1	-1.20		-5.46	0.0	000	0.00
Unmitigated Noise Le			barrie	er atten	uation)						
	Peak Hour		_	Leq E		Leq			Ldn		NEL
Autos:	66.9		6.1		64.6		61.9		69.		69
Medium Trucks:	66.6		65.9		63.0		62.0		69.		69
Heavy Trucks:	66.1		64.7		60.1		63.9		70.3		70
Vehicle Noise:	71.3		0.4		67.7		67.5	5	74.3	3	74
Centerline Distance to	Noise Cor	ntour (in feet)									
			L	70 0		65 (		6	60 dBA		dBA
			.dn:		92		197		425		91
		C1	IEL :		95		205		441		95

Monday, August 10, 2020

Scona	io: Existing Wi	thout Project				Project	Name: Ri	der 2 & 4		
	10. Existing Wi 16: Rider St.	uloui Plojeci					umber: 11			
	nt: w/o Redlan	ds Av.				00071		000		
	SPECIFIC IN	IPUT DATA						DEL INPUT	s	
Highway Data				S	Site Con	ditions	(Hard = 1	0, Soft = 15)		
Average Daily	Traffic (Adt):	12,392 vehicle	s				AL	<i>itos:</i> 15		
	Percentage:	6.83%					ucks (2 Ax	,		
Peak F	lour Volume:	846 vehicles			Hea	avy Truc	cks (3+ Ax	<i>les):</i> 15		
Ve	hicle Speed:	45 mph		v	/ehicle N	lix				
Near/Far La	ne Distance:	56 feet		-		cleType	D	ay Evening	Night	Daily
Site Data							Autos: 68	3.2% 12.3%	19.6%	91.219
Ba	rrier Height:	0.0 feet			Me	dium Ti	rucks: 69	9.8% 8.8%	21.4%	6.78%
Barrier Type (0-W		0.0			H	leavy Ti	rucks: 58	3.3% 5.1%	36.6%	2.019
	st. to Barrier:	47.0 feet			loiso So	urco El	evations	(in foot)		
Centerline Dist.	to Observer:	47.0 feet		~	voise so	Auto				
Barrier Distance	to Observer:	0.0 feet			Modiur	n Truck		-		
Observer Height	(Above Pad):	5.0 feet				y Truck		-	iustment	.00
P	ad Elevation:	0.0 feet				·			aotanona	. 0.0
Ro	ad Elevation:	0.0 feet		L	ane Equ		Distance	. ,		
	Road Grade:	0.0%				Auto		-		
	Left View:	-90.0 degree				n Truck		-		
	Right View:	90.0 degree	s		Heav	y Truck	s: 37.86	19		
FHWA Noise Mod	el Calculation	s								
VehicleType	REMEL	Traffic Flow	Distar		Finite		Fresnel			rm Atten
Autos:	68.46	-2.96		1.67		-1.20			000	0.00
Medium Trucks:				1.71		-1.20			000	0.00
Heavy Trucks:	84.25	-19.52		1.71		-1.20	-5	6.46 0.0	000	0.00
Unmitigated Nois	e Levels (with	out Topo and I	barrier a	attenı	uation)					
VehicleType	Leq Peak Hou			eq Ev	rening	Leq	Night	Ldn	-	NEL
Autos:	66		5.2		63.7		61.0	68.3		68.
Medium Trucks:			65.0		62.0		61.1	68.3	-	68.
Heavy Trucks:			53.8		59.2		63.0	69.4		69.
Vehicle Noise:	70	.4 6	69.5		66.8		66.6	73.4	1	73.
Centerline Distan	ce to Noise Co	ontour (in feet)		70 4	04	65	-10.4	CO -/DA		
			dn:	70 d	BA 80	00	dBA 172	60 dBA 370		dBA 79
					80		172	370		828
			IEL :							

	FHW	A-RD-77-108	HIGHW	AY NOISE F	PREDICT	ION MOI	DEL			
Scenario Road Name Road Segmen		,				Name: F umber: 1		8 4		
SITE S	PECIFIC INF	PUT DATA			N	IOISE N	IODE	L INPUTS	3	
Highway Data				Site Co	nditions	(Hard =	10, So	oft = 15)		
Average Daily T	raffic (Adt): 3	8,066 vehicle	s			A	Autos:	15		
Peak Hour F	Percentage:	6.83%		M	ledium Tri	ucks (2 A	xles):	15		
Peak Ho	our Volume: 2	2,600 vehicles	5	н	leavy Tru	cks (3+ A	xles):	15		
Veh	icle Speed:	45 mph		Vehicle	Mix					
Near/Far Lan	e Distance:	80 feet			hicleType		Day	Evening	Night	Daily
Site Data							68.2%	•	19.6%	
	ier Height:	0.0 feet		/	, Aedium Ti		69.8%		21.4%	
Barrier Type (0-Wa		0.0 1001			Heavy T	ucks:	58.3%	5.1%	36.6%	2.01%
Centerline Dis	. ,	64.0 feet			,					
Centerline Dist. to		64.0 feet		Noise S	Source El			eet)		
Barrier Distance to		0.0 feet			Auto		000			
Observer Height (A	bove Pad):	5.0 feet			um Truck		297	Our de Adi		
÷ (	d Elevation:	0.0 feet		Hea	avy Truck	s: 8.0	04	Grade Adj	ustment	. 0.0
Roa	d Elevation:	0.0 feet		Lane E	quivalent	Distanc	e (in f	eet)		
R	oad Grade:	0.0%			Auto	s: 50.2	210			
	Left View:	-90.0 degree	s	Medi	um Truck	s: 50.0	033			
	Right View:	90.0 degree	s	Hea	avy Truck	s: 50.0	050			
FHWA Noise Mode	l Calculations									
VehicleType		Traffic Flow	Distan		e Road	Fresn	-	Barrier Atte		m Atten
Autos:	68.46	1.91		-0.13	-1.20		-4.70	0.0		0.000
Medium Trucks:	79.45	-9.39		-0.11	-1.20		-4.88	0.0		0.000
Heavy Trucks:	84.25	-14.66		-0.11	-1.20		-5.31	0.0	00	0.000
Unmitigated Noise	Levels (withou			ttenuation)						
	Leq Peak Hour			eq Evening		Night		Ldn		NEL
Autos:	69.0		58.2	66.	-	64.1		71.3		71.7
Medium Trucks:	68.8		58.1	65.		64.2		71.3		71.5
Heavy Trucks:	68.3	-	6.8	62.	_	66.0		72.5		72.6
Vehicle Noise:	73.5	5	72.5	69.	9	69.6		76.5		76.7
Centerline Distance	e to Noise Cor	ntour (in feet)					1			
				70 dBA		dBA 373	6	0 dBA 804	55	dBA
			l.dn:							1.733
			IEL:	173		373		804		1,733

	FHWA-F	RD-77-108	HIG	HWAY	NO	ISE PF	REDICTI	ION MO	DDEL				
Scenario: Existing Road Name: Perris E Road Segment: s/o Har	I. ,						Project Job N	Name: umber:					
SITE SPECIFIC	INPU	T DATA					N	OISE	MODE	EL INPU	rs		
Highway Data					Sit	te Con	ditions	(Hard :	= 10, S	oft = 15)			
Average Daily Traffic (Ad Peak Hour Percentag Peak Hour Volum	e: 6.6	982 vehicl 83% 48 vehicle					dium Tru avy Truc			15			
Vehicle Spee	d: 4	45 mph			Ve	hicle <b>A</b>	lix						
Near/Far Lane Distanc	e: ł	B0 feet					cleType		Dav	Evening	Nie	ght	Daily
Site Data								Autos:	68.29			9.6%	91.249
Barrier Heigh	t-	0.0 feet			1	Ме	dium Tr	ucks:	69.8%	6 8.8%	21	1.4%	6.76%
Barrier Type (0-Wall, 1-Bern	):	0.0				H	leavy Tr	ucks:	58.3%	6 5.1%	36	6.6%	2.01%
Centerline Dist. to Barrie	-	4.0 feet			No	oise So	urce El	evatio	ns (in f	eet)			
Centerline Dist. to Observe		4.0 feet					Autos	s: C	.000	,			
Barrier Distance to Observe		0.0 feet				Mediur	n Trucks	s: 2	.297				
Observer Height (Above Pac Pad Elevatio		5.0 feet 0.0 feet				Heav	y Trucks	s: 8	.004	Grade A	djustr	nent:	0.0
Road Elevatio		0.0 feet			La	ne Eai	iivalent	Distar	nce (in	feet)			
Road Grad		0.0 leet 0%					Autos		.210				
Left Vie		0.0 degre	ac			Mediur	n Trucks		033				
Right Vie		0.0 degre				Heav	y Trucks		.050				
FHWA Noise Model Calculat	ions												
VehicleType REMEL	Tra	ffic Flow	Di	istance		Finite	Road	Fres	nel	Barrier A	tten	Berr	n Atten
Autos: 68	.46	0.88		-0.	13		-1.20		-4.70	0	.000		0.00
Medium Trucks: 79	.45	-10.43		-0.	11		-1.20		-4.88	0	.000		0.00
Heavy Trucks: 84	.25	-15.70		-0.	11		-1.20		-5.31	0	.000		0.00
Unmitigated Noise Levels (v						<u> </u>			_				
VehicleType Leq Peak		Leq Day		Leq l	Eve		Leq	Night		Ldn		CN	IEL
Autos:	68.0		67.2			65.8		63	-	70			70.
Medium Trucks:	67.7		67.0			64.0		63		70			70.
Heavy Trucks:	67.2		65.8			61.2		65		71			71.
Vehicle Noise:	72.4		71.5			68.8		68	.6	75	.5		75.
Centerline Distance to Nois	Conto	ur (in feet	)						-				
				70	) dB		65 0	dBA		60 dBA		55	dBA
			Ldn:			148		31	-	68			1,478
		C	NEL:			154		33	1	71	2		1,535

	FHWA	-RD-77-108 HIG	HWAY N	NOISE PR	REDICTIC	ON MOD	JEL .			
Scenario: E:	kisting + Proj	ect			Project N	<i>lame:</i> R	lider 2	& 4		
Road Name: Pe	erris Bl.				Job Nu	mber: 1	1559			
Road Segment: s/	o Ramona E	xwy.								
	CIFIC INPU	JT DATA							S	
Highway Data				Site Con	ditions (F	Hard = 1	10, So	ft = 15)		
Average Daily Traffi	ic (Adt): 24	,456 vehicles				A	utos:	15		
Peak Hour Perc	entage: 6	6.83%		Mee	dium Truc	ks (2 A.	xles):	15		
Peak Hour V	/olume: 1,6	670 vehicles		Hei	avy Truck	s (3+ A	xles):	15		
Vehicle	Speed:	45 mph	÷.	Vehicle N	Aiv					
Near/Far Lane Di	stance:	80 feet	H		cleTvpe	1	Dav	Evening	Night	Dailv
Site Data				10/1			68.2%	•	19.6%	
Barrier	Hoight:	0.0 feet		Me	dium Tru		9.8%		21.4%	
Barrier Type (0-Wall, 1		0.0		E	leavy Tru	cks: 5	58.3%	5.1%	36.6%	1.989
Centerline Dist. to		0.0 64.0 feet	L							
Centerline Dist. to Ot		64.0 feet	1	Noise So				et)		
Barrier Distance to Ot		0.0 feet			Autos:					
Observer Height (Abov		5.0 feet			n Trucks:					
÷ (	evation:	0.0 feet		Heav	y Trucks:	8.0	04	Grade Ad	iustment.	0.0
Road Ele		0.0 feet	7	Lane Equ	ivalent L	Distanc	e (in f	eet)		
		0.0 1001	F		Autos:					
		90.0 degrees		Mediur	n Trucks:					
Rigi		90.0 degrees		Heav	y Trucks:					
FHWA Noise Model Ca	lculations									
VehicleType RI	EMEL Tr	raffic Flow Di	istance	Finite	Road	Fresne	e/	Barrier Att	en Ber	m Atten
Autos:	68.46	0.00	-0.1	3	-1.20	-	4.70	0.0	000	0.00
Medium Trucks:	79.45	-11.37	-0.1	1	-1.20	-	4.88	0.0	000	0.00
Heavy Trucks:	84.25	-16.65	-0.1	1	-1.20	-	5.31	0.0	000	0.00
Unmitigated Noise Lev										
	Peak Hour	Leq Day		vening	Leq N			Ldn		VEL
Autos:	67.1	66.3		64.9		62.2		69.4		69.
Medium Trucks:	66.8	66.1		63.1		62.2		69.3		69.
Heavy Trucks:	66.3	64.8		60.2		64.0		70.5		70.
Vehicle Noise:	71.5	70.6		67.9		67.7		74.5	5	74.
Centerline Distance to	Noise Cont	our (in feet)								
				dBA	65 di		6	0 dBA		dBA
		Ldn: CNEL:		128 133		276 287		595		1,282
								618		1.332

Monday, August 10, 2020

Seconori	o: Existing + F	Project				Project	Name: F	Didor '	28.4	_	_
	e: Perris Bl.	TOJEGE					umber: 1				
	nt: n/o Ramona	a Exwy.				00070		1000			
SITE (	SPECIFIC IN					N					
Highway Data		FUI DATA		s	Site Con						
Average Daily	Traffic (Adt):	28.856 vehicle	s					Autos:	15		
• •	Percentage:	6.83%			Med	dium Tru	icks (2 A	xles).	15		
	our Volume:	1.971 vehicles			Hea	avy Truc	ks (3+ A	xles):	15		
Vel	hicle Speed:	45 mph		-							
Near/Far Lar		80 feet		v	/ehicle N	<b>lix</b> cleType		Day	Evening	Night	Deily
Site Data					veni			58.2%	•	19.6%	Daily 91.24%
					Ma	م dium Tr		00.27 69.8%		21.4%	6.75%
	rier Height:	0.0 feet				leavy Tr		58.3%		36.6%	2.01%
Barrier Type (0-W		0.0				ieavy II	uchs.	50.57	0 0.170	30.070	2.017
Centerline Dis Centerline Dist		64.0 feet 64.0 feet		٨	loise So	urce El	evations	; (in f	eet)		
Barrier Distance		0.0 feet				Autos	s: 0.0	000			
		5.0 feet			Mediur	n Trucks	s: 2.2	97			
Observer Height (	Above Pad): ad Elevation:	0.0 feet			Heav	y Trucks	s: 8.0	04	Grade Adju	stment:	0.0
	d Elevation:	0.0 feet		1	ane Equ	ivalent	Distanc	e (in	feet)		
	lu Elevalion. Road Grade:	0.0%		F	uno Equ	Autos					
1	Left View:	-90.0 deared			Mediur	n Trucks					
	Right View:	90.0 degree				y Trucks					
	5	•	-								
FHWA Noise Mode										1 -	
VehicleType	REMEL	Traffic Flow	Dista		Finite		Fresn		Barrier Atte		m Atten
Autos:	68.46	0.71		-0.13		-1.20		4.70	0.00		0.00
Medium Trucks: Heavy Trucks:	79.45 84.25	-10.60 -15.87		-0.11		-1.20 -1.20		-4.88 -5.31	0.00		0.00
				-		-1.20		-5.31	0.00	0	0.00
Unmitigated Noise					,						
	Leq Peak Hou			.eq Ev	•	Leq	Night		Ldn	CI	VEL
Autos:	67		67.0		65.6		62.9		70.1 70.1		70.
Medium Trucks:	67		66.8		63.9		63.0 64.8				70.
Heavy Trucks:	67		65.6		61.0				71.3		71.
Vehicle Noise:	72		71.3		68.7		68.4		75.3		75.
Centerline Distanc	e to Noise Co	ontour (in feet)									
				70 d	BA	65 0	dBA	1	60 dBA	55	dBA
			🖵								
			Ldn: VEL:		144 150		310 322		669 695		1,440 1,496

	FHV	VA-RD-77-108	HIGHWA	Y NOISE P	REDICTI	ON MOD	EL			
	o: Existing + F e: Perris Bl. nt: s/o Morgan					Name: R umber: 1		& 4		
SITE S	SPECIFIC IN	PUT DATA			N	OISE M	ODEL	INPUTS	6	
Highway Data				Site Col	nditions	(Hard = 1	0, Sof	ft = 15)		
Average Daily	Traffic (Adt):	25,869 vehicle	s			А	utos:	15		
Peak Hour	Percentage:	6.83%		Me	edium Tru	icks (2 A	(les):	15		
Peak H	our Volume:	1,767 vehicles		H	eavy Truc	ks (3+ A)	des):	15		
Vel	hicle Speed:	45 mph		Vehicle	Mix					
Near/Far Lar	ne Distance:	80 feet			nicleType	1	Day	Evening	Night	Daily
Site Data				VC/			8.2%	12.3%	19.6%	
Bar	rier Height:	0.0 feet		N	ledium Tr	ucks: 6	9.8%	8.8%	21.4%	6.72%
Barrier Type (0-W		0.0			Heavy Tr	ucks: 5	8.3%	5.1%	36.6%	2.00%
Centerline Dis	. ,	64.0 feet		Naina C	ource El	ovetiene	lin for			
Centerline Dist. t	to Observer:	64.0 feet		NOISE 3	Autos			=0		
Barrier Distance t	to Observer:	0.0 feet		Madi	Autos Im Trucks					
Observer Height ()	Above Pad):	5.0 feet			vy Trucks			Grade Adj	istment	0.0
Pa	d Elevation:	0.0 feet		пеа	vy mucks	s. 0.0	04 (	Siaue Auj	Journeriu.	0.0
Roa	d Elevation:	0.0 feet		Lane Eq	quivalent	Distance	e (in fe	eet)		
F	Road Grade:	0.0%			Autos	: 50.2	10			
	Left View:	-90.0 degree	s	Mediu	im Trucks	s: 50.0	33			
	Right View:	90.0 degree	s	Hea	vy Trucks	50.0	50			
FHWA Noise Mode	l Calculation	s								
VehicleType	REMEL	Traffic Flow	Distan	ce Finite	e Road	Fresne	el E	Barrier Atte	en Ber	m Atten
Autos:	68.46	0.24		0.13	-1.20	-	4.70	0.0	00	0.00
Medium Trucks:	79.45	-11.09		0.11	-1.20	-	4.88	0.0	00	0.000
Heavy Trucks:	84.25	-16.37		0.11	-1.20	-	5.31	0.0	00	0.000
Unmitigated Noise										
	Leq Peak Hou			q Evening		Night		Ldn		VEL
Autos:	67		6.6	65.1		62.4		69.6		70.0
Medium Trucks:	67		6.3	63.4		62.5		69.6		69.8
Heavy Trucks:	66		65.1	60.5		64.3		70.8		70.9
Vehicle Noise:	71	.8 7	0.8	68.2	2	67.9		74.8		75.0
Centerline Distanc	e to Noise Co	ontour (in feet)								
				70 dBA	65 0		60	) dBA	55	dBA
		1	.dn:	134		288		620		1,336
			IEL:	139		299		644		1.388

FHWA-RD-77-1	08 HIGHWA	Y NOISE PRE	DICTION MO	DEL	
Scenario: Existing + Project Road Name: Perris Bl. Road Segment: s/o Rider St.			Project Name: Job Number:		
SITE SPECIFIC INPUT DAT	A		NOISE N	ODEL INPUT	S
Highway Data		Site Condi	tions (Hard =	10, Soft = 15)	
Average Daily Traffic (Adt): 27,668 veh Peak Hour Percentage: 6.83% Peak Hour Volume: 1,890 vehit			um Trucks (2 A y Trucks (3+ A	, .	
Vehicle Speed: 45 mph		Vehicle Mi			
Near/Far Lane Distance: 80 feet		Vehicle		Day Evening	Night Daily
Site Data		Vernich		68.2% 12.3%	19.6% 91.24%
Barrier Height: 0.0 fee		Med	ium Trucks:	69.8% 8.8%	21.4% 6.75%
Barrier Type (0-Wall, 1-Berm): 0.0	L	He	avy Trucks:	58.3% 5.1%	36.6% 2.00%
Centerline Dist. to Barrier: 64.0 feet		Noise Sou	rce Elevation	s (in feet)	
Centerline Dist. to Observer: 64.0 feet		10.00 000		000	
Barrier Distance to Observer: 0.0 feet		Medium		297	
Observer Height (Above Pad): 5.0 feel					iustment: 0.0
Pad Elevation: 0.0 feet					0.0
Road Elevation: 0.0 feet		Lane Equiv	valent Distan	, ,	
Road Grade: 0.0%				210	
Left View: -90.0 deg		Medium		033	
Right View: 90.0 deg	rees	Heavy	Trucks: 50.	050	
FHWA Noise Model Calculations					
VehicleType REMEL Traffic Flow	v Distanc	e Finite R	oad Fresh	el Barrier Att	en Berm Atten
Autos: 68.46 0.	53 -0	).13 ·	-1.20	-4.70 0.0	00.00
Medium Trucks: 79.45 -10.	78 -0	D.11 ·	-1.20	-4.88 0.0	00.00
Heavy Trucks: 84.25 -16.	05 -0	).11 ·	-1.20	-5.31 0.0	0.00
Unmitigated Noise Levels (without Topo a		,		T.	T
VehicleType Leq Peak Hour Leq D		Evening	Leq Night	Ldn	CNEL
Autos: 67.7	66.9	65.4	62.7		
Medium Trucks: 67.4	66.7	63.7	62.8		
Heavy Trucks: 66.9	65.4	60.8	64.6		
Vehicle Noise: 72.1	71.1	68.5	68.2	2 75.1	1 75.
Centerline Distance to Noise Contour (in fe	,			*	
	7	'0 dBA	65 dBA	60 dBA	55 dBA
	Ldn:	140	302	650	1,400

	FHW	A-RD-77-108 H	GHWA	AY NC	DISE PRI	DICTIO	N MOI	DEL			
Scenario: Ex	isting + Pr	oject			F	Project N	lame: F	Rider 2	8 4		
Road Name: Re	dlands Av					Job Nur	nber: 1	1559			
Road Segment: s/c	Markham	i St.									
SITE SPEC	IFIC INF	PUT DATA							L INPUT	S	
Highway Data				Si	te Cond	itions (H	lard =	10, So	oft = 15)		
Average Daily Traffic	: (Adt):	5,702 vehicles					A	Autos:	15		
Peak Hour Perce	ntage:	6.83%			Medi	um Truc	ks (2 A	xles):	15		
Peak Hour Ve	olume:	389 vehicles			Hear	vy Truck	s (3+ A	xles):	15		
Vehicle 3	Speed:	40 mph		V	ehicle M	iv					
Near/Far Lane Dis	tance:	56 feet				leType		Day	Evening	Night	Daily
Site Data								58.2%	•	19.6%	
Barrier H	loiaht:	0.0 feet			Med	lium Tru	cks:	69.8%	8.8%	21.4%	8.75
Barrier Type (0-Wall, 1-		0.0			He	avy Tru	cks:	58.3%	5.1%	36.6%	5.879
Centerline Dist. to E		47.0 feet				-					
Centerline Dist. to Ob		47.0 feet		N	oise Sou				eet)		
Barrier Distance to Ob		0.0 feet				Autos:	0.0				
Observer Height (Above		5.0 feet			Medium						
Pad Ele	,	0.0 feet			Heavy	Trucks:	8.0	04	Grade Ad	ustment	0.0
Road Ele	vation:	0.0 feet		Lá	ne Equi	valent D	istanc	e (in f	eet)		
Road	Grade:	0.0%			,	Autos:	38.0	)79	1		
Lef	t View:	-90.0 degrees			Medium	Trucks:	37.8	346			
Righ	t View:	90.0 degrees			Heavy	Trucks:	37.8	869			
FHWA Noise Model Cal	culations										
VehicleType RE	MEL	Traffic Flow	Distan	се	Finite R	load	Fresn	e/	Barrier Att	en Ber	m Atten
Autos:	66.51	-6.11		1.67		-1.20		4.63	0.0	000	0.00
Medium Trucks:	77.72	-16.00		1.71		-1.20		4.87	0.0	000	0.00
Heavy Trucks:	82.99	-17.74		1.71		-1.20		5.46	0.0	000	0.00
Unmitigated Noise Leve			-								
	Peak Hour		_	eq Eve		Leq N	•		Ldn		VEL
Autos:	60.9				58.6		55.9		63.		63
Medium Trucks:	62.2				58.6		57.7		64.		65
Heavy Trucks:	65.8				59.7		63.5		69.		70
Vehicle Noise:	68.2		.1		63.8		65.1		71.	7	71
Centerline Distance to I	Voise Cor	ntour (in feet)									
				70 dE		65 dE		6	0 dBA		dBA
		La			61		132		285		61
		CNE			63		136		293		63

Monday, August 10, 2020

FH	WA-RD-77-108	HIGH	NAY N	NOISE PR	EDICTI				
Scenario: Existing + Road Name: Redlands Road Segment: s/o Harley	Av.					Vame: Ri Imber: 11			
, , ,									
SITE SPECIFIC I Highway Data	NPUT DATA			Site Con			DEL INPUT: ), Soft = 15)	5	
Average Daily Traffic (Adt):	5,193 vehicle	s		one com	anions (		itos: 15		
Peak Hour Percentage:	6.83%			Med	dium Tru	cks (2 Ax	les): 15		
Peak Hour Volume:	355 vehicles	;		Hea	avy Truc	ks (3+ Ax	les): 15		
Vehicle Speed:	40 mph		-	Vehicle N	<b>e</b>				
Near/Far Lane Distance:	56 feet		-		leType	Di	ay Evening	Night	Dailv
Site Data			-	veni			3.2% 12.3%	19.6%	
	0.0 feet			Me	dium Tri		9.8% 8.8%	21.4%	8.94%
Barrier Height: Barrier Type (0-Wall, 1-Berm):	0.0			H	leavy Tri	ucks: 58	3.3% 5.1%	36.6%	6.24%
Centerline Dist. to Barrier:	47.0 feet		L						
Centerline Dist. to Observer:	47.0 feet		1	Noise So		,	,		
Barrier Distance to Observer:	0.0 feet				Autos		-		
Observer Height (Above Pad):	5.0 feet				n Trucks				
Pad Elevation:	0.0 feet			Heav	y Trucks	: 8.00	4 Grade Adj	ustment:	0.0
Road Elevation:	0.0 feet			Lane Equ	ivalent	Distance	(in feet)		
Road Grade:	0.0%				Autos	: 38.07	9		
Left View:	-90.0 degree	s		Mediur	n Trucks	: 37.84	6		
Right View:	90.0 degree			Heav	y Trucks	: 37.86	9		
FHWA Noise Model Calculation	ıs		I						
VehicleType REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresnel	Barrier Att	en Ber	m Atten
Autos: 66.5	-6.54		1.6	67	-1.20	-4	.63 0.0	000	0.00
Medium Trucks: 77.72	-16.31		1.7	'1	-1.20	-4	.87 0.0	000	0.00
Heavy Trucks: 82.99	-17.87		1.7	'1	-1.20	-5	.46 0.0	000	0.00
Unmitigated Noise Levels (with				,					
VehicleType Leq Peak Ho			Leq E	vening	Leq N	•	Ldn		VEL
		59.6		58.2		55.5	62.7		63.
		51.2		58.2		57.3	64.4		64.
		54.1		59.5		63.4	69.8	-	69.
Vehicle Noise: 6	8.0	56.9		63.5		64.9	71.5	5	71.
Centerline Distance to Noise C	ontour (in feet)		-						
			70	dBA	65 a		60 dBA		dBA
		Ldn:		59		128	276		594
	CI	IEL:		61		132	284		611

Average Daily Traffic (Ad1):         2,437 vehicles         Autos:         15           Peak Hour Percentage:         6.83%         Medium Trucks (2 Axles):         15           Peak Hour Volume:         166 vehicles         Heavy Trucks (3+ Axles):         15           Vehicle Speed:         40 mph         Vehicle Type         Day         Evening         Night         Daily           Site Data         Autos:         66.2%         12.3%         9.6%         8.8%         21.4%         0.8%           Barrier Height:         0.0         feet         Medium Trucks:         68.3%         5.1%         36.6%         10.8%           Centerline Dist. to Deserver:         0.0 feet         Medium Trucks:         0.00         Medium Trucks:         8.04         Grade Adjustment:         0.0           Centerline Dist. to Observer:         0.0 feet         Autos:         8.04         Grade Adjustment:         0.0           Road Elevation:         0.0 feet         Autos:         8.04         Grade Adjustment:         0.0           Road Grade:         0.0%         Left View:         90.0 degrees         Heavy Trucks:         37.869           FHWA Noise Model Calculations         VehicleType         REMEL         Trdfift Flow         Distance         Fresn		FHW	A-RD-77-108	HIGHWA	Y NOISE	PREDICT		DEL			
Highway Data         Site Conditions (Hard = 10, Soft = 15)           Average Daily Traffic (Adt):         2,437 vehicles         Autos::         15           Peak Hour Percentage:         6.83%         Autos::         15           Peak Hour Volume:         166 vehicles         Medium Trucks (2 Aves):         15           Vehicle Speed:         40 mph         Vehicle Mix         Vehicle Mix         Vehicle Mix           Site Data         Autos:         68.2%         12.3%         19.6% r8.27%           Barrier Height:         0.0 feet         Autos:         68.2%         12.3%         19.6% r8.27%           Barrier Jype (0-Wall, 1-Berm):         0.0 feet         Medium Trucks:         68.2%         12.3%         10.86%           Barrier Distance to Observer:         47.0 feet         Autos:         60.00         Medium Trucks:         2.297           Observer Height (Above Pad):         5.0 feet         Heavy Trucks:         8.004         Grade Adjustment: 0.0           Pad Elevation:         0.0 feet         Noise Bodel Calculations         Medium Trucks:         37.846           WehicleType         ReMed Varues:         30.000         0.000         0.000           Medium Trucks:         77.72         -18.76         1.71         -120 <t< th=""><th>Road Name</th><th>CRedlands Av</th><th><i>i</i>.</th><th></th><th></th><th></th><th></th><th></th><th>2 &amp; 4</th><th></th><th></th></t<>	Road Name	CRedlands Av	<i>i</i> .						2 & 4		
Average Daily Traffic (Ad):         2,437 vehicles         Autos:         15           Peak Hour Percentage:         6.83%         Medium Trucks (2 Axles):         15           Peak Hour Volume:         166 vehicles         Heavy Trucks (2 Axles):         15           Vehicle Speed:         40 mph         Vehicle Type         Day         Evening         Night         Daily           Site Data         Autos:         66.2%         12.3%         19.6%         78.27%           Barrier Height:         0.0 feet         Medium Trucks:         68.2%         12.3%         19.6%         78.27%           Barrier Type (0-Wall, 1-Berm):         0.0         Medium Trucks:         69.8%         8.8%         21.4%         10.86%           Barrier Type (0-Wall, 1-Berm):         0.0         Medium Trucks:         69.8%         8.8%         1.4%         10.86%           Centerline Dist. to Deserver:         0.0 feet         Molise Source Elevations (in feet)         Noise Source Elevations (in feet)         Noise Source Ilevations (in feet)         Noise Source Ilevations (in feet)         Autos:         38.079         Medium Trucks:         37.846           Heavy Trucks:         77.72         -10.18         1.67         -12.0         -4.63         0.000         0.000           <	SITE S	PECIFIC IN	PUT DATA			N	IOISE N	IODE	L INPUTS	3	
Deak Hour Percentage:         6.83%         Medium Trucks (2 Axles):         15           Peak Hour Volume:         166 vehicles         Heavy Trucks (3 + Axles):         15           Vehicle Speed         40 mph         Vehicle Type         Day         Evening         Night         Daily           Site Data         Autos:         68.2%         12.3%         19.6%         78.27%           Barrier Type (O-Wall, 1-Berm):         0.0         Centerline Dist. to Barrier:         47.0 feet         Autos:         68.2%         12.3%         19.6%         78.27%           Barrier Type (O-Wall, 1-Berm):         0.0         Centerline Dist. to Barrier:         47.0 feet         Noise Source Elevations (in feet)         Medium Trucks:         0.000         Medium Trucks:         0.000           Barrier Type (Devall, 1-Bern):         0.0 feet         Autos:         8.004         Grade Adjustment:         0.0           Barrier Meight (Move Pad):         5.0 feet         Heavy Trucks:         37.846         Heavy Trucks:         8.004         Grade Adjustment:         0.0           Road Grade:         .00%         Istance         Finite Road         Fresnel         Barrier Atten         Berner Atten           Autos:         86.51         10.18         1.71         -1.20 <td< th=""><th>Highway Data</th><th></th><th></th><th></th><th>Site C</th><th>onditions</th><th>(Hard =</th><th>10, So</th><th>oft = 15)</th><th></th><th></th></td<>	Highway Data				Site C	onditions	(Hard =	10, So	oft = 15)		
Peak Hour Volume:         166 vehicles           Vehicle Speed:         40 mph           Near/Far Lane Distance:         56 feet           Site Data         Vehicle Mix           Barrier Height:         0.0 feet           Barrier Height:         0.0 feet           Barrier Jype (0-Wall, 1-Berm):         0.0           Centerline Dist. to Barrier:         47.0 feet           Barrier Jistance to Observer:         47.0 feet           Barrier Jistance to Observer:         47.0 feet           Road Grade:         0.0%           Left View:         -90.0 degrees           Right View:         90.0 degrees           Right View:         90.0 degrees           FHWA Noise Model Calculations         Vehicle Nix           VehicleType         REMEL           Variots:         77.2           18.75         1.71           -120         -4.63         0.000           Medium Trucks:         37.846           Heavy Trucks:         8.004         Bernier Atten           Autos:         66.51         1.0.18         1.67         -1.20           VehicleType         Leg Vering         Leg Night         Left Vering         Conoo           VehicloType	Average Daily T	raffic (Adt):	2,437 vehicle	s			,	Autos:			
Vehicle Speed: Near/Far Lane Distance:         40 mph 56 feet         Vehicle Mix           Vehicle Mix         Vehicle Mix         Vehicle Mix           Vehicle Mix         Vehicle Mix         Vehicle Mix           Site Data         Autos:         68.2%         12.3%         19.6%         78.27%           Barrier Type (0-Wall, 1-Berm):         0.0         feet         Medium Trucks:         68.2%         1.2.3%         19.6%         78.27%           Centerline Dist. to Barrier         47.0 feet         Medium Trucks:         68.8%         5.1%         36.6%         10.87%           Deserver Idigit (Above Pad):         5.0 feet         Noise Source Elevations (in feet)         Medium Trucks:         2.00           Road Grade:         0.0%         Left View:         90.0 degrees         Medium Trucks:         37.846           Heavy Trucks:         87.72         -18.76         1.71         -1.20         -4.63         0.000         0.000           Medium Trucks:         77.72         -18.76         1.71         -1.20         -4.63         0.000         0.000           Medium Trucks:         82.99         -18.75         1.71         -1.20         -5.46         0.000         0.000           Medium Trucks:         56.8	Peak Hour F	Percentage:	6.83%			Medium Tr	ucks (2 A	(xles):	15		
Near/Far Lane Distance:         56 feet         Venicle Nix         Day         Evening         Night         Daily           Site Data         Autos:         68.2%         12.3%         19.6%         78.27%           Barrier Type (O-Walt, 1-Berm):         0.0         68.2%         12.3%         19.6%         78.27%           Centerline Dist. to Barrier:         47.0 feet         Medium Trucks:         69.8%         8.8%         21.4%         10.86%           Barrier Type (O-Walt, 1-Berm):         0.0         Feet         Medium Trucks:         69.8%         8.8%         21.4%         10.86%           Centerline Dist. to Daserver:         47.0 feet         Noise Source Elevations (in feet)         Moise Source Elevations:         0.000         Medium Trucks:         0.207           Observer Height (Above Pad):         5.0 feet         Autos:         30.04         Grade Adjustment: 0.0           Road Elevation:         0.0 feet         Autos:         37.846         Heavy Trucks:         37.846           Heit Witw:         90.0 degrees         Finite Road         Fresnel         Barrier Atten         Berner Atten           Medium Trucks:         71.72         -18.75         1.71         -1.20         -4.63         0.000         0.000           <	Peak Ho	ur Volume:	166 vehicles			Heavy Tru	cks (3+ A	xles):	15		
Near/Far Lane Distance:         56 feet         VehicleType         Day         Evening         Night         Daily           Site Data         Autos:         66.82%         12.3%         19.6%         78.27%           Barrier Height:         0.0 feet         Medium Trucks:         69.8%         8.8%         21.4%         10.86%           Barrier Type (0-Wall, 1-Berm):         0.0         Medium Trucks:         58.3%         5.1%         36.6%         10.87%           Centerline Dist. to Dserver:         0.0 feet         Moise Source Elevations (in feet)         0.0         Medium Trucks:         0.00         Medium Trucks:         0.00         Medium Trucks:         2.297         0.0           Deserver Height (Nove Pad):         5.0 feet         Autos:         8.004         Grade Adjustment:         0.0           Road Grade:         0.0%         Left View:         90.0 degrees         Medium Trucks:         37.846           Heavy Trucks:         87.72         -18.76         1.71         -1.20         -4.63         0.000         0.000           Medium Trucks:         77.72         -18.76         1.71         -1.20         -4.63         0.000         0.000           Medium Trucks:         82.99         -18.75         1.71	Veh	icle Speed:	40 mph		Vohio	lo Mix					
Barrier Height:         0.0 feet           Barrier Type (0-Wall, 1-Berm):         0.0           Centerline Dist. to Barrier:         47.0 feet           Barrier Distance to Observer:         0.0 feet           Road Grade:         0.0%           Left View:         -90.0 degrees           Right View:         90.0 degrees           Right View:         90.0 degrees           FHWA Noise Model Calculations         Finite Road           VehicleType         REMEL           Traffic Flow         Distance           VehicleType         Leg Peak Hour           Leg Day         1.67           1.71         -1.20           4.83         50.0           Unnitigated Noise Levels (without Topo and barrier attenuation)           VehicleType         Leg Peak Hour           Leq Day         Leq Evening           Autos:         56.8           66.4         65.2           Medium Trucks:         57.8           Barrier Atten	Near/Far Lan	e Distance:	56 feet					Day	Evening	Night	Daily
Barrier Tige (IV-Wall, 1-Berrier Tige (IV-Wall, 1-Berrier Tige (IV-Wall, 1-Berrier):         0.0         Heavy Trucks:         58.3%         5.1%         36.6%         10.87%           Centerline Dist. to Doserver:         47.0 feet         Noise Source Elevations (in feet)         Noise Source Elevations (in feet)           Diserver Height (Above Pad):         5.0 feet         Autos:         0.000         Medium Trucks:         2.297           Pad Elevation:         0.0 feet         Autos:         38.04         Grade Adjustment:         0.0           Road Grade:         0.0%         Heavy Trucks:         37.846         Heavy Trucks:         37.846           VehicleType         REIMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Bern Atten           Autos:         66.51         -10.18         1.67         -1.20         -4.63         0.000         0.000           Medium Trucks:         77.72         -18.76         1.71         -1.20         -5.46         0.000         0.000           Medium Trucks:         75.95         58.8         55.8         59.1         59.5         59.5           Medium Trucks:         59.5         58.8         55.8         59.1         59.5         68.4         63.5<	Site Data						Autos:	68.2%	12.3%	19.6%	78.27%
Barrier Type (0-Wall, 1-Berm):         0.0         Heavy Trucks:         58.3%         5.1%         36.6%         10.87%           Centerline Dist. to Dasriver:         47.0 feet         Noise Source Elevations (in feet)         Autos:         0.00           Deserver Height (Above Pad):         5.0 feet         Autos:         0.00         Medium Trucks:         2.297           Pad Elevation:         0.0 feet         Autos:         8.004         Grade Adjustment:         0.0           Road Grade:         0.0%         Left View:         90.0 degrees         Medium Trucks:         37.846           PHWA Noise Model Calculations         VenicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         66.51         -10.18         1.67         -1.20         -4.63         0.000         0.000           Medium Trucks:         77.72         -18.75         1.71         -1.20         -4.63         0.000         0.000           Medium Trucks:         82.99         -18.75         1.71         -1.20         -5.46         0.000         0.000           Umitigated Noise Levels (without Topo and barrier attenuation)         Eqe Night         Left View         S5.8	Barr	ier Heiaht:	0.0 feet			Medium T	rucks:	69.8%	8.8%	21.4%	10.86%
Centerline Dist. to Observer:         47.0 feet         Noise Source Elevations (in feet)           Barrier Distance to Observer:         0.0 feet         Medium Trucks:         2.297           Observer Height (Above Pad):         0.0 feet         Medium Trucks:         2.297           Road Elevation:         0.0 feet         Heavy Trucks:         8.004         Grade Adjustment:         0.0           Road Elevation:         0.0 feet         Left View:         -90.0 degrees         Medium Trucks:         37.846           VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos::         66.51         10.18         1.67         -1.20         -4.63         0.000         0.000           Medium Trucks:         77.72         -18.76         1.71         -1.20         -4.63         0.000         0.000           Medium Trucks:         82.99         -18.75         1.71         -1.20         -4.63         0.000         0.000           Immitigated Noise Levels (without Topo and barrier attenuation)         VehicleType         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Autos::         56.8         56.0         54.6			0.0			Heavy T	rucks:	58.3%	5.1%	36.6%	10.87%
Centerline Dist. to Observer:         47.0 feet           Barrier Distance to Observer:         0.0 feet           Doserver Height (Above Pad):         5.0 feet           Pad Elevation:         0.0 feet           Road Grade:         0.0 feet           Road Grade:         0.0 degrees           Right View:         90.0 degrees           PHWA Noise Model Calculations         Left View:           VehicleType         REMEL           Traffic Flow         Distance           VehicleType         REMEL           Traffic Flow         Distance           VehicleType         REMEL           Traffic Flow         Distance           Heavy Trucks:         80.000           Medium Trucks:         77.72           18.75         1.71           -1.20         -4.63         0.000           Medium Trucks:         82.99           18.75         1.71         -120           VehicleType         Leq Pask Hour         Leq Day           Leq Evening         Leq Night         Ldn           Autos:         56.8         56.0         54.6           Autos:         56.8         56.0         54.6           Autos:         56.8 <td>Centerline Dist</td> <td>to Barrier:</td> <td>47.0 feet</td> <td></td> <td>Noise</td> <td>Source El</td> <td>levations</td> <td>s (in fe</td> <td>et)</td> <td></td> <td></td>	Centerline Dist	to Barrier:	47.0 feet		Noise	Source El	levations	s (in fe	et)		
Barrier Distance to Observer:         0.0 feet         Medium Trucks:         2.297           Observer Height (Above Pad):         5.0 feet         Heavy Trucks:         8.004         Grade Adjustment:         0.0           Pad Elevation:         0.0 feet         Heavy Trucks:         8.004         Grade Adjustment:         0.0           Road Grade:         0.0%         Left View:         90.0 degrees         Medium Trucks:         37.846           WehiceType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         66.51         -10.18         1.67         -1.20         -4.63         0.000         0.000           Medium Trucks:         77.72         -18.76         1.71         -1.20         -4.63         0.000         0.000           Medium Trucks:         82.99         -18.75         1.71         -1.20         -4.63         0.000         0.000           Unnitigated Noise Levels (without Topo and barrier attenuation)         -4.63         0.000         0.000           VehicleType         Leg Peak Hour         Leg Day         Leg Right         Ldn         CNEL           Autos:         56.8         56.8         56.8         56.8	Centerline Dist. to	Observer:	47.0 feet								
Observer Height (Above Pad):         5.0 feet         Heavy Trucks:         8.004         Grade Adjustment:         0.0           Road Elevation:         0.0 feet         Lane Equivalent Distance (in feet)         Lane Equivalent Distance (in feet)           Road Grade:         0.0%         Autos:         38.079         Medium Trucks:         37.846           VehicleType         REMEL         Traffic Flow         Distance         Finte Road         Fresnel         Barrier Atten         Bern Atten           Autos:         66.51         -10.18         1.67         -1.20         -4.63         0.000         0.000           Medium Trucks:         77.72         -18.76         1.71         -1.20         -5.46         0.000         0.000           Medium Trucks:         77.72         -18.76         1.71         -1.20         -5.46         0.000         0.000           Medium Trucks:         75.9         -88.8         55.8         54.9         62.0         62.3           VehicleType         Leq Peak Hour         Leq Evening         Leq Night         Ldn         CNEL           Autos:         59.5         58.8         55.8         54.9         62.0         62.3           Medium Trucks:         59.5         58.8 <td>Barrier Distance to</td> <td>Observer:</td> <td>0.0 feet</td> <td></td> <td>Med</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Barrier Distance to	Observer:	0.0 feet		Med						
Pad Elevation:         0.0 feet         Lane Equivalent Distance (in feet)           Road Glevation:         0.0 feet         Lane Equivalent Distance (in feet)           Road Grade:         0.0%         Autos:         38.079           Left View:         -90.0 degrees         Medium Trucks:         37.846           Right View:         90.0 degrees         Medium Trucks:         37.869           FHWA Noise Model Calculations           VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         66.51         -10.18         1.67         -1.20         -4.63         0.000         0.000           Medium Trucks:         77.72         -18.76         1.71         -1.20         -5.46         0.000         0.000           Unnitigated Noise Levels (without Topo and barrier attenuation)         Ueq Evening         Leq Night         Ldn         CNEL           Autos:         56.8         56.0         54.6         51.8         59.1         59.5           Medium Trucks:         59.5         58.8         58.7         62.5         68.9         69.0           VehicleType         Leq Peak Hour         Leq Day         Le	Observer Height (A	bove Pad):	5.0 feet						Grade Adi	ustment	0.0
Road Grade:         0.0%         Autos:         38.079           Left View:         -90.0 degrees         Medium Trucks:         37.846           Right View:         90.0 degrees         Medium Trucks:         37.869           FHWA Noise Model Calculations         VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         66.51         -10.18         1.67         -1.20         -4.63         0.000         0.000           Medium Trucks:         77.72         -18.76         1.71         -1.20         -4.63         0.000         0.000           Medium Trucks:         77.72         -18.76         1.71         -1.20         -4.63         0.000         0.000           Medium Trucks:         70.72         -18.76         1.71         -1.20         -5.46         0.000         0.000           Unnitigated Noise Levels (without Topo and barrier attenuation)         VehicleType         Leg Peak Hour         Leg Day         Leg Evening         Leg Night         Ldn         CNEL           Autos:         56.8         56.0         54.6         51.8         59.1         59.5         59.5         58.8         54.9         62.0	Pad	d Elevation:	0.0 feet								
Left View:         -90.0 degrees Right View:         Medium Trucks:         37.846 Heavy Trucks:         37.846           FHWA Noise Model Calculations         Medium Trucks:         37.869           VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Bern Atten           Autos:         66.51         -10.18         1.67         -1.20         -4.63         0.000         0.000           Medium Trucks:         77.72         -18.76         1.71         -1.20         -4.63         0.000         0.000           Heavy Trucks:         82.99         -18.75         1.71         -1.20         -4.67         0.000         0.000           Unmitigated Noise Levels (without Topo and barrier attenuation)         VehicleType         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Autos:         56.8         56.0         54.6         51.8         59.1         59.5           Medium Trucks:         59.5         58.8         55.8         54.9         62.0         62.0           Heavy Trucks:         66.4         65.2         61.5         63.5         70.1         70.3           Medium Trucks:         66.4         65.	Road	d Elevation:	0.0 feet		Lane	Equivalent	t Distanc	e (in :	feet)		
Right View:         90.0 degrees         Heavy Trucks:         37.869           FHWA Noise Model Calculations         VehicleType         REMEL         Traffic Flow         Distance         Finte Road         Fresnel         Barrier Atten         Bern Atten           Autos:         66.61         -10.18         1.67         -1.20         -4.63         0.000         0.000           Medium Trucks:         77.72         -18.76         1.71         -1.20         -4.67         0.000         0.000           Unnitigated Noise Levels (without Topo and barrier attenuation)         VehicleType         Leq Peak Hour         Leq Day         Leq Right         Ldn         CNEL           VehicleType         66.8         56.0         54.6         51.8         59.1         59.5           Medium Trucks:         59.5         58.8         55.8         54.9         62.0         62.3           Medium Trucks:         66.4         65.2         61.5         63.5         70.1         70.3           Centerline Distance to Noise Contour (in feet)         Immediated Noise         66.4         65.2         61.5         63.5         55.8           Ldn:         48         103         221         477	R	oad Grade:	0.0%			Auto	s: 38.0	079			
FHWA Noise Model Calculations           FHWA Noise Model Calculations           VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         66.51         -10.18         1.67         -1.20         -4.63         0.000         0.000           Medium Trucks:         77.72         -18.76         1.71         -1.20         -4.63         0.000         0.000           Heavy Trucks:         2.99         -18.75         1.71         -1.20         -5.46         0.000         0.000           Unnitigated Noise Levels (without Topo and barrier attenuation)         VehicleType         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Autos:         56.8         56.0         54.6         51.8         59.1         59.5           Medium Trucks:         59.5         58.8         55.8         54.9         62.0         62.3           Heavy Trucks:         64.8         63.3         58.7         62.5         68.9         69.0           Vehicle Noise:         66.4         65.2         61.5         63.5         70.1         70.3           Centerline Distanc		Left View:	-90.0 degree	s	Med	lium Truck	s: 37.8	346			
VehicleType         REMEL         Traffic Flow         Distance         Finite Road         Fresnel         Barrier Atten         Berm Atten           Autos:         66.51         -10.18         1.67         -1.20         -4.63         0.000         0.000           Medium Trucks:         77.7         -18.76         1.71         -1.20         -4.63         0.000         0.000           Heavy Trucks:         82.99         -18.75         1.71         -1.20         -5.46         0.000         0.000           Unnitigated Noise Levels (without Topo and barrier attenuation)		Right View:	90.0 degree	s	He	eavy Truck	s: 37.8	369			
Autos:         66.51         -10.18         1.67         -1.20         -4.63         0.000         0.000           Medium Trucks:         77.72         -18.76         1.71         -1.20         -4.63         0.000         0.000           Heavy Trucks:         82.99         -18.75         1.71         -1.20         -4.63         0.000         0.000           Umitigate Moise Levels (without Topo and barrier attenuation)         -4.67         0.000         0.000           VehicleType         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Autos:         56.8         56.0         54.6         51.8         59.1         59.5           Medium Trucks:         59.5         58.8         58.8         54.9         62.0         62.3           Heavy Trucks:         64.8         63.3         58.7         62.5         68.9         69.0           Vehicle Noise:         66.4         65.2         61.5         63.5         70.1         70.3           Centerline Distance to Noise Contour (in feet)	FHWA Noise Model	Calculations									
Medium Trucks:         77.72         -18.76         1.71         -1.20         -4.87         0.000         0.000           Unmitigated Noise Levels (without Topo and barrier attenuation)         -18.75         1.71         -1.20         -5.46         0.000         0.000           Unmitigated Noise Levels (without Topo and barrier attenuation)         -4.87         0.000         0.000           VehicleType         Leg Peak Hour         Leg Day         Leg Night         Ldn         CNEL           Autos:         56.8         56.0         54.6         51.8         59.1         59.5           Medium Trucks:         59.5         58.8         55.8         54.9         62.0         62.3           Heavy Trucks:         66.4         65.2         61.5         63.5         70.1         70.3           Centerline Distance to Noise Contour (in feet)	VehicleType	REMEL	Traffic Flow	Distanc	e Fin	ite Road	Fresn	el	Barrier Atte	en Ber	m Atten
Heavy Trucks:         82.99         -18.75         1.71         -1.20         -5.46         0.000         0.000           Unnitigated Noise Levels (without Topo and barrier attenuation)         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           VehicleType         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Medium Trucks:         56.8         56.0         55.8         54.9         62.0         62.3           Heavy Trucks:         64.8         63.3         58.7         62.5         68.9         69.0           Vehicle Noise:         66.4         65.2         61.5         63.5         70.1         70.3           Centerline Distance to Noise Contour (in feet)         TO dBA         65 dBA         60 dBA         55 dBA           Ldn:         48         103         221         477	Autos:	66.51	-10.18		1.67	-1.20		-4.63	0.0	00	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)           VehicleType         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Autos:         56.8         56.0         54.6         51.8         59.1         59.5           Medium Trucks:         59.5         58.8         55.8         54.9         62.0         62.3           Heavy Trucks:         64.8         63.3         58.7         62.5         68.9         69.0           Vehicle Noise:         66.4         65.2         61.5         63.5         70.1         70.3           Centerline Distance to Noise Contour (in feet)	Medium Trucks:	77.72	-18.76		1.71	-1.20		-4.87	0.0	00	0.000
VehicleType         Leq Peak Hour         Leq Day         Leq Evening         Leq Night         Ldn         CNEL           Autos:         56.8         56.0         54.6         51.8         59.1         59.5           Medium Trucks:         59.5         58.8         55.8         54.9         62.0         62.3           Heavy Trucks:         64.8         63.3         58.7         62.5         68.9         69.0           Vehicle Noise:         66.4         65.2         61.5         63.5         70.1         70.3           Centerline Distance to Noise Contour (in feet)	Heavy Trucks:	82.99	-18.75		1.71	-1.20		-5.46	0.0	00	0.000
Autos:         56.8         56.0         54.6         51.8         59.1         59.5           Medium Trucks:         59.5         58.8         55.8         64.9         62.0         62.3           Heavy Trucks:         64.8         63.3         58.7         62.5         68.9         69.0           Vehicle Noise:         66.4         65.2         61.5         63.5         70.1         70.3           Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         48         103         221         477	Unmitigated Noise	Levels (witho	ut Topo and I								
Medium Trucks:         59.5         58.8         55.8         54.9         62.0         62.3           Heavy Trucks:         64.8         63.3         58.7         62.5         68.9         69.0           Vehicle Noise:         66.4         65.2         61.5         63.5         70.1         70.3           Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         48         103         221         477		1									
Heavy Trucks:         64.8         63.3         58.7         62.5         68.9         69.0           Vehicle Noise:         66.4         65.2         61.5         63.5         70.1         70.3           Centerline Distance to Noise Contour (in feet)          70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         48         103         221         477											
Vehicle Noise:         66.4         65.2         61.5         63.5         70.1         70.3           Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         48         103         221         477											
Centerline Distance to Noise Contour (in feet)         70 dBA         65 dBA         60 dBA         55 dBA           Ldn:         48         103         221         477											
TO dBA         65 dBA         60 dBA         55 dBA           Ldn:         48         103         221         477	Vehicle Noise:	66.	4 6	5.2	61	.5	63.5		70.1		70.3
Ldn: 48 103 221 477	Centerline Distance	to Noise Co	ntour (in feet)			-		r		T	
								6		55	
GIVEL. 49 100 227 488			Ch	EL:	4	19	105		227		488

	FHV	VA-RD-77-108	HIGH	WAY N	IOISE PF	REDICTIO	N MODEL			
Scenario: Road Name: Road Segment:		IV.					ame: Rider nber: 11559			
SITE SP	ECIFIC IN	IPUT DATA				NO	ISE MODI	EL INPUTS	3	
Highway Data					Site Con	ditions (H	ard = 10, S	oft = 15)		
Average Daily Tra Peak Hour Pe Peak Hou	rcentage:	3,910 vehicl 6.83% 267 vehicle					Autos ks (2 Axles) (3+ Axles)	: 15		
	le Speed:	40 mph		F			1			
Near/Far Lane		56 feet		-	Vehicle N		0	Constant	Ninha	Deile
Site Data					veni	cleType Aut	Day 05: 68.29	Evening 6 12.3%	Night 19.6%	Daily 91.29%
					14	Aut dium Truc			21.4%	
	er Height:	0.0 feet				leavy Truc			21.4%	
Barrier Type (0-Wall		0.0			-	leavy IIuc	KS. 00.01	0 0.170	30.0%	1.997
Centerline Dist.		47.0 feet			Noise So	urce Elev	ations (in i	'eet)		
Centerline Dist. to		47.0 feet				Autos:	0.000			
Barrier Distance to		0.0 feet			Mediur	n Trucks:	2.297			
Observer Height (Ab	ove Pad): Elevation:	5.0 feet			Heav	y Trucks:	8.004	Grade Adj	ustment	0.0
	Elevation: Elevation:	0.0 feet		H	l ano Equ	uivalont D	istance (in	foot		
	elevation: ad Grade:	0.0 feet 0.0%		-	Lane Lyi	Autos:	38.079	ieeij		
	au Graue. Left View:				Modiur	n Trucks:	37.846			
	ight View:	-90.0 degre 90.0 degre				y Trucks:	37.869			
FHWA Noise Model	Calculation	s								
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresnel	Barrier Atte	en Ber	m Atten
Autos:	66.51	-7.46		1.6	7	-1.20	-4.63	0.0	00	0.00
Medium Trucks:	77.72	-18.79		1.7	1	-1.20	-4.87	0.0	00	0.00
Heavy Trucks:	82.99	-24.06		1.7	1	-1.20	-5.46	0.0	00	0.00
Unmitigated Noise L	evels (with	out Topo and	barrie	r atten	uation)					
VehicleType Le	eq Peak Hou	ir Leq Daj	/	Leq E	vening	Leq Nig	ght	Ldn	CI	NEL
Autos:	59	.5	58.7		57.3		54.6	61.8		62.2
Medium Trucks:	59	.4	58.7		55.8		54.9	62.0	)	62.2
Heavy Trucks:	59	.4	58.0		53.4		57.2	63.6	;	63.
Vehicle Noise:	64	.2	63.3		60.5		60.5	67.3	;	67.6
Centerline Distance	to Noise Co	ontour (in feet	)							
				70	dBA	65 dB	A	60 dBA	55	dBA
			Ldn:		31		67	144		311

F	HWA-RD	0-77-108 F	ligh	WAY NO	DISE PF	REDICTIC	N MOI	DEL			
Scenario: Existing	+ Project					Project N	lame: F	Rider 2	& 4		
Road Name: Harley K	nox BI.					Job Nu	nber: '	11559			
Road Segment: e/o Patte	rson Av.										
SITE SPECIFIC	INPUT	DATA							L INPUT	5	
Highway Data				S	ite Con	ditions (H	lard =	10, So	ft = 15)		
Average Daily Traffic (Adt)	: 18,70	7 vehicles						Autos:	15		
Peak Hour Percentage	6.83	%			Mee	dium Truc	ks (2 A	(xles):	15		
Peak Hour Volume	: 1,278	vehicles			Hei	avy Truck	s (3+ A	xles):	15		
Vehicle Speed	: 45	mph		v	ehicle N	Aix					
Near/Far Lane Distance	: 80	feet		-		cleTvpe		Dav	Evening	Night	Dailv
Site Data								68.2%	•	19.6%	
Barrier Height	· 0	0 feet			Me	dium Tru	cks:	69.8%	8.8%	21.4%	7.389
Barrier Type (0-Wall, 1-Berm)					E	leavy Tru	cks:	58.3%	5.1%	36.6%	3.199
Centerline Dist. to Barrie		0 0 feet									
Centerline Dist. to Observer		0 feet		N	oise So	urce Ele			et)		
Barrier Distance to Observer		0 feet				Autos:		000			
Observer Height (Above Pad)		0 feet				n Trucks:		297			
Pad Elevation		0 feet			Heav	y Trucks:	8.0	004	Grade Adj	ustment:	0.0
Road Elevation		0 feet		L	ane Equ	ivalent L	istand	e (in f	eet)		
Road Grade					,	Autos:	50.2	210	,		
Left View		o degrees			Mediur	n Trucks:	50.0	033			
Right View		0 degrees			Heav	y Trucks:	50.0	050			
FHWA Noise Model Calculati	ons										
VehicleType REMEL	Traffi	ic Flow	Dis	tance	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten
Autos: 68.	46	-1.26		-0.13		-1.20		-4.70	0.0	000	0.00
Medium Trucks: 79.	45	-12.09		-0.11		-1.20		-4.88	0.0	000	0.00
Heavy Trucks: 84.	25	-15.74		-0.11		-1.20		-5.31	0.0	000	0.00
Unmitigated Noise Levels (w			arrie								
VehicleType Leq Peak H		Leq Day		Leq Ev		Leq N	•		Ldn		VEL
Autos:	65.9		5.1		63.6		60.9		68.1		68
Medium Trucks:	66.0		5.3		62.4		61.5		68.6		68.
Heavy Trucks:	67.2		5.7		61.1		65.0		71.4		71.
Vehicle Noise:	71.2		0.2		67.3		67.6		74.4	ł	74
Centerline Distance to Noise	Contour	(in feet)	-	=0.1							
			. L	70 di		65 dI		6	0 dBA		dBA
			dn:		126		270		583 603		1,25 1,29
		CNE			130		280				

Monday, August 10, 2020

FH	WA-RD-77-108 I	HIGHWAY	NOISE PI	REDICTI		EL		
Scenario: Existing + Road Name: Harley Kno Road Segment: e/o Weste	ox Bl.				Name: Ri umber: 11			
SITE SPECIFIC II	NPUT DATA					DDEL INPUT	s	
Highway Data			Site Con	ditions (	Hard = 1	0, Soft = 15)		
Average Daily Traffic (Adt):	20,821 vehicles	6			AL	itos: 15		
Peak Hour Percentage:	6.83%		Me	dium Tru	icks (2 Ax	les): 15		
Peak Hour Volume:	1,422 vehicles		He	avy Truc	ks (3+ Ax	<i>les):</i> 15		
Vehicle Speed:	45 mph		Vehicle I	Mix				
Near/Far Lane Distance:	80 feet			icleType	D	ay Evening	Nigh	t Daily
Site Data						8.2% 12.3%		
Barrier Height:	0.0 feet		M	edium Tr	ucks: 6	9.8% 8.8%	21.4	4% 7.32%
Barrier Type (0-Wall, 1-Berm):	0.0		ŀ	Heavy Tr	ucks: 5	8.3% 5.1%	36.	5% 3.07%
Centerline Dist. to Barrier:	64.0 feet							
Centerline Dist. to Observer:	64.0 feet		Noise Sc		evations	, ,		
Barrier Distance to Observer:	0.0 feet			Autos				
Observer Height (Above Pad):	5.0 feet			m Trucks			livetee	ont: 0.0
Pad Elevation:	0.0 feet		Heav	y Trucks	8.00	4 Grade Ad	ijusiin	ent. 0.0
Road Elevation:	0.0 feet		Lane Eq	uivalent	Distance	(in feet)		
Road Grade:	0.0%			Autos	: 50.21	10		
Left View:	-90.0 degrees	6	Mediu	m Trucks	: 50.03	33		
Right View:	90.0 degrees	6	Heav	ry Trucks	50.05	50		
FHWA Noise Model Calculation	ıs		1					
VehicleType REMEL	Traffic Flow	Distance	Finite	Road	Fresne	Barrier At	ten l	Berm Atten
Autos: 68.46	6 -0.78	-0	.13	-1.20	-4	4.70 0.	000	0.00
Medium Trucks: 79.45	-11.66	-0	.11	-1.20	-4	F.88 0.	000	0.00
Heavy Trucks: 84.25	-15.44	-0	.11	-1.20	-5	5.31 0.	000	0.000
Unmitigated Noise Levels (with			,					
VehicleType Leq Peak Ho			Evening	Leq I		Ldn		CNEL
		5.5	64.1		61.4	68		69.0
		5.8	62.8		61.9	69	-	69.3
		6.0	61.4		65.3	71.		71.8
		0.6	67.7		68.0	74.	.8	75.0
Centerline Distance to Noise C	ontour (in feet)		0.404		0.4	CO -/D A	-	55 JD 4
	,		0 dBA	65 0		60 dBA	_	55 dBA
		dn:	133		287	61		1,330
	CN	EL.:	138		297	63	9	1,377

	FH\	NA-RD-77-108	HIGHW	AY NO	DISE PR	EDICT	ON MOE	DEL			
	o: Existing + F e: Harley Kno nt: e/o Webste	x BI.					Name: F umber: 1		2 & 4		
SITE S	SPECIFIC IN	IPUT DATA				N	OISE M	ODE	L INPUT	S	
Highway Data				S	ite Cond	litions	(Hard = 1	10, Sc	oft = 15)		
	Percentage:	17,581 vehicle 6.83%					icks (2 A				
Peak H	our Volume:	1,201 vehicles	3		Hea	avy Truc	:ks (3+ A	xles):	15		
Vel	hicle Speed:	45 mph		V	ehicle N	lix					
Near/Far Lar	ne Distance:	80 feet		-		cleType	1	Day	Evening	Night	Daily
Site Data	-							58.2%	•	19.6%	
Bar	rier Heiaht:	0.0 feet			Me	dium Ti	ucks: 6	59.8%	8.8%	21.4%	7.42%
Barrier Type (0-W		0.0 1001			н	leavy Ti	ucks: 8	58.3%	5.1%	36.6%	3.26%
Centerline Dis	. ,	64.0 feet		M	loise So	urco El	evations	(in f	aat)		
Centerline Dist. t	to Observer:	64.0 feet		N	0138 30	Auto:			eey		
Barrier Distance t	to Observer:	0.0 feet			Mediun						
Observer Height ()	Above Pad):	5.0 feet							0		
	ad Elevation:	0.0 feet			Heavy	/ Truck	s: 8.0	04	Grade Ad	usimen	E 0.0
Roa	ad Elevation:	0.0 feet		Li	ane Equ	ivalent	Distanc	e (in i	feet)		
F	Road Grade:	0.0%				Autos	s: 50.2	10			
	Left View:	-90.0 degree	s		Mediun	n Truck	s: 50.0	33			
	Right View:	90.0 degree			Heavy	/ Truck	s: 50.0	50			
FHWA Noise Mode	el Calculation	s									
VehicleType			0: /								
	REMEL	Traffic Flow	Distar	nce	Finite I	Road	Fresne	e/	Barrier Att	en Be	rm Atten
Autos:	REMEL 68.46			nce -0.13		Road -1.20		el 4.70		en Be	
		-1.53					-		0.0		0.000
Autos:	68.46	-1.53 -12.34		-0.13		-1.20	-	4.70	0.0 0.0	000	0.000
Autos: Medium Trucks: Heavy Trucks:	68.46 79.45 84.25	-1.53 -12.34 -15.91		-0.13 -0.11 -0.11		-1.20 -1.20	-	4.70 4.88	0.0 0.0	000	0.000
Autos: Medium Trucks: Heavy Trucks: <b>Unmitigated Noise</b> VehicleType	68.46 79.45 84.25 <b>E Levels (with</b> Leg Peak Hou	-1.53 -12.34 -15.91 <b>out Topo and</b> ur Leq Day	barrier a	-0.13 -0.11 -0.11	<b>iation)</b> ening	-1.20 -1.20 -1.20	Night	4.70 4.88	0.0 0.0 0.0	000 000 000	0.000 0.000 0.000
Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos:	68.46 79.45 84.25 • Levels (with Leq Peak Hou 65	-1.53 -12.34 -15.91 out Topo and ur Leq Day 5.6	barrier a	-0.13 -0.11 -0.11	ening 63.4	-1.20 -1.20 -1.20	- - Night 60.6	4.70 4.88 5.31	0.0 0.0 0.0 <i>Ldn</i> 67.9	000 000 000 C	0.000 0.000 0.000 NEL 68.3
Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos: Medium Trucks:	68.46 79.45 84.25 • Levels (with Leg Peak Hou 65 65	-1.53 -12.34 -15.91 out Topo and ur Leq Day 5.6 5.8	<i>barrier a</i> 2.00 64.8 65.1	-0.13 -0.11 -0.11	<i>ation)</i> ening 63.4 62.1	-1.20 -1.20 -1.20	Night 60.6 61.2	4.70 4.88 5.31	0.0 0.0 0.0 <i>Ldn</i> 67.9 68.3	000 000 000 000 200 200 200 200 200 200	0.000 0.000 0.000 NEL 68.3 68.6
Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos: Medium Trucks: Heavy Trucks:	68.46 79.45 84.25 • Levels (with Leq Peak Hou 65 65 65	-1.53 -12.34 -15.91 out Topo and ur Leq Day 5.6 5.8 7.0	barrier a 64.8 65.1 65.6	-0.13 -0.11 -0.11	ening 63.4 62.1 61.0	-1.20 -1.20 -1.20	Night 60.6 61.2 64.8	4.70 4.88 5.31	0.0 0.0 0.0 <i>Ldn</i> 67.9 68.3 71.2	000 000 000 000 000 000 000 000 000	0.000 0.000 0.000 WEL 68.3 68.6 71.3
Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos: Medium Trucks:	68.46 79.45 84.25 • Levels (with Leq Peak Hou 65 65 65	-1.53 -12.34 -15.91 out Topo and ur Leq Day 5.6 5.8 7.0	<i>barrier a</i> 2.00 64.8 65.1	-0.13 -0.11 -0.11	<i>ation)</i> ening 63.4 62.1	-1.20 -1.20 -1.20	Night 60.6 61.2	4.70 4.88 5.31	0.0 0.0 0.0 <i>Ldn</i> 67.9 68.3	000 000 000 000 000 000 000 000 000	0.000 0.000 0.000 WEL 68.3 68.6 71.3
Autos: Medium Trucks: Heavy Trucks: Unmitigated Noisee VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	68.46 79.45 84.25 8 Levels (with Leq Peak Hot 65 65 65 67 71	-1.53 -12.34 -15.91 out Topo and ur Leq Day 5.6 5.8 7.0 1.0	barrier a 64.8 65.1 65.6 69.9	-0.13 -0.11 -0.11 attenu eq Eve	ening 63.4 62.1 61.0 67.0	-1.20 -1.20 -1.20 Leq	Night 60.6 61.2 64.8 67.4	4.70 4.88 5.31	0.0 0.0 <i>Ldn</i> 67.9 68.3 71.2 74.2	000 000 000 000 000 000 000 000 000 00	0.000 0.000 <i>NEL</i> 68.3 68.6 71.3 74.4
Autos: Medium Trucks: Heavy Trucks: Unmitigated Noisee VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	68.46 79.45 84.25 8 Levels (with Leq Peak Hot 65 65 65 67 71	-1.53 -12.34 -15.91 out Topo and ur Leq Day 5.6 5.8 .0 1.0 ontour (in feet,	barrier a 64.8 65.1 65.6 69.9	-0.13 -0.11 -0.11	ening 63.4 62.1 61.0 67.0 BA	-1.20 -1.20 -1.20 Leq	Night 60.6 61.2 64.8 67.4	4.70 4.88 5.31	0.0 0.0 0.0 0.0 67.9 68.3 71.2 74.2 50 dBA	000 000 000 000 000 000 000 000 000 00	0.000 0.000 0.000 NEL 68.3 68.6 71.3 74.4
Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos: Medium Trucks: Heavy Trucks:	68.46 79.45 84.25 8 Levels (with Leq Peak Hot 65 65 65 67 71	-1.53 -12.34 -15.91 out Topo and ur Leq Day 5.6 5.8 .0 1.0 ontour (in feet,	barrier a 64.8 65.1 65.6 69.9	-0.13 -0.11 -0.11 attenu eq Eve	ening 63.4 62.1 61.0 67.0	-1.20 -1.20 -1.20 Leq	Night 60.6 61.2 64.8 67.4	4.70 4.88 5.31	0.0 0.0 <i>Ldn</i> 67.9 68.3 71.2 74.2	000 000 000 000 000 000 000 000 000 00	0.000 0.000 <i>NEL</i> 68.3 68.6 71.3 74.4

	FHV	VA-RD-77-108	HIGHWA	Y NOISI	E PREDICTIO	N MODEL			
	5: Existing + F 9: Harley Knop 1: e/o Indian	x Bl.				ame: Ride nber: 1155			
SITE S	PECIFIC IN	IPUT DATA			NO	ISE MOD	EL INPUT	5	
Highway Data				Site	Conditions (H	lard = 10,	Soft = 15)		
Average Daily 1 Peak Hour I Peak Hu	. ,	11,024 vehicle 6.83% 753 vehicles			Medium Truc Heavy Truck		s): 15		
	nicle Speed:	50 mph	,		-	S (S · MAICC	y. 10		
Near/Far Lan		80 feet			le Mix				
	e Distance.	ou leer			/ehicleType	Day	- 5	Night	Daily
Site Data						tos: 68.2		19.6%	88.19%
Ban	rier Height:	0.0 feet			Medium True			21.4%	7.80%
Barrier Type (0-Wa	all, 1-Berm):	0.0			Heavy True	cks: 58.3	5.1%	36.6%	4.019
Centerline Dis		64.0 feet		Nois	e Source Elev	ations (in	feet)		
Centerline Dist. t		64.0 feet			Autos:	0.000			
Barrier Distance t		0.0 feet		Me	dium Trucks:	2.297			
Observer Height (/	,	5.0 feet			leavy Trucks:	8.004	Grade Adj	iustment:	0.0
	d Elevation:	0.0 feet							
	d Elevation:	0.0 feet		Lane	Equivalent D		n feet)		
F	Road Grade:	0.0%			Autos:	50.210			
	Left View: Right View:	-90.0 degree 90.0 degree			dium Trucks: leavy Trucks:	50.033 50.050			
	· ·		:5		outy mucho.	50.000			
FHWA Noise Mode VehicleType	REMEL	s Traffic Flow	Distan	Ei	nite Road	Fresnel	Barrier Atte	an Barr	n Atten
Autos	70.20	-4.07		0.13	-1.20	-4.7		000	0.00
Medium Trucks:	81.00	-14.61		0.11	-1.20	-4.8		000	0.00
Heavy Trucks:	85.38	-17.50		0.11	-1.20	-5.3		000	0.00
Unmitigated Noise	Levels (with	out Topo and	barrier at	tenuatio	n)				
VehicleType	Leq Peak Hou	Ir Leq Day	Le	q Evenin	g Leq Ni	ght	Ldn	CN	IEL
Autos:	64	.8 (	54.0	e	2.6	59.8	67.1	1	67.
Medium Trucks:	65	.1 (	54.4	e	1.4	60.5	67.6	6	67.
Heavy Trucks:	66		55.1		0.5	64.3	70.8		70.
Vehicle Noise:	70	.3 (	69.3	e	6.3	66.8	73.6	6	73.
Centerline Distanc	e to Noise Co	ontour (in feet)							
				70 dBA	65 dE	BA	60 dBA	55 0	dBA
			dn:				544		1.107
		1	Lun.	1	11	238	514		1,107

	FHW	A-RD-77-108	HIGH	WAY N	DISE PR	EDICT	ON MO	DEL			
Scenario: Ex	isting + Pr	oject				Project	Name:	Rider 2	2 & 4		
Road Name: Ma	irkham St.					Job N	umber:	11559			
Road Segment: w/o	Redland	s Av.									
SITE SPEC	IFIC INF	UT DATA							L INPUT	S	
Highway Data				S	ite Conc	litions	(Hard =	10, Sc	oft = 15)		
Average Daily Traffic	: (Adt):	679 vehicle	s					Autos:	15		
Peak Hour Perce	ntage:	6.83%			Mea	lium Tru	icks (2 /	Axles):	15		
Peak Hour Ve	olume:	46 vehicles	5		Hea	avy Truc	:ks (3+ A	Axles):	15		
Vehicle 3	Speed:	35 mph		L.	ehicle M	liv					
Near/Far Lane Dis	tance:	56 feet		-		leTvpe		Dav	Evening	Night	Dailv
Site Data					10.110			68.2%		19.6%	
Barrier H	loiaht <sup>.</sup>	0.0 feet			Me	dium Ti	ucks:	69.8%	8.8%	21.4%	
Barrier Type (0-Wall, 1-		0.0			н	leavy Ti	ucks:	58.3%	5.1%	36.6%	2.01
Centerline Dist. to E		47.0 feet		L							
Centerline Dist. to Ob		47.0 feet		Ν	loise So				eet)		
Barrier Distance to Ob		0.0 feet				Autos		000			
Observer Height (Above		5.0 feet			Medium			297			
Pad Ele		0.0 feet			Heavy	/ Truck	s: 8.	004	Grade Ad	iustment.	0.0
Road Ele		0.0 feet		L	ane Equ	ivalent	Distan	ce (in i	feet)		
	Grade:	0.0%		-		Auto		079			
	t View:	-90.0 degree			Medium			846			
	t View:	90.0 degree				/ Truck		869			
FHWA Noise Model Cal	culations										
VehicleType RE	MEL	Traffic Flow	Dis	tance	Finite F	Road	Fresr	iel	Barrier Att	en Ber	m Atter
Autos:	64.30	-14.48		1.67		-1.20		-4.63	0.0	000	0.00
Medium Trucks:	75.75	-25.77		1.71		-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	81.57	-31.04		1.71		-1.20		-5.46	0.0	000	0.00
Unmitigated Noise Leve			-								
	Peak Hour			Leq Ev		Leq	Night		Ldn		VEL
Autos:	50.3		49.5		48.1		45.3		52.6		53
Medium Trucks:	50.5		49.8		46.8		45.9	-	53.0	-	53
Heavy Trucks:	51.0		49.6		44.9		48.8		55.2		55
Vehicle Noise:	55.4		54.4		51.6		51.7	7	58.5	5	58
Centerline Distance to I	Voise Cor	ntour (in feet)									
				70 d		65	dBA		60 dBA		dBA
			Ldn:		8		17		37		8
			VEL:		8		18		39		84

Monday, August 10, 2020

FH	WA-RD-77-108 H	HIGHWAY	NOISE PR	REDICTIC	N MÖDEL		
Scenario: Existing + Road Name: Harley Kno Road Segment: e/o Perris	ox Bl.				ame: Ride nber: 1155		
SITE SPECIFIC I	NPUT DATA					EL INPUTS	
Highway Data			Site Con	ditions (H	lard = 10, S	Soft = 15)	
Average Daily Traffic (Adt):	5,270 vehicles	5			Auto	s: 15	
Peak Hour Percentage:	6.83%		Me	dium Truc	ks (2 Axles	): 15	
Peak Hour Volume:	360 vehicles		He	avy Truck	s (3+ Axles	): 15	
Vehicle Speed:	45 mph		Vehicle I	<i>liy</i>			
Near/Far Lane Distance:	80 feet			cleType	Dav	Evening	Vight Daily
Site Data					tos: 68.2	•	19.6% 84.91%
Barrier Height:	0.0 feet		Me	edium Tru	cks: 69.8	% 8.8%	21.4% 8.91%
Barrier Type (0-Wall, 1-Berm):	0.0		F	leavy Tru	cks: 58.3	% 5.1%	36.6% 6.18%
Centerline Dist. to Barrier:	64.0 feet		Noise Or			f	
Centerline Dist. to Observer:	64.0 feet		Noise So	Autos:	vations (in	reet)	
Barrier Distance to Observer:	0.0 feet		Martin	n Trucks:	0.000 2.297		
Observer Height (Above Pad):	5.0 feet			n Trucks: y Trucks:	2.297	Grade Adju	stmant: 0.0
Pad Elevation:	0.0 feet		neav	y mucks.	0.004	Grade Adju	sumerit. 0.0
Road Elevation:	0.0 feet		Lane Equ	uivalent E	)istance (ir	n feet)	
Road Grade:	0.0%			Autos:	50.210		
Left View:	-90.0 degrees	3	Mediur	n Trucks:	50.033		
Right View:	90.0 degrees	3	Heav	y Trucks:	50.050		
FHWA Noise Model Calculation	ıs		1				
VehicleType REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Atter	Berm Atten
Autos: 68.46	6.99	-0.	.13	-1.20	-4.70	0.00	0 0.00
Medium Trucks: 79.45	-16.78	-0.	.11	-1.20	-4.88	8 0.00	0.00
Heavy Trucks: 84.25	-18.36	-0.	.11	-1.20	-5.3	1 0.00	0 0.00
Unmitigated Noise Levels (with	nout Topo and b	arrier atte	enuation)				
VehicleType Leq Peak Ho			Evening	Leq N		Ldn	CNEL
	• •	9.3	57.9		55.2	62.4	62.
		0.7	57.7		56.8	63.9	64.
		3.1	58.5		62.3	68.8	68.
Vehicle Noise: 6	7.2 6	6.1	62.8		64.0	70.7	70.
Centerline Distance to Noise C	ontour (in feet)						
			) dBA	65 dE		60 dBA	55 dBA
		dn:	71		153	330	71
	CN	EL:	73		158	340	732

FHWA-RD-77-108 HIGH	WAY NO	DISE PR	EDICT	ION MO	DEL			
Scenario: Existing + Project Road Name: Ramona Exwy. Road Segment: w/o Nevada Av.				Name: I umber:		2 & 4		
SITE SPECIFIC INPUT DATA			N	IOISE N	IODE	L INPUT	s	
Highway Data	S	ite Cond	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily Traffic (Adt): 46,093 vehicles					Autos:	15		
Peak Hour Percentage: 6.83%				ucks (2 A	/			
Peak Hour Volume: 3,148 vehicles		Hea	avy Truc	cks (3+ A	(xles):	15		
Vehicle Speed: 50 mph	V	ehicle N	lix					
Near/Far Lane Distance: 102 feet	-		cleType		Day	Evening	Night	Daily
Site Data					68.2%	•		91.28%
Barrier Height: 0.0 feet		Me	dium Ti	rucks:	69.8%	8.8%	21.4%	6.72%
Barrier Type (0-Wall, 1-Berm): 0.0		н	leavy Ti	rucks:	58.3%	5.1%	36.6%	2.00%
Centerline Dist. to Barrier: 92.0 feet	N	oise So	urce El	evation	s (in fe	eet)		
Centerline Dist. to Observer: 92.0 feet	_		Auto		000	,		
Barrier Distance to Observer: 0.0 feet		Mediun	n Truck		97			
Observer Height (Above Pad): 5.0 feet		Heav	y Truck	s: 8.0	004	Grade Ad	iustment	: 0.0
Pad Elevation: 0.0 feet	_							
Road Elevation: 0.0 feet	L	ane Equ				reet)		
Road Grade: 0.0%			Autos					
Left View: -90.0 degrees		Mediun						
Right View: 90.0 degrees		Heavy	y Truck	s: 76.	529			
FHWA Noise Model Calculations								
	tance	Finite I		Fresn		Barrier Att		rm Atten
Autos: 70.20 2.29	-2.89		-1.20		-4.76		000	0.000
Medium Trucks: 81.00 -9.04	-2.88		-1.20		-4.88		000	0.000
Heavy Trucks: 85.38 -14.31	-2.88		-1.20		-5.18	0.0	000	0.000
Unmitigated Noise Levels (without Topo and barrie							1	
VehicleType Leq Peak Hour Leq Day	Leq Eve		Leq	Night		Ldn		NEL
Autos: 68.4 67.6		66.2		63.4		70.7		71.1
Medium Trucks: 67.9 67.2		64.2		63.3		70.4		70.7
Heavy Trucks: 67.0 65.5		60.9		64.7		71.2		71.3
Vehicle Noise: 72.6 71.6		69.0		68.6		75.5	0	75.8
Centerline Distance to Noise Contour (in feet)	70.0				_			
L	70 dl	3A 215	65	dBA 463	6	50 dBA 997		dBA
Ldn: CNEL:		215 223						2,149
CNEL:		223		482		1,037		2,235

	FHW/	A-RD-77-108	HIGI	HWAY		REDICT	ION MO	DEL			_
Scenario: Existing Road Name: Ramon Road Segment: e/o New	a Exw	y.					t Name: lumber:				
SITE SPECIFIC	C INP	UT DATA				1	NOISE N	IODE	L INPUTS	3	
Highway Data					Site Con	ditions	(Hard =	10, So	oft = 15)		
Average Daily Traffic (Ad	t): 4	2,884 vehicle	es					Autos:	15		
Peak Hour Percentag	e:	6.83%			Me	dium Tr	ucks (2 A	Axles):	15		
Peak Hour Volum	e: 2	,929 vehicle	s		He	avy Tru	cks (3+ A	Axles):	15		
Vehicle Spee	d:	50 mph			Vehicle I	Mix					
Near/Far Lane Distand	e:	102 feet				icleType	2	Dav	Evening	Night	Dailv
Site Data					1011			68.2%	•	19.6%	
Barrier Heigi		0.0 feet			M	edium T		69.8%		21.4%	
Barrier Type (0-Wall, 1-Bern		0.0 reet				Heavy T		58.3%		36.6%	
Centerline Dist. to Barrie		92.0 feet									
Centerline Dist. to Observe		92.0 feet			Noise So				eet)		
Barrier Distance to Observe		0.0 feet				Auto		000			
Observer Height (Above Pau		5.0 feet				m Truck		297	~		
Pad Elevatio	·	0.0 feet			Heav	/y Truck	(s: 8.)	004	Grade Adj	ustment	: 0.0
Road Elevation	n:	0.0 feet			Lane Eq	uivalen	t Distan	ce (in :	feet)		
Road Grad	le:	0.0%				Auto	s: 76.	733			
Left Vie	w:	-90.0 deared	es		Mediu	m Truck	s: 76.	618			
Right Vie	W:	90.0 degree	es		Heav	/y Truck	s: 76.	629			
FHWA Noise Model Calcula	tions										
VehicleType REMEL	. 1	Traffic Flow	Di	stance	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten
Autos: 70	0.20	1.98		-2.8	39	-1.20		-4.76	0.0	00	0.00
	00.1	-9.35		-2.8		-1.20		-4.88	0.0		0.000
Heavy Trucks: 85	5.38	-14.63		-2.8	38	-1.20		-5.18	0.0	00	0.00
Unmitigated Noise Levels (			-								
VehicleType Leq Peak		Leq Day		Leq E	vening		Night		Ldn		NEL
Autos:	68.1		67.3		65.9		63.1		70.4		70.7
Medium Trucks:	67.6		66.9		63.9		63.0		70.1		70.4
Heavy Trucks:	66.7		65.2		60.6		64.4		70.9		71.0
Vehicle Noise:	72.2		71.3		68.7		68.3	5	75.2		75.
Centerline Distance to Nois	e Con	tour (in feet	)	70	dD A	67	dBA		60 dBA		d D A
			Ldn:	70	dBA 205	65	ава 441	(	60 dBA 950	55	dBA
			Lan: NEL:		205		441 459		950 988		2,047 2,129
		CI	VEL.		213		459		988		2,129

	FHV	/A-RD-77-108	HIGI	HWAY N	OISE PR	EDICT	ION MO	DEL			
Scenario:	Existing + P	roject				Project	Name:	Rider 2	2 & 4		
Road Name:	Ramona Ex	wy.				Job N	umber:	11559			
Road Segment:	e/o Indian	Av.									
	PECIFIC IN	PUT DATA							L INPUT	S	
Highway Data				S	Site Cond	litions	(Hard =	10, So	oft = 15)		
Average Daily Tr	raffic (Adt):	39,691 vehicle	es					Autos:	15		
Peak Hour P	ercentage:	6.83%			Mec	lium Tr	ucks (2 /	Axles):	15		
Peak Hou	ur Volume:	2,711 vehicles	s		Hea	avy Tru	cks (3+ A	Axles):	15		
Vehi	cle Speed:	50 mph		L.	/ehicle N	liv					
Near/Far Lane	e Distance:	102 feet		F		cleType		Dav	Evening	Night	Daily
Site Data								68.2%	•	19.6%	
Barri	er Height:	0.0 feet			Me	dium T	rucks:	69.8%	8.8%	21.4%	6.729
Barrier Type (0-Wal		0.0			н	leavy T	ucks:	58.3%	5.1%	36.6%	1.999
Centerline Dist.		92.0 feet		-		-					
Centerline Dist. to		92.0 feet		^	loise So				eet)		
Barrier Distance to	Observer:	0.0 feet				Auto		000			
Observer Height (A	bove Pad):	5.0 feet			Mediun			297	O		
<b>e</b> (	Elevation:	0.0 feet			Heavy	/ Truck	s: 8.	004	Grade Ad	usiment.	0.0
Road	Elevation:	0.0 feet		L	ane Equ	ivalent	Distan	ce (in i	feet)		
Ro	oad Grade:	0.0%				Auto	s: 76.	733			
	Left View:	-90.0 degree	es		Mediun	n Truck	s: 76.	618			
F	Right View:	90.0 degree	es		Heav	Y Truck	s: 76.	629			
FHWA Noise Model	Calculations	;									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite I	Road	Fresr	iel	Barrier Att	en Ber	m Atten
Autos:	70.20	1.64		-2.89	)	-1.20		-4.76	0.0	000	0.00
Medium Trucks:	81.00	-9.69		-2.88		-1.20		-4.88		000	0.00
Heavy Trucks:	85.38	-14.97		-2.88	3	-1.20		-5.18	0.0	000	0.00
Unmitigated Noise I			-	er attenu	uation)						
	eq Peak Hou			Leq Ev		Leq	Night		Ldn		VEL
Autos:	67	-	67.0		65.5		62.8		70.0	-	70.
Medium Trucks:	67		66.5		63.6		62.6		69.7		70.
Heavy Trucks:	66	-	64.8		60.2		64.1		70.5		70.
Vehicle Noise:	71	9	71.0		68.4		68.0	)	74.9	9	75.
Centerline Distance	to Noise Co	ntour (in feet,	) _								
			L	70 d		65	dBA		60 dBA		dBA
			Ldn:		194		419 436		902		1,94
			VEL		202				938		2,022

Monday, August 10, 2020

	FHV	VA-RD-77-108	HIGH	WAY N	OISE PF	REDICTI	ON MOD	EL			
	o: Existing + F e: Ramona E≯ t: e/o Webste	wy.					Name: R umber: 1		2 & 4		
	SPECIFIC IN	IPUT DATA							L INPUTS		
Highway Data				5	Site Con	ditions (	Hard = 1	0, Sc	oft = 15)		
Average Daily	Traffic (Adt):	38,827 vehicle	es				A	utos:	15		
Peak Hour I	Percentage:	6.83%					icks (2 Ax	/			
Peak H	our Volume:	2,652 vehicles	6		Hea	avy Truc	ks (3+ Ax	(les):	15		
Vel	nicle Speed:	50 mph		1	/ehicle N	lix					
Near/Far Lar	ne Distance:	102 feet		F		cleType	D	ay	Evening	Night	Daily
Site Data								8.2%	•	19.6%	91.29%
Bar	rier Height:	0.0 feet			Me	dium Tr	ucks: 6	9.8%	8.8%	21.4%	6.71%
Barrier Type (0-Wa		0.0			E	leavy Tr	ucks: 5	8.3%	5.1%	36.6%	1.99%
Centerline Dis	. ,	92.0 feet			laiaa Ca	uree El	evations	lin fe	e fi		
Centerline Dist. t	o Observer:	92.0 feet		,	voise so	Autos			el)		
Barrier Distance t	o Observer:	0.0 feet			Modiur	n Trucks					
Observer Height (/	Above Pad):	5.0 feet				y Trucks			Grade Adju	stment.	0.0
Pa	d Elevation:	0.0 feet								Sunon.	0.0
Roa	d Elevation:	0.0 feet		L	.ane Equ	iivalent	Distance	e (in f	feet)		
F	Road Grade:	0.0%				Autos	76.7	33			
	Left View:	-90.0 degree	es		Mediur	n Trucks					
	Right View:	90.0 degree	es		Heav	y Trucks	: 76.6	29			
FHWA Noise Mode	I Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresne	1	Barrier Atte	n Berr	n Atten
Autos:	70.20	1.54		-2.89	9	-1.20	-1	4.76	0.00	00	0.000
Medium Trucks:	81.00	-9.79		-2.88	3	-1.20	-4	4.88	0.00	00	0.000
Heavy Trucks:	85.38	-15.06		-2.88	3	-1.20	-	5.18	0.00	00	0.000
Unmitigated Noise	Levels (with	out Topo and									
VehicleType	Leq Peak Hou	ir Leq Day	r	Leq Ev	ening/	Leq I	Vight		Ldn	C٨	IEL
Autos:	67		66.9		65.4		62.7		69.9		70.3
Medium Trucks:	67		66.4		63.5		62.6		69.6		69.9
Heavy Trucks:	66		64.8		60.1		64.0		70.4		70.5
Vehicle Noise:	71	.8	70.9		68.3		67.9		74.8		75.0
Centerline Distanc	e to Noise Co	ontour (in feet	)								
			L	70 a		65 c		6	i0 dBA	55 (	dBA
											1.915
			Ldn: VEL:		192 199		413 429		889 925		1,915

	FHV	VA-RD-77-108 I	IIGHWA	Y NOISE P	REDICT	ION MOI	DEL			
	: Existing + P : Ramona Ex : e/o Perris B	wy.				t Name: F lumber: ·		& 4		
SITE S	PECIFIC IN	PUT DATA				NOISE N	IODE		5	
Highway Data				Site Cor	nditions	(Hard =	10, So	ft = 15)		
Average Daily T	raffic (Adt):	35,358 vehicles	3				Autos:	15		
Peak Hour F	ercentage:	6.83%		Me	edium Tr	ucks (2 A	xles):	15		
Peak Ho	ur Volume:	2,415 vehicles		He	eavy Tru	cks (3+ A	xles):	15		
Veh	icle Speed:	50 mph		Vehicle	Mise					
Near/Far Lan	e Distance:	102 feet			nicleType		Day	Evening	Night	Daily
Site Data				Ver			68.2%	12.3%	19.6%	
		0.0 feet		N	ledium T		69.8%		21.4%	6.77%
Barrier Type (0-Wa	ier Height:	0.0 teet			Heavy T	rucks:	58.3%	5.1%	36.6%	2.01%
Centerline Dist	. ,	92.0 feet								
Centerline Dist. to		92.0 feet		Noise S		levations		et)		
Barrier Distance to		0.0 feet			Auto		000			
Observer Height (A		5.0 feet			m Truck		97			
	d Elevation:	0.0 feet		Hea	vy Truck	(s: 8.0	04	Grade Ad	ustment	: 0.0
Road	d Elevation:	0.0 feet		Lane Eq	uivalen	t Distanc	e (in f	eet)		
R	oad Grade:	0.0%			Auto	s: 76.	733			
	Left View:	-90.0 degrees	5	Mediu	m Truck	s: 76.0	518			
	Right View:	90.0 degrees		Hea	vy Truck	(s: 76.6	629			
FHWA Noise Model	Calculations	S								
VehicleType	REMEL	Traffic Flow	Distanc	e Finite	Road	Fresn	el i	Barrier Att	en Ber	m Atten
Autos:	70.20	1.14	-	2.89	-1.20		-4.76	0.0	000	0.000
Medium Trucks:	81.00	-10.16	-	2.88	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	85.38	-15.44	-	2.88	-1.20		-5.18	0.0	000	0.000
Unmitigated Noise				,						
	.eq Peak Hou			l Evening		Night		Ldn		NEL
Autos:	67		6.4	65.0		62.3		69.5		69.9
Medium Trucks:	66		6.1	63.1		62.2		69.3		69.5
Heavy Trucks:	65		4.4	59.8		63.6		70.0	-	70.2
Vehicle Noise:	71	.4 7	0.5	67.9	)	67.5		74.4	ł	74.6
Centerline Distance	to Noise Co	ontour (in feet)								
				70 dBA	65	dBA	6	0 dBA	55	dBA
			dn:	181		389		838		1,806
		CN	EL:	188		405		872		1,878

	FHW	/A-RD-77-108	HIGHWA	AY NO	DISE PR	REDICTIO		DEL			
Scenario: Road Name: Road Segment:		wy.				Project I Job Nu			2 & 4		
SITE SF	ECIFIC IN	PUT DATA							L INPUT	5	
Highway Data				Si	te Con	ditions (l	Hard =	10, Sc	oft = 15)		
Average Daily Tr Peak Hour Pe Peak Hou	ercentage:	37,333 vehicle 6.83% 2,550 vehicle				dium Truc avy Truck	cks (2 A	/	15		
Vehic	le Speed:	50 mph		14	ehicle I	liv					
Near/Far Lane	Distance:	102 feet		V		cleType		Dav	Evening	Night	Daily
Site Data					Veni			68.2%	•	19.6%	,
		0.0 feet		_	Me	dium Tru		69.8%		21.4%	
Barrier Type (0-Wall	e <b>r Height:</b> , 1-Berm):	0.0 reet 0.0			F	leavy Tru	icks:	58.3%	5.1%	36.6%	
Centerline Dist.	to Barrier:	92.0 feet		N	nisa Sr	urce Ele	vations	(in fe	oof)		
Centerline Dist. to	Observer:	92.0 feet			0136 00	Autos		000			
Barrier Distance to	Observer:	0.0 feet			Modiu	n Trucks		97			
Observer Height (At	ove Pad):	5.0 feet				y Trucks.		04	Grade Adj	ustment	. 0 0
Pad	Elevation:	0.0 feet								aounom	. 0.0
Road	Elevation:	0.0 feet		Lá	ane Equ	uivalent l	Distanc	e (in i	feet)		
	ad Grade:	0.0%				Autos:					
	Left View:	-90.0 degre	es			n Trucks.		618			
R	light View:	90.0 degre	es		Heav	y Trucks.	76.6	529			
FHWA Noise Model	Calculations	;									
VehicleType	REMEL	Traffic Flow	Distan		Finite		Fresn		Barrier Atte		m Atten
Autos:	70.20	1.37		-2.89		-1.20		4.76	0.0		0.00
Medium Trucks:	81.00	-9.93		-2.88		-1.20		-4.88	0.0		0.00
Heavy Trucks:	85.38	-15.20		-2.88		-1.20		-5.18	0.0	000	0.00
Unmitigated Noise L											
	eq Peak Hou			eq Eve		Leq N			Ldn		NEL
Autos:	67.	-	66.7		65.3		62.5		69.7		70.
Medium Trucks:	67.	-	66.3		63.3		62.4		69.5		69.
Heavy Trucks:	66.		64.6		60.0		63.8		70.3		70.4
Vehicle Noise:	71.	7	70.7		68.1		67.7		74.6	3	74.
Centerline Distance	to Noise Co	ntour (in feet	)								
				70 dE		65 d		6	60 dBA	55	dBA
			Ldn:		187		403		869		1,872
		0	NEL:		195		419		904		1.947

	FHW	A-RD-77-108 H	IGHW	AY NC	ISE PRE	DICTIC	ON MOL	DEL			
Scenario: Ex		oject				Project N			& 4		
Road Name: M						Job Nu	mber: 1	1559			
Road Segment: e/	o Perris Bl.										
SITE SPE	CIFIC INP	UT DATA								5	
Highway Data				Si	te Condi	itions (I	-lard =	10, So	ft = 15)		
Average Daily Traffi	ic (Adt):	1,502 vehicles					A	Autos:	15		
Peak Hour Perce	entage:	6.83%				um Truc			15		
Peak Hour V	/olume:	103 vehicles			Heav	vy Truck	is (3+ A	xles):	15		
Vehicle	Speed:	40 mph		Ve	ehicle Mi	x					
Near/Far Lane Di	stance:	56 feet				a leTvpe		Dav	Evening	Night	Dailv
Site Data			-	-		A	utos:	68.2%		19.6%	92.32
Barrier I	Heiaht:	0.0 feet			Med	lium Tru	icks:	69.8%	8.8%	21.4%	5.92
Barrier Type (0-Wall, 1-		0.0			He	avy Tru	icks:	58.3%	5.1%	36.6%	1.76
Centerline Dist. to		47.0 feet									
Centerline Dist. to Ob	server:	47.0 feet		NO	oise Sou				et)		
Barrier Distance to Ob	server:	0.0 feet				Autos:		000			
Observer Height (Abov	e Pad):	5.0 feet			Medium			97	0		
	evation:	0.0 feet			Heavy	Trucks:	8.0	04	Grade Ad	usiment.	0.0
Road Ele	evation:	0.0 feet		La	ne Equi	valent I	Distanc	e (in f	eet)		
Road	Grade:	0.0%				Autos:	38.0	)79			
Le	ft View:	-90.0 degrees			Medium	Trucks:	37.8	346			
Righ	ht View:	90.0 degrees			Heavy	Trucks:	37.8	369			
FHWA Noise Model Ca	lculations										
VehicleType RI	EMEL 1	Traffic Flow	Distar	nce	Finite R	oad	Fresn	e/	Barrier Att	en Ber	m Atter
Autos:	66.51	-11.56		1.67		-1.20		-4.63	0.0	000	0.00
Medium Trucks:	77.72	-23.49		1.71		-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	82.99	-28.77		1.71		-1.20		-5.46	0.0	000	0.00
Unmitigated Noise Lev			-								
	Peak Hour	Leq Day		eq Eve		Leq N	•		Ldn		VEL
Autos:	55.4		1.6		53.2		50.4		57.1		58
Medium Trucks:	54.7	-	1.0		51.1		50.2		57.3	-	57
Heavy Trucks:	54.7		3.3		48.7		52.5		58.9		59
Vehicle Noise:	59.7		8.8		56.1		55.9		62.8	3	63
Centerline Distance to	Noise Con	tour (in feet)							_	-	
				70 dE		65 dl		6	0 dBA		dBA
			in:		16		33 35		72 75		15
		CNE			16						16

Monday, August 10, 2020

					IOISE PF						
Scenario: Existing		ct					Name: Rid umber: 11				
Road Name: Ramona Road Segment: e/o Red		,				JOD IN	umber: 11	559			
SITE SPECIFIC	INPU	T DATA						DEL INPU	TS		
lighway Data					Site Con	ditions	(Hard = 10	), Soft = 15)			
Average Daily Traffic (Adt)		31 vehicle	s					tos: 15			
Peak Hour Percentage	: 6.8	33%					ucks (2 Axl	,			
Peak Hour Volume	2,85	57 vehicles			He	avy Truc	cks (3+ Axl	es): 15			
Vehicle Speed	: 5	50 mph			Vehicle I	<i>lix</i>					
Near/Far Lane Distance	: 10	02 feet		F		cleType	Da	ay Evening	7 Ni	ght	Daily
Site Data							Autos: 68	3.2% 12.3%	6 1	9.6%	91.239
Barrier Height		0.0 feet			Me	dium Ti	rucks: 69	.8% 8.89	6 2	1.4%	6.76%
Barrier Type (0-Wall, 1-Berm		0.0			F	leavy Ti	rucks: 58	3.3% 5.1%	6 3	6.6%	2.01%
Centerline Dist. to Barrie		2.0 feet		_							
Centerline Dist. to Observe		2.0 feet		1	Noise So		evations (	,			
Barrier Distance to Observe	. (	0.0 feet				Auto					
Observer Height (Above Pad		5.0 feet				n Truck		-			
Pad Elevation		0.0 feet			Heav	y Truck	s: 8.00	4 Grade A	Adjust	ment:	0.0
Road Elevation	: (	0.0 feet		1	Lane Equ	uivalent	Distance	(in feet)			
Road Grade	: 0.0	0%				Auto	s: 76.73	3			
Left View	90	0.0 degree	s		Mediur	n Truck	s: 76.61	8			
Right View	: 91	0.0 degree	s		Heav	y Truck	s: 76.62	9			
FHWA Noise Model Calculati	ons										
VehicleType REMEL	Tra	ffic Flow	Dis	stance	Finite	Road	Fresnel	Barrier A	Atten	Bern	n Atten
Autos: 70.	20	1.87		-2.8	9	-1.20	-4	.76 (	0.000		0.00
Medium Trucks: 81.	00	-9.43		-2.8	8	-1.20	-4	.88 (	0.000		0.00
Heavy Trucks: 85.	38	-14.71		-2.8	8	-1.20	-5	.18 (	0.000		0.00
Inmitigated Noise Levels (w		Topo and I	barri	er atten	uation)						
VehicleType Leq Peak I		Leq Day		Leq E	vening	Leq	Night	Ldn		CN	
Autos:	68.0		67.2		65.7		63.0		0.2		70.
Medium Trucks:	67.5		6.8		63.8		62.9		0.0		70.
Heavy Trucks:	66.6		65.1		60.5		64.3		0.8		70.
Vehicle Noise:	72.2	1	71.2		68.6		68.2	7	5.1		75.4
Centerline Distance to Noise	Contol	ur (in feet)		=0			(2.4				
			L	/0 (	dBA	65	dBA	60 dBA		55 c	
		1	dn:		202		435	93	37		2,019
		~	IFL ·		210		452		75		2.100

	FHW	A-RD-77-108	HIGHWA	Y NO	DISE PF	REDICT		DEL			
Scenario Road Name Road Segmen		,					Name: F umber: ·				
SITE S	PECIFIC IN	PUT DATA				N	IOISE N	IODE	L INPUTS	5	
Highway Data				S	ite Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily T	raffic (Adt):	12,701 vehicle	s					Autos:	15		
Peak Hour F	Percentage:	6.83%			Me	dium Tr	ucks (2 A	xles).	15		
Peak Ho	our Volume:	867 vehicles			He	avy Tru	cks (3+ A	xles).	15		
Veh	icle Speed:	45 mph		V	ehicle I	Mix					
Near/Far Lan	e Distance:	56 feet				icleType		Dav	Evening	Night	Daily
Site Data				+				68.2%	•	19.6%	
Ban	ier Heiaht:	0.0 feet			Me	edium Ti	rucks:	69.8%	8.8%	21.4%	6.60%
Barrier Type (0-Wa		0.0			F	leavy T	rucks:	58.3%	5.1%	36.6%	1.96%
Centerline Dis	. ,	47.0 feet									
Centerline Dist. to		47.0 feet		N	oise Sc		evations		eet)		
Barrier Distance to	o Observer:	0.0 feet			Madin	Auto m Truck		000 297			
Observer Height (A	bove Pad):	5.0 feet				т Truck vy Truck		297 004	Grade Adj	iustmon	
Pa	d Elevation:	0.0 feet			neav	y muck	s. o.u	JU4	Grade Auj	usunen	. 0.0
Roa	d Elevation:	0.0 feet		La	ane Equ	uivalent	Distanc	e (in:	feet)		
R	oad Grade:	0.0%				Auto		079			
	Left View:	-90.0 degree	s		Mediur	m Truck	s: 37.8	346			
	Right View:	90.0 degree	s		Heav	y Truck	s: 37.8	369			
FHWA Noise Mode	Calculations										
VehicleType	REMEL	Traffic Flow	Distanc	e	Finite	Road	Fresn	el	Barrier Atte	en Bei	rm Atten
Autos:	68.46	-2.84		1.67		-1.20		-4.63	0.0		0.000
Medium Trucks:	79.45	-14.26		1.71		-1.20		-4.87	0.0		0.000
Heavy Trucks:	84.25	-19.54		1.71		-1.20		-5.46	0.0	000	0.000
Unmitigated Noise								1			
	Leq Peak Hour			q Eve	ening	Leq	Night		Ldn		NEL
Autos: Medium Trucks:	66. 65.		35.3 35.0		63.9 62.0		61.1 61.1		68.4 68.2		68.8 68.5
Heavy Trucks:	65.		5.0 53.7		62.0 59.1		63.0		69.4	-	69.5
Vehicle Noise:	65. 70.		33.7 39.5		59.1 66.9		66.6		73.5		73.7
					00.9		00.0		73.0	,	13.1
Centerline Distance	e to Noise Col	ntour (in feet)		70 dF	RA I	65	dBA		60 dBA	55	dBA
		,	dn:	, 5 UL	80	00	172	I'	371	55	800
			IEL:		83		172		386		831
		0.1							200		201

	FHV	VA-RD-77-108	HIGI	HWAY	NOISE F	PREDICTIO		DEL			
Scenario: Ex Road Name: Ri Road Segment: w/	der St.					Project I Job Ni	Name: F Imber: 1		2 & 4		
SITE SPEC	CIFIC IN	PUT DATA				N	OISE N	IODE	L INPUT	5	
Highway Data					Site Co	nditions (	'Hard =	10, Sc	oft = 15)		
Average Daily Traffi Peak Hour Perce Peak Hour V	entage:	12,736 vehicl 6.83% 870 vehicle				ledium Tru leavy Truc	cks (2 A		15 15 15		
Vehicle	Speed:	45 mph			Vehicle	Mix					
Near/Far Lane Di	stance:	56 feet			Ve	hicleType		Dav	Evening	Night	Daily
Site Data						A	utos:	68.2%		19.6%	91.44%
Barrier I	leiaht <sup>.</sup>	0.0 feet			٨	Aedium Tru	ucks:	69.8%	8.8%	21.4%	6.60%
Barrier Type (0-Wall, 1-	Berm):	0.0				Heavy Tri	ucks:	58.3%	5.1%	36.6%	1.96%
Centerline Dist. to		47.0 feet			Noise S	Source Ele	evations	s (in fe	eet)		
Centerline Dist. to Ob		47.0 feet				Autos	: 0.0	000	1		
Barrier Distance to Ob		0.0 feet			Medi	um Trucks	: 2.2	297			
Observer Height (Abov Pad Ele		5.0 feet 0.0 feet			Hea	avy Trucks	: 8.0	004	Grade Adj	iustmen	t: 0.0
Road Ele	vation:	0.0 feet			Lane E	quivalent	Distand	e (in f	feet)		
Road	Grade:	0.0%				Autos	: 38.0	)79	1		
Lei	ft View:	-90.0 degre	es		Medi	um Trucks	: 37.8	346			
Righ	t View:	90.0 degre			Hea	avy Trucks	37.8	369			
FHWA Noise Model Cal	culations	5									
VehicleType RE	EMEL	Traffic Flow	Di	stance	Finit	e Road	Fresn	el	Barrier Att	en Be	rm Atten
Autos:	68.46	-2.83		1.6	67	-1.20		-4.63	0.0	000	0.00
Medium Trucks:	79.45	-14.25		1.3	71	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	84.25	-19.52		1.3	71	-1.20		-5.46	0.0	000	0.00
Unmitigated Noise Lev					/						
	Peak Hou			Leq E	Evening	Leq N			Ldn		NEL
Autos:	66		65.3		63.	-	61.1		68.4		68.
Medium Trucks:	65		65.0		62.	-	61.1		68.2	-	68.
Heavy Trucks:	65	-	63.8		59.	-	63.0		69.4		69.
Vehicle Noise:	70		69.5		66.	а	66.6		73.5	>	73.
Centerline Distance to	Noise Co	ntour (in feet	)			1					
			L	70	dBA	65 a		6	i0 dBA		5 dBA
			Ldn:		80		173		372		802
		С	NEL:		83	5	179		387		833

		-RD-77-108 HI	SHIWA1	-HOISE PI		-			
Scenario: EAC		ject				ame: Rider			
Road Name: Perr					Job Nur	nber: 11559	9		
Road Segment: n/o	Harley Kn	ox Bl.							
SITE SPECI	FIC INP	UT DATA					EL INPUT	S	
Highway Data				Site Con	ditions (H	lard = 10, S			
Average Daily Traffic	(Adt): 43	3,426 vehicles				Autos			
Peak Hour Percen	tage: (	5.83%		Me	dium Truci	ks (2 Axles)	: 15		
Peak Hour Vol	lume: 2,	966 vehicles		He	avy Trucks	s (3+ Axles)	: 15		
Vehicle S	peed:	45 mph		Vehicle	Mix				
Near/Far Lane Dist	ance:	80 feet			icleTvpe	Dav	Evening	Night	Dailv
Site Data						tos: 68.2	•	19.6%	
Barrier He	iaht.	0.0 feet		M	edium Truc	cks: 69.8	% 8.8%	21.4%	
Barrier Type (0-Wall, 1-B	•	0.0		/	leavy Truc	cks: 58.3	% 5.1%	36.6%	2.019
Centerline Dist. to Ba		64.0 feet			·				
Centerline Dist. to Obse		64.0 feet		Noise So		ations (in	feet)		
Barrier Distance to Obse		0.0 feet			Autos:	0.000			
Observer Height (Above		5.0 feet			m Trucks:	2.297			
Pad Elev	,	0.0 feet		Heav	y Trucks:	8.004	Grade Ad	ustment.	0.0
Road Elev		0.0 feet		Lane Eq	uivalent D	istance (in	feet)		
Road G	rade:	0.0%			Autos:	50.210			
Left		-90.0 degrees		Mediu	m Trucks:	50.033			
Right	View:	90.0 degrees		Heav	y Trucks:	50.050			
FHWA Noise Model Calc	ulations								
VehicleType REN	IEL T	raffic Flow	Distance	e Finite	Road	Fresnel	Barrier Att	en Ber	m Atten
Autos:	68.46	2.49	-C	.13	-1.20	-4.70	0.0	000	0.00
Medium Trucks:	79.45	-8.81		.11	-1.20	-4.88		000	0.00
Heavy Trucks:	84.25	-14.09	-C	.11	-1.20	-5.31	0.0	000	0.00
Unmitigated Noise Level				,					
	eak Hour	Leq Day		Evening	Leq Ni		Ldn		VEL
Autos:	69.6	68.	-	67.4		64.6	71.9		72
Medium Trucks:	69.3	68.	-	65.7		64.8	71.8	-	72.
Heavy Trucks:	68.9	67.		62.8		66.6	73.0		73
Vehicle Noise:	74.0	73.	1	70.4		70.2	77.1	1	77
Centerline Distance to N	oise Con	tour (in feet)	-					-	
				0 dBA	65 dE		60 dBA		dBA
		Ldr		189		408	878 913		1,89 1,96
		CNEL		197		424			

Monday, August 10, 2020

FA	WA-RD-77-108	HIGHW	/AY N	IOISE PF	REDICTI	ON MOD	DEL			
Scenario: Existing + Road Name: Rider St. Road Segment: e/o Redlar						Name: F umber: 1		2 & 4		
SITE SPECIFIC I	NPUT DATA							L INPUTS	3	
Highway Data			1	Site Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily Traffic (Adt):	15,525 vehicle	s					lutos:			
Peak Hour Percentage:	6.83%					icks (2 A	/			
Peak Hour Volume:	1,060 vehicles			Hea	avy Truc	:ks (3+ A	xles):	15		
Vehicle Speed:	45 mph		1	Vehicle N	lix					
Near/Far Lane Distance:	56 feet			Vehi	cleType	1	Day	Evening	Night	Daily
Site Data					A	utos: (	58.2%	12.3%	19.6%	91.36%
Barrier Height:	0.0 feet			Me	dium Ti	ucks: (	59.8%	8.8%	21.4%	6.66%
Barrier Type (0-Wall, 1-Berm):	0.0			H	leavy Ti	ucks:	58.3%	5.1%	36.6%	1.98%
Centerline Dist. to Barrier:	47.0 feet		H	Noise So	uree El	ovetiene	lin fi	o o fi		
Centerline Dist. to Observer:	47.0 feet		'	NUISE 30	Auto:			eelj		
Barrier Distance to Observer:	0.0 feet			Modiur	n Truck:					
Observer Height (Above Pad):	5.0 feet				y Truck			Grade Adj	ustment	· 0.0
Pad Elevation:	0.0 feet		L						aounom	. 0.0
Road Elevation:	0.0 feet		1	Lane Equ				feet)		
Road Grade:	0.0%				Autos					
Left View:	-90.0 degree				n Truck					
Right View:	90.0 degree	s		Heav	y Truck:	s: 37.8	69			
FHWA Noise Model Calculation	ıs									
VehicleType REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresne	e/	Barrier Atte	en Ber	m Atten
Autos: 68.46	6 -1.98		1.6	7	-1.20		4.63	0.0	00	0.00
Medium Trucks: 79.45	5 -13.35		1.7	1	-1.20	-	4.87	0.0	00	0.00
Heavy Trucks: 84.25	-18.62		1.7	1	-1.20		5.46	0.0	00	0.00
Unmitigated Noise Levels (with										
VehicleType Leq Peak Ho			.eq Ei	vening	Leq	Night		Ldn		VEL
		6.2		64.7		62.0 62.0		69.2 69.1		69. 69.
		65.9 64.7		63.0 60.1		62.0		69.1 70.3		
	••••	0.4		60.1		63.9		70.3		70.4
		0.4		07.70		07.5		74.4		74.
Centerline Distance to Noise C	contour (in feet)		70 /	dBA	65	dBA	6	60 dBA	55	dBA
	,	.dn:	,00	92	051	198	C	426	55	иди 919
		IEL:		92		206		420		919
	- ON			00		200		.40		004

	FHW	/A-RD-77-108 HI	GHWAY		REDICTIC	N MODEL			
Road Nam	o: EAC With P e: Perris Bl. nt: s/o Harley K					lame: Ridei mber: 1155			
SITE	SPECIFIC IN	PUT DATA			NC	ISE MOD	EL INPUTS	;	
Highway Data				Site Con	ditions (H	lard = 10, S	Soft = 15)		
Average Daily	Traffic (Adt):	33,563 vehicles				Autos	s: 15		
Peak Hour	Percentage:	6.83%		Me	dium Truc	ks (2 Axles	): 15		
Peak H	our Volume:	2,292 vehicles		He	avy Truck	s (3+ Axles	): 15		
Ve	hicle Speed:	45 mph		Vehicle I	Niv				
Near/Far La	ne Distance:	80 feet			cleType	Day	Evening	Night	Daily
Site Data						itos: 68.2	•	•	91.24%
Bai	rier Height:	0.0 feet		Me	edium Tru	cks: 69.8	% 8.8%	21.4%	6.76%
Barrier Type (0-W		0.0		F	łeavy Tru	cks: 58.3	% 5.1%	36.6%	2.01%
Centerline Dis	st. to Barrier:	64.0 feet		Noise Sc	urce Elev	vations (in	feet)		
Centerline Dist.	to Observer:	64.0 feet			Autos:				
Barrier Distance	to Observer:	0.0 feet		Mediu	n Trucks:				
Observer Height (	Above Pad):	5.0 feet			y Trucks:		Grade Adju	ustment:	0.0
Pa	ad Elevation:	0.0 feet							
	ad Elevation:	0.0 feet		Lane Equ		Distance (ir	i feet)		
I	Road Grade:	0.0%			Autos:	50.210			
	Left View:	-90.0 degrees			n Trucks:				
	Right View:	90.0 degrees		Heav	y Trucks:	50.050			
FHWA Noise Mode	el Calculations								
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Atte	n Beri	m Atten
Autos:	68.46	1.37	-0.1	13	-1.20	-4.70	0.0	00	0.000
Medium Trucks:	79.45	-9.94	-0.1	11	-1.20	-4.88	8 0.0	00	0.000
Heavy Trucks:	84.25	-15.21	-0.1	11	-1.20	-5.31	0.0	00	0.000
Unmitigated Noise	Levels (witho	ut Topo and ba	rrier atte	nuation)					
VehicleType	Leq Peak Hour	r Leq Day	Leq E	evning	Leq N	ight	Ldn	CN	IEL
Autos:	68.			66.3		63.5	70.8		71.2
Medium Trucks:	68.			64.5		63.6	70.7		71.0
Heavy Trucks:	67.			61.7		65.5	71.9		72.0
Vehicle Noise:	72.	9 72	.0	69.3		69.1	75.9		76.2
Centerline Distance	e to Noise Co	ntour (in feet)							
				dBA	65 dE		60 dBA	55	dBA
		Ld		159		343	740		1,593
		CNE	L:	166		357	768		1,655

	FHW/	A-RD-77-108	HIGH	IWAY I	NOISE PF	REDICTIO	ON MOE	DEL			
Scenario: EAC V Road Name: Perris Road Segment: n/o Ra	BI.	,				Project N Job Nu	lame: F mber: 1		8 4		
SITE SPECIFI	C INP	UT DATA				N	DISE M	ODE	L INPUTS	3	
Highway Data					Site Con	ditions (l	Hard = 1	10, So	ft = 15)		
Average Daily Traffic (Ad Peak Hour Percentag Peak Hour Volun	je:	2,798 vehicl 6.83% 2.240 vehicle				dium Truc avy Truck	cks (2 A	,	15 15 15		
Vehicle Spee		45 mph	5				13 (0 · A	103).	10		
Near/Far Lane Distan		40 feet			Vehicle I						
		00 1001			Vehi	icleType		Day	Evening	Night	Daily
Site Data								68.2%		19.6%	
Barrier Heig	ht:	0.0 feet				edium Tru		§9.8%		21.4%	
Barrier Type (0-Wall, 1-Berr	n):	0.0			F	leavy Tru	icks: 5	58.3%	5.1%	36.6%	2.01%
Centerline Dist. to Barri	er:	64.0 feet		ŀ	Noise So	ource Ele	vations	(in fe	et)		
Centerline Dist. to Observ	er:	64.0 feet		ŀ		Autos					
Barrier Distance to Observ	er:	0.0 feet			Mediur	n Trucks:					
Observer Height (Above Pa	d):	5.0 feet				v Trucks:			Grade Adj	ustment	: 0.0
Pad Elevation	on:	0.0 feet									
Road Elevation		0.0 feet			Lane Equ				eet)		
Road Grad		0.0%				Autos:					
Left Vie		-90.0 degre	es			n Trucks:					
Right Vie	W.	90.0 degre	es		Heav	y Trucks:	50.0	50			
FHWA Noise Model Calcula	tions										
VehicleType REME	1 1	Traffic Flow	Dis	stance	Finite	Road	Fresne		Barrier Atte	en Ber	m Atten
Autos: 6	8.46	1.27		-0.1	13	-1.20	-	4.70	0.0	00	0.000
Medium Trucks: 7	9.45	-10.04		-0.1	1	-1.20	-	4.88	0.0	00	0.00
Heavy Trucks: 8	4.25	-15.31		-0.1	11	-1.20	-	5.31	0.0	00	0.00
Unmitigated Noise Levels (					,						
VehicleType Leq Peak				Leq E	vening	Leq N	•		Ldn		NEL
Autos:	68.4		67.6		66.2		63.4		70.7		71.
Medium Trucks:	68.1		67.4		64.4		63.5		70.6		70.9
Heavy Trucks:	67.6		66.2		61.6		65.4		71.8		71.9
Vehicle Noise:	72.8		71.9		69.2		69.0		75.8	1	76.
	e Con	tour (in feet	)							1	
Centerline Distance to Nois											dBA
Centerline Distance to Nois			L	70	dBA	65 di		6	0 dBA	55	
Centerline Distance to Nois			Ldn: NEL:	70	dBA 157 163	65 di	338 351	6	0 dBA 728 757	55	1,569 1.630

	FHWA	-RD-77-108 I	HIGH	HWAY N	OISE PR	REDICT		DEL			
Scenario: EAC W	ith Pro	ject				Projec	t Name:	Rider 2	2 & 4		
Road Name: Perris I	31.					Job I	Number:	11559			
Road Segment: s/o Mo	rgan St										
SITE SPECIFIC	C INPU	JT DATA							L INPUT	S	
Highway Data				5	Site Con	ditions	(Hard =	10, So	oft = 15)		
Average Daily Traffic (Ad	t): 30	,827 vehicles	6					Autos:	15		
Peak Hour Percentag	e: 6	6.83%			Med	dium Ti	rucks (2 )	Axles):	15		
Peak Hour Volum	e: 2,	105 vehicles			Hea	avy Tru	icks (3+ )	Axles):	15		
Vehicle Spee	d:	45 mph		1	/ehicle N	liv					
Near/Far Lane Distand	e:	80 feet		-		cleTyp	e	Day	Evening	Night	Daily
Site Data							Autos:	68.2%		19.6%	
Barrier Heigi	at.	0.0 feet			Me	dium 1	rucks:	69.8%	8.8%	21.4%	6.73%
Barrier Type (0-Wall, 1-Berr		0.0			h	leavy T	rucks:	58.3%	5.1%	36.6%	2.00%
Centerline Dist. to Barri		64.0 feet		-							
Centerline Dist. to Observ		64.0 feet		٨	loise So				eet)		
Barrier Distance to Observ		0.0 feet				Auto		000			
Observer Height (Above Pa		5.0 feet			Mediun			297			
Pad Elevatio	·	0.0 feet			Heav	y Truck	(s: 8.	004	Grade Ad	justment	0.0
Road Elevatio		0.0 feet		L	ane Equ	ıivalen	t Distan	ce (in i	feet)		
Road Grad		0.0%				Auto		210	,		
Left Vie		90.0 degrees			Mediun	n Truck	(s: 50	033			
Right Vie		90.0 degrees			Heav	y Trucł	(s: 50.	050			
FHWA Noise Model Calcula	tions										
VehicleType REMEL	. T	raffic Flow	Dis	stance	Finite	Road	Fresi	nel	Barrier Att	en Ber	m Atten
Autos: 68	3.46	1.00		-0.13	3	-1.20		-4.70	0.0	000	0.00
Medium Trucks: 79	9.45	-10.32		-0.11		-1.20		-4.88	0.0	000	0.00
Heavy Trucks: 84	1.25	-15.60		-0.11		-1.20		-5.31	0.0	000	0.00
Unmitigated Noise Levels (			arri								
VehicleType Leq Peak		Leq Day		Leq Ev		Leq	Night		Ldn		VEL
Autos:	68.1		7.3		65.9		63.3		70.4		70.
Medium Trucks:	67.8	-	7.1		64.2		63.3	-	70.3		70.
Heavy Trucks:	67.3		5.9		61.3		65.		71.		71.
Vehicle Noise:	72.5	7	1.6		68.9		68.	7	75.	6	75.
Centerline Distance to Nois	e Cont	our (in feet)									
				70 d		65	dBA	_	60 dBA		dBA
			dn: EL		150		324		698		1,50
					156		336		725		1.56

Monday, August 10, 2020

	FHW	/A-RD-77-108	HIGHWA	NY NO	DISE PF	REDICTI	ON MOE	DEL			
Scenario. Road Name. Road Segment		,					Name: F umber: 1				
	PECIFIC IN	PUT DATA							L INPUTS	;	
Highway Data				S	ite Con	ditions	(Hard = 1	10, S	oft = 15)		
Average Daily Ti	affic (Adt):	29,820 vehicle	S				A	lutos:	15		
Peak Hour P	ercentage:	6.83%					icks (2 A	/			
Peak Ho	ur Volume:	2,037 vehicles			Hea	avy Truc	:ks (3+ A	xles):	15		
Vehi	cle Speed:	45 mph		V	ehicle N	Nix					
Near/Far Lane	e Distance:	80 feet		-		cleType	1	Day	Evening	Night	Daily
Site Data								58.2%		19.6%	
Barr	er Heiaht:	0.0 feet			Me	edium Tr	ucks: 6	59.8%	6.8%	21.4%	6.69%
Barrier Type (0-Wa		0.0			E	leavy Tr	ucks: 5	58.3%	5.1%	36.6%	1.98%
Centerline Dist.		64.0 feet		A	oioo Co	uree El	evations	ling	a a fi		
Centerline Dist. to	Observer:	64.0 feet		/	use su	Autos			eelj		
Barrier Distance to	Observer:	0.0 feet			Madium	Autos n Trucks					
Observer Height (A	bove Pad):	5.0 feet				y Trucks			Grade Adju	istment	0.0
Pac	Elevation:	0.0 feet						-		istinent.	0.0
Road	Elevation:	0.0 feet		Li	ane Equ	uivalent	Distanc	e (in	feet)		
R	oad Grade:	0.0%				Autos		210			
	Left View:	-90.0 degree	S		Mediur	n Trucks					
1	Right View:	90.0 degree	S		Heav	y Trucks	s: 50.0	)50			
FHWA Noise Model	Calculations	;									
VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fresne	e/	Barrier Atte	n Ber	m Atten
Autos:	68.46	0.86		-0.13		-1.20	-	4.70	0.0	00	0.00
Medium Trucks:	79.45	-10.50		-0.11		-1.20	-	4.88	0.0	00	0.00
Heavy Trucks:	84.25	-15.77		-0.11		-1.20	-	5.31	0.0	00	0.00
Unmitigated Noise			-								
	eq Peak Hou			q Eve	ening	Leq	Night		Ldn	CI	VEL
Autos:	68.		7.2		65.8		63.0		70.3		70.
Medium Trucks:	67.		6.9		64.0		63.1		70.2		70.4
Heavy Trucks:	67.		5.7		61.1		64.9		71.4		71.
Vehicle Noise:	72.		1.4		68.8		68.5		75.4		75.6
Centerline Distance	to Noise Co	ntour (in feet)									
				70 dE		65 (	dBA		60 dBA	55	dBA
			.dn: EL:		147 152		316 328		680 707		1,466 1.523

	FHV	WA-RD-77-108	HIGHWA	Y NOISE F	REDICTI	ON MOD	EL			
	o: EAC With F e: Perris Bl. nt: s/o Rider S	,				Name: R umber: 1		& 4		
SITE	SPECIFIC IN	IPUT DATA			N	OISE M	ODEL	INPUTS	3	
Highway Data				Site Co	nditions	(Hard = 1	0, Soi	ft = 15)		
Average Daily	Traffic (Adt): Percentage:	31,815 vehicle 6.83%	s	м	edium Tru		utos: des):	15 15		
	our Volume:	2.173 vehicles			eavy Truc	,		15		
	hicle Speed:	45 mph	,					10		
Near/Far Lai		80 feet		Vehicle						
	le Distance.	ou leel		Ve	hicleType			Evening	Night	Daily
Site Data							8.2%	12.3%	19.6%	
Bar	rier Height:	0.0 feet		٨	ledium Tr	ucks: 6	9.8%	8.8%	21.4%	6.76%
Barrier Type (0-W		0.0			Heavy Tr	ucks: 5	8.3%	5.1%	36.6%	2.01%
Centerline Dis	t. to Barrier:	64.0 feet		Noiso	ource El	ovations	(in fo	of		
Centerline Dist.	to Observer:	64.0 feet		Noise a	Autos			eŋ		
Barrier Distance	to Observer:	0.0 feet		Madi	Im Trucks					
Observer Height (	Above Pad):	5.0 feet			vy Trucks			Grade Adj	ustmont	0.0
Pa	d Elevation:	0.0 feet		nee	vy mucks	5. 0.0	04	Graue Auj	usuneni.	0.0
Roa	d Elevation:	0.0 feet		Lane E	quivalent	Distance	e (in fe	eet)		
F	Road Grade:	0.0%			Autos	s: 50.2	10			
	Left View:	-90.0 degree	es	Media	im Trucks	s: 50.0	33			
	Right View:	90.0 degree	es	Hea	vy Trucks	s: 50.0	50			
FHWA Noise Mode	Calculation	s		1						
VehicleType	REMEL	Traffic Flow	Distanc	e Finite	e Road	Fresne	el E	Barrier Atte	en Ber	m Atten
Autos:	68.46	1.13	-	0.13	-1.20	-	4.70	0.0	00	0.000
Medium Trucks:	79.45	-10.17	-	0.11	-1.20	-	4.88	0.0	00	0.000
Heavy Trucks:	84.25	-15.44	-	0.11	-1.20	-	5.31	0.0	00	0.000
Unmitigated Noise	Levels (with									
VehicleType	Levels (with Leq Peak Hou	ır Leq Day	Leo	q Evening	Leq	Night		Ldn		VEL
VehicleType Autos:	Levels (with Leq Peak Hou 68	Ir Leq Day	67.5	, <i>Evening</i> 66.0	Leq (	63.3		70.5		70.9
VehicleType	Levels (with Leq Peak Hou 68 68	ur Leq Day 1.3 1.0	67.5 67.3	q Evening 66.0 64.3	Leq i	63.3 63.4		70.5 70.5		70.9 70.8
VehicleType Autos: Medium Trucks: Heavy Trucks:	Levels (with Leq Peak Hou 68 68 68	<i>Ir Leq Day</i> 1.3 1.0 1.5	67.5 67.3 66.0	g Evening 66.0 64.3 61.4	Leq 1 ) 3	63.3 63.4 65.3		70.5 70.5 71.7		70.9 70.8 71.8
VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	Levels (with Leq Peak Hou 68 68 67 72	ur Leq Day 1.3 1.5 1.7	Leo 67.5 67.3 66.0 71.7	q Evening 66.0 64.3	Leq 1 ) 3	63.3 63.4		70.5 70.5		70.9 70.8 71.8
VehicleType Autos: Medium Trucks: Heavy Trucks:	Levels (with Leq Peak Hou 68 68 67 72	ur Leq Day 1.3 1.5 1.7	Leo 67.5 67.3 66.0 71.7	g Evening 66. 64. 61. 69.	Leq 1 0 3 4	63.3 63.4 65.3 68.8		70.5 70.5 71.7 75.7		70.9 70.8 71.8 76.0
VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	Levels (with Leq Peak Hou 68 68 67 72	ur Leq Day 5.3 5.0 7.5 2.7 2.7 2.7 2.7	67.5 67.3 66.0 71.7	70 dBA	Leq 1 2 3 4 1 65 (	63.3 63.4 65.3 68.8		70.5 70.5 71.7 75.7 0 dBA		70.9 70.8 71.8 76.0 dBA
VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	Levels (with Leq Peak Hou 68 68 67 72	ur Leq Day 1.3 1.0 1.5 2.7 2.7 2.7 2.7 2.7	Leo 67.5 67.3 66.0 71.7	g Evening 66. 64. 61. 69.	Leq 1 2 3 4 1 65 0	63.3 63.4 65.3 68.8		70.5 70.5 71.7 75.7		70.9 70.8 71.8 76.0

	FHV	VA-RD-77-108	HIGHW	AY NC	DISE PR	REDICTIO	N MODEL			
Scenario: E Road Name: F Road Segment: s	Redlands A	N.					ame: Ridei nber: 1155			
	CIFIC IN	PUT DATA						EL INPUT	S	
Highway Data				Si	ite Cond	ditions (H	ard = 10, S	Soft = 15)		
Average Daily Traf Peak Hour Pere	. ,	8,781 vehicl 6.83%	es		Мес	dium Truci	Auto: ks (2 Axles			
Peak Hour	Volume:	600 vehicle	s		Hea	avy Trucks	s (3+ Axles	): 15		
Vehicle	Speed:	40 mph		14	ehicle N	liv				
Near/Far Lane D	istance:	56 feet		V		cleType	Dav	Evening	Night	Daily
Site Data					Venn		tos: 68.2		19.6%	,
	Heiaht:	0.0 feet			Me	dium Truc	ks: 69.8		21.4%	
Barrier Type (0-Wall,		0.0			H	leavy Truc	cks: 58.3	% 5.1%	36.6%	4.51%
Centerline Dist. to	Barrier:	47.0 feet		N	oise So	urce Elev	ations (in	feet)		
Centerline Dist. to O		47.0 feet				Autos:	0.000			
Barrier Distance to O		0.0 feet			Mediun	n Trucks:	2.297			
Observer Height (Abo Pad E	ve Pad): levation:	5.0 feet 0.0 feet				y Trucks:	8.004	Grade Ad	justment	0.0
Road E	levation:	0.0 feet		La	ane Equ	ivalent D	istance (ir	n feet)		
Road	d Grade:	0.0%				Autos:	38.079			
Le	eft View:	-90.0 degre	es		Mediun	n Trucks:	37.846			
Rig	ht View:	90.0 degre	es		Heav	y Trucks:	37.869			
FHWA Noise Model Ca		-								
1 1 1	REMEL	Traffic Flow	Distar		Finite		Fresnel	Barrier Att		rm Atten
Autos:	66.51	-4.13		1.67		-1.20	-4.63		000	0.00
Medium Trucks:	77.72	-14.48		1.71		-1.20	-4.8		000	0.00
Heavy Trucks:	82.99	-17.00		1.71		-1.20	-5.46	5 0.0	000	0.00
Unmitigated Noise Le					<u> </u>					
VehicleType Leq Autos:	Peak Hou 62		62.1	eq Eve	ening 60.6	Leq Ni	gnt 57.9	Ldn 65.1		NEL 65
Autos: Medium Trucks:	62		62.1 63.0		60.6 60.1		57.9 59.2	66.3	-	65. 66
Heavy Trucks:	66		65.0		60.4		59.2 64.3	70.1	-	70.
Vehicle Noise:	69		68.3		65.2		66.1	70.		70.
Centerline Distance to	Noise Co	ntour (in feet	)							
				70 dF	24	65 dE	4	60 dBA	55	dBA
						65 aB	A			
			Ldn:	70 UL	73	65 dB	156	337		726

		A-RD-77-108 HI	GHWA	YNC	JISE PRI	EDICTIC	N MOL	DEL			
Scenario: EAC					F	Project N			2 & 4		
Road Name: Red						Job Nu	mber: 1	1559			
Road Segment: s/o F	Ramona	Exwy.									
SITE SPECI	FIC INF	UT DATA							L INPUT	s	
Highway Data				Si	te Cond	itions (H	lard =	10, So	oft = 15)		
Average Daily Traffic (	Adt):	4,930 vehicles					A	Autos:	15		
Peak Hour Percent	tage:	6.83%			Medi	ium Truc	:ks (2 A	xles):	15		
Peak Hour Vol	ume:	337 vehicles			Hea	vy Truck	s (3+ A	xles):	15		
Vehicle Sp	eed:	40 mph		Ve	ehicle M	ix					
Near/Far Lane Dista	nce:	56 feet		-		leType		Day	Evening	Night	Daily
Site Data								68.2%	•	19.6%	
Barrier He	iaht:	0.0 feet			Med	dium Tru	cks:	69.8%	8.8%	21.4%	8.80
Barrier Type (0-Wall, 1-Be	•	0.0			He	avy Tru	cks:	58.3%	5.1%	36.6%	6.39
Centerline Dist. to Ba		47.0 feet		-							
Centerline Dist. to Obse		47.0 feet		N	oise Sou				eet)		
Barrier Distance to Obse	rver:	0.0 feet				Autos:		000			
Observer Height (Above I	Pad):	5.0 feet			Medium			97	0		
Pad Eleva		0.0 feet			Heavy	Trucks:	8.0	04	Grade Ad	usiment	0.0
Road Eleva	ation:	0.0 feet		La	ane Equi	ivalent L	Distanc	e (in f	feet)		
Road G	rade:	0.0%				Autos:	38.0	)79			
Left \	/iew:	-90.0 degrees			Medium	Trucks:	37.8	346			
Right \	/iew:	90.0 degrees			Heavy	Trucks:	37.8	369			
FHWA Noise Model Calcu	lations										
VehicleType REM	IEL	Traffic Flow	Distanc	е	Finite R	Road	Fresn	el	Barrier Att	en Ber	m Atten
Autos:	66.51	-6.77		1.67		-1.20		-4.63		000	0.00
Medium Trucks:	77.72	-16.61		1.71		-1.20		-4.87		000	0.00
Heavy Trucks:	82.99	-18.00		1.71		-1.20		-5.46	0.0	000	0.00
Unmitigated Noise Levels										Т	
	ak Hour			y Eve	ening	Leq N	•		Ldn		VEL
Autos:	60.2				58.0		55.2		62.	-	62
Medium Trucks:	61.6				58.0		57.0		64.		64
Heavy Trucks:	65.5				59.4		63.3		69.		69
Vehicle Noise:	67.8		7		63.3		64.7		71.4	1	71
Centerline Distance to No	oise Cor	tour (in feet)	1								
				70 dE		65 dI		6	0 dBA		dBA
		Ldi CNE			58 60		125 128		269 276		57 59

Monday, August 10, 2020

FH	WA-RD-77-108 H	IGHWAY	NOISE PF	EDICTIC	MODEL		
Scenario: EAC With Road Name: Redlands					lame: Ride mber: 1155		
Road Segment: s/o Markha				300 140	nber. 1155	9	
SITE SPECIFIC II				N		EL INPUTS	
Highway Data	POTDATA		Site Con		lard = 10, 3		
Average Daily Traffic (Adt):	9.321 vehicles				Auto		
Peak Hour Percentage:	6.83%		Med	dium Truc	ks (2 Axles	;): 15	
Peak Hour Volume:	637 vehicles		Hea	avy Truck	s (3+ Axles	): 15	
Vehicle Speed:	40 mph		14-1-1-1				
Near/Far Lane Distance:	56 feet		Vehicle N	leType	Dav	Evening	Night Daily
Site Data			Veni		itos: 68.2	•	19.6% 87.64%
	0.0 feet		Me	dium Tru			21.4% 7.99%
Barrier Height: Barrier Type (0-Wall, 1-Berm):	0.0 Teet		H	leavy Tru	cks: 58.3		36.6% 4.379
Centerline Dist. to Barrier:	47.0 feet					-	
Centerline Dist. to Observer:	47.0 feet		Noise So		vations (in	feet)	
Barrier Distance to Observer:	0.0 feet			Autos:			
Observer Height (Above Pad):	5.0 feet			n Trucks:			
Pad Elevation:	0.0 feet		Heav	y Trucks:	8.004	Grade Adju	stment: 0.0
Road Elevation:	0.0 feet		Lane Equ	ivalent L	Distance (ii	n feet)	
Road Grade:	0.0%			Autos:	38.079		
Left View:	-90.0 degrees		Mediur	n Trucks:	37.846		
Right View:	90.0 degrees		Heav	y Trucks:	37.869		
FHWA Noise Model Calculation	s						
VehicleType REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Atter	n Berm Atten
Autos: 66.51	-3.86	1.0	67	-1.20	-4.6	3 0.00	0.00
Medium Trucks: 77.72	-14.26	1.	71	-1.20	-4.8	7 0.00	0.00
Heavy Trucks: 82.99	-16.88	1.	71	-1.20	-5.4	6 0.00	0 0.00
Unmitigated Noise Levels (with	out Topo and ba	arrier atte	nuation)				
VehicleType Leq Peak Ho			Evening	Leq N	•	Ldn	CNEL
		2.3	60.9		58.2	65.4	65.
		3.3	60.3		59.4	66.5	66.
		5.1	60.5		64.4	70.8	70.
		3.5	65.4		66.3	73.0	73.
Centerline Distance to Noise C	ontour (in feet)						
			dBA	65 dl		60 dBA	55 dBA
		dn:	74		160	346	74
	CNE	=L.:	77		165	356	768

	FHV	/A-RD-77-108	HIGHWA	Y NOISE	PREDICT		DEL			
	2: EAC With P 2: Redlands A 1: s/o Rider St	v.				t Name: F Number: ·		8 4		
SITE S	PECIFIC IN	PUT DATA			I	NOISE	ODE	L INPUTS	3	
Highway Data				Site 0	Conditions	(Hard =	10, So	oft = 15)		
Average Daily 1	raffic (Adt):	4,218 vehicle	s				Autos:	15		
Peak Hour H	Percentage:	6.83%			Medium Ti	rucks (2 A	xles):	15		
Peak Ho	our Volume:	288 vehicles			Heavy Tru	icks (3+ A	xles):	15		
Veh	icle Speed:	40 mph		Vehic	le Mix					
Near/Far Lan	e Distance:	56 feet			/ehicleTyp	e	Day	Evening	Night	Daily
Site Data							68.2%	•	19.6%	
Ban	rier Height:	0.0 feet			Medium 1	rucks:	69.8%	8.8%	21.4%	6.72%
Barrier Type (0-Wa		0.0			Heavy 1	rucks:	58.3%	5.1%	36.6%	1.99%
Centerline Dis	. ,	47.0 feet		Noise	Source E	lovation	in fo	of		
Centerline Dist. t	o Observer:	47.0 feet		110/30	Auto		000	.00		
Barrier Distance t	o Observer:	0.0 feet		Me	dium Truck		297			
Observer Height (A	Above Pad):	5.0 feet			eavy Truck		04	Grade Adj	ustment	0.0
Pa	d Elevation:	0.0 feet			•					
Roa	d Elevation:	0.0 feet		Lane	Equivalen			'eet)		
F	oad Grade:	0.0%			Auto					
	Left View:	-90.0 degree	s	Me	dium Truck					
	Right View:	90.0 degree	s	H	eavy Truck	(s: 37.8	369			
FHWA Noise Mode	I Calculations	;								
VehicleType	REMEL	Traffic Flow	Distand		nite Road	Fresn	-	Barrier Atte		m Atten
Autos:	66.51	-7.13		1.67	-1.20		-4.63	0.0		0.000
Medium Trucks:	77.72	-18.46		1.71	-1.20		-4.87	0.0		0.000
Heavy Trucks:	82.99	-23.73		1.71	-1.20		-5.46	0.0	00	0.000
Unmitigated Noise					,					
	Leq Peak Hou			q Evenin		Night		Ldn		VEL
Autos:	59.		59.1	-	7.6	54.9		62.1		62.5
Medium Trucks:	59.		59.1		6.1	55.2		62.3		62.6
Heavy Trucks:	59.		58.3		3.7	57.5		64.0		64.1
Vehicle Noise:	64.	.6 6	63.6	6	0.9	60.8		67.6		67.9
Centerline Distanc	e to Noise Co	ntour (in feet)								
				70 dBA		dBA	6	0 dBA	55	dBA
			dn:		33	71		152		327
		CN	IEL:		34	73		158		340

	FHV	VA-RD-77-108	HIGHW	AY N		REDICT		DEL			
Scenario: Road Name: Road Segment:		k BI.					Name: F umber: 1		2 & 4		
	PECIFIC IN	PUT DATA							L INPUTS	6	
Highway Data				S	Site Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily Tr	affic (Adt):	33,720 vehicle	es					Autos:	15		
Peak Hour Pe	ercentage:	6.83%					ucks (2 A				
Peak Hou	ır Volume:	2,303 vehicle	S		He	avy Tru	cks (3+ A	xles):	15		
	cle Speed:	45 mph		v	/ehicle I	Mix					
Near/Far Lane	Distance:	80 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data							Autos:	68.2%	12.3%	19.6%	90.22%
Barri	er Heiaht:	0.0 feet			Me	edium T	rucks:	69.8%	8.8%	21.4%	7.11%
Barrier Type (0-Wal		0.0			ŀ	leavy T	rucks:	58.3%	5.1%	36.6%	2.66%
Centerline Dist.		64.0 feet			laina Ca	uraa E	evations	in f	o o fi		
Centerline Dist. to	Observer:	64.0 feet		~	ioise sc	Auto		000	eelj		
Barrier Distance to	Observer:	0.0 feet			Modiu	n Truck		297			
Observer Height (Al	oove Pad):	5.0 feet				v Truck		004	Grade Adj	ustment	. 0 0
Pad	Elevation:	0.0 feet								aounom	. 0.0
Road	Elevation:	0.0 feet		L	ane Eq		Distanc		feet)		
Ro	ad Grade:	0.0%				Auto					
	Left View:	-90.0 degre				m Truck					
F	Right View:	90.0 degre	es		Heav	y Truck	s: 50.0	050			
FHWA Noise Model											
VehicleType	REMEL	Traffic Flow	Dista		Finite		Fresn		Barrier Atte		m Atten
Autos:	68.46	1.34		-0.13		-1.20		-4.70	0.0		0.00
Medium Trucks:	79.45	-9.69		-0.11		-1.20		-4.88	0.0		0.00
Heavy Trucks:	84.25	-13.96		-0.11		-1.20		-5.31	0.0	00	0.00
Unmitigated Noise L											
	eq Peak Hou			eq Ev	rening	Leq	Night		Ldn		NEL
Autos:	68	.0	67.7		66.2		63.5		70.7		71.
Medium Trucks:	68		67.7		64.8		63.9		71.0		71.
Heavy Trucks:	69		67.5		62.9		66.7		73.2		73.
Vehicle Noise:	73		72.4		69.6		69.7		76.5		76.
Centerline Distance	to Noise Co	ontour (in feet	)	70.0				_			
			∟	70 d		65	dBA		60 dBA	55	dBA
			Ldn:		175		376		811		1,747
			NEL:		181		390		840		1.810

	FHW	A-RD-77-108	HIGI	HWAY N	OISE PF	REDICT	ION MC	DEL			
Scenario: EAC V Road Name: Harley Road Segment: e/o W	Knox I	BI.					t Name: lumber:		2 & 4		
ç				-							
SITE SPECIFI Highway Data	CINP	UIDAIA			Site Con				L INPUT	5	
* /						unuonis					
Average Daily Traffic (A	·	6,306 vehicle	es			diana Ta		Autos:			
Peak Hour Percenta	-	6.83%					ucks (2	,			
Peak Hour Volur		,797 vehicles	5		не	avy Iru	cks (3+ .	axies):	15		
Vehicle Spe		45 mph		۱	/ehicle I	Nix					
Near/Far Lane Distan	ce:	80 feet			Vehi	icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	68.2%	12.3%	19.6%	89.949
Barrier Heig	ht:	0.0 feet			Me	edium 1	rucks:	69.8%	8.8%	21.4%	7.219
Barrier Type (0-Wall, 1-Ber		0.0			F	leavy T	rucks:	58.3%	5.1%	36.6%	2.85%
Centerline Dist. to Barr		64.0 feet		-				- (- *	41		
Centerline Dist. to Observ	er:	64.0 feet		<i>'</i>	loise So				eet)		
Barrier Distance to Observ	er:	0.0 feet				Auto		000			
Observer Height (Above Pa	ad):	5.0 feet				m Truck		297	Grade Ad	ivetment	
Pad Elevati	on:	0.0 feet			Heav	y Truck	(S.' 8.	004	Grade Au	usunen	0.0
Road Elevati	on:	0.0 feet		L	.ane Equ	uivalen	t Distan	ce (in i	feet)		
Road Gra	de:	0.0%				Auto	s: 50	210			
Left Vi	ew:	-90.0 degree	es		Mediur	m Truck	s: 50	033			
Right Vie	ew:	90.0 degree	es		Heav	y Truck	(s: 50	050			
FHWA Noise Model Calcul											
VehicleType REME		Traffic Flow	Di	stance		Road	Fresi		Barrier Att		m Atten
	8.46	0.25		-0.13		-1.20		-4.70		000	0.00
	9.45	-10.71		-0.11		-1.20		-4.88		000	0.00
Heavy Trucks: 8	4.25	-14.75		-0.11	1	-1.20		-5.31	0.0	000	0.00
Unmitigated Noise Levels											
VehicleType Leq Peal				Leq Ev		Leq	Night	_	Ldn		VEL
Autos:	67.4		66.6		65.1		62.		69.		70.
Medium Trucks:	67.4		66.7		63.8		62.		69.9		70.
Heavy Trucks:	68.2		66.7		62.1		65.		72.4		72.
Vehicle Noise:	72.5		71.4		68.6		68.	5	75.	Ď	75.
Centerline Distance to Nois	se Con	tour (in feet,	1	70 c		67	dBA		0 dBA		dBA
			Ldn:	100	IBA 151	05	<i>aba</i> 326		0 dBA 703		ава 1.514
			VEL:				320		703		1,51
					157						

Monday, August 10, 2020

		ON MODEL	REDICTIO	NOISE PR	GHWAY	7-108 HIC	VA-RD-	FH\	
		Name: Rider 2 Imber: 11559					x Bl.	io: EAC With F ne: Harley Kno nt: e/o Patters	Road Nam
		OISE MODE				ATA	IPUT D	SPECIFIC IN	
	oft = 15)	'Hard = 10, So	ditions (H	Site Con					lighway Data
	: 15	Autos:				vehicles	30,942	Traffic (Adt):	Average Daily
	: 15	cks (2 Axles):	dium Truc	Me			6.83%	Percentage:	Peak Hour
	: 15	ks (3+ Axles):	avy Truck	He		ehicles	2,113	lour Volume:	Peak H
			Nix	Vehicle I		nph	45 ı	hicle Speed:	Ve
aht Daily	Evening Nig	Day	cleType			eet	80 1	ne Distance:	Near/Far La
0.6% 90.13%		utos: 68.2%							Site Data
.4% 7.149	6 8.8% 21	ucks: 69.8%	dium Tru	Me		feet	0.0	rrier Height:	Pa
6.6% 2.72%	6 5.1% 36	ucks: 58.3%	leavy Tru	F		ieet	0.0		Barrier Type (0-W
						feet	64.0		Centerline Di
	'eet)	evations (in f		Noise So			64.0		Centerline Dist.
			Autos:			feet			Barrier Distance
			n Trucks:			feet			Observer Height (
nent: 0.0	Grade Adjustr	8.004	y Trucks:	Heav		feet		ad Elevation:	
	feet)	Distance (in	uivalent D	Lane Equ		feet	0.0	ad Elevation:	Ro
	-	50.210	Autos:				0.0%	Road Grade:	
		50.033	n Trucks:	Mediur		degrees		Left View:	
		50.050	y Trucks:	Heav		degrees		Right View:	
							s	el Calculation	HWA Noise Mod
Berm Atten	Barrier Atten	Fresnel	Road	Finite	Distance	Flow L	Traffic	REMEL	VehicleType
0.00	0.000	-4.70	-1.20	13	-0.	0.96		68.46	Autos:
0.00	0.000	-4.88	-1.20	.11	-0.	10.05		79.45	Medium Trucks:
0.00	0.000	-5.31	-1.20	.11	-0.	14.24		84.25	Heavy Trucks:
0.1/5/				,					Inmitigated Noise
CNEL	Ldn	•	Leq Ni	Evening		eq Day		Leq Peak Hou	VehicleType
70. 70	70.4 70.6	63.1		65.9		67.3 67.4		68	Autos: Medium Trucks:
		63.5		64.4				68	
73.					-				
76.	70.2	09.4		69.3	. 1			-	
55 dBA	60 dBA	IBA I	65 dF	) dBA	7/	n feet)	ontour (	ce to Noise Co	Centerline Distan
1.66			00 UL			I dr			
1,00									
-	72.9 76.2 60 dBA 771 799	66.5 69.4 (BA 0 358 371	65 dE	62.6 69.3 0 dBA 166 172	.1 70 n:	67.: 72.: n feet) Ldr. CNEL	.1	-	Heavy Trucks <u>:</u> Vehicle Noise: <b>Centerline Distan</b> d

Scenario: EAC With Project	B : (N B)								
Road Name: Harley Knox Bl. Road Segment: e/o Indian Av.	Project Name: Rider 2 & 4 Job Number: 11559								
SITE SPECIFIC INPUT DATA	NOISE MODEL INPUTS								
	Site Conditions (Hard = 10, Soft = 15)								
Average Daily Traffic (Adt): 15,500 vehicles	Autos: 15								
Peak Hour Percentage: 6.83%	Medium Trucks (2 Axles): 15								
Peak Hour Volume: 1,059 vehicles	Heavy Trucks (3+ Axles): 15								
Vehicle Speed: 50 mph	icle Mix								
Near/Far Lane Distance: 80 feet	VehicleType Day Evening Night Daily								
Site Data	Autos: 68.2% 12.3% 19.6% 89.06%								
	Medium Trucks: 69.8% 8.8% 21.4% 7.51%								
Barrier Height:         0.0 feet           Barrier Type (0-Wall, 1-Berm):         0.0	Heavy Trucks: 58.3% 5.1% 36.6% 3.43%								
Orientarian Dist to Demiser 04.0 fact									
Centerline Dist. to Observer: 64.0 feet	se Source Elevations (in feet)								
Berrier Distance to Observer: 0.0 feet	Autos: 0.000								
Observer Height (Above Pad): 5.0 foot	fedium Trucks: 2.297								
Pad Elevation: 0.0 feet	Heavy Trucks: 8.004 Grade Adjustment: 0.0								
Road Elevation: 0.0 feet Lan	e Equivalent Distance (in feet)								
Road Grade: 0.0%	Autos: 50.210								
Left View: -90.0 degrees M	fedium Trucks: 50.033								
Right View: 90.0 degrees	Heavy Trucks: 50.050								
FHWA Noise Model Calculations									
	Finite Road Fresnel Barrier Atten Berm Atten								
Autos: 70.20 -2.55 -0.13	-1.20 -4.70 0.000 0.00								
Medium Trucks: 81.00 -13.29 -0.11	-1.20 -4.88 0.000 0.00								
Heavy Trucks: 85.38 -16.69 -0.11	-1.20 -5.31 0.000 0.00								
Unmitigated Noise Levels (without Topo and barrier attenuat	,								
VehicleType Leq Peak Hour Leq Day Leq Even									
Autos: 66.3 65.5	64.1 61.4 68.6 69.								
Medium Trucks: 66.4 65.7	62.7 61.8 68.9 69.								
Heavy Trucks: 67.4 65.9	61.3 65.1 71.6 71. 67.0 71.								
Vehicle Noise: 71.5 70.5	67.6 67.9 74.7 74.								
Centerline Distance to Noise Contour (in feet) 70 dBA	65 dBA 60 dBA 55 dBA								
Ldn:	131 283 609 1.312								
CNEL:	136 293 630 1.358								
GNEL.	100 200 1,000								

	FHV	VA-RD-77-108	HIGHW	AY N	OISE PI	REDICTIO	N MODEL			
	o: EAC With F e: Harley Kno: ht: e/o Perris E	x Bl.					ame: Ride nber: 1155			
	SPECIFIC IN	IPUT DATA						EL INPUT	S	
Highway Data				s	ite Con	ditions (H	lard = 10, S	,		
Average Daily	. ,	8,989 vehicle	es				Auto			
	Percentage:	6.83%					ks (2 Axles			
	our Volume:	614 vehicles	6		He	avy Truck	s (3+ Axles	): 15		
	hicle Speed:	45 mph		ν	ehicle	Mix				
Near/Far Lar	ne Distance:	80 feet			Veh	icleType	Day	Evening	Night	Daily
Site Data						Au	tos: 68.2	% 12.3%	19.6%	87.51%
Bar	rier Heiaht:	0.0 feet			М	edium Tru	cks: 69.8	% 8.8%	21.4%	8.03%
Barrier Type (0-Wa	all, 1-Berm):	0.0			I	Heavy Tru	cks: 58.3	% 5.1%	36.6%	4.46%
Centerline Dis	t. to Barrier:	64.0 feet			laisa Si	ource Elev	ations (in	foot)		
Centerline Dist. t	to Observer:	64.0 feet		~	0/30 00	Autos:	0.000	1000		
Barrier Distance t	to Observer:	0.0 feet			Mediu	m Trucks:	2.297			
Observer Height (/	,	5.0 feet				/y Trucks:	8.004	Grade Ad	justment	: 0.0
	d Elevation:	0.0 feet		-						
	d Elevation:	0.0 feet		L	ane Eq		istance (ir	1 feet)		
F	Road Grade:	0.0%				Autos:	50.210			
	Left View:	-90.0 degree				m Trucks:	50.033			
	Right View:	90.0 degree	es		Heav	/y Trucks:	50.050			
FHWA Noise Mode	l Calculation	s								
VehicleType	REMEL	Traffic Flow	Distar			Road	Fresnel	Barrier Att		rm Atten
Autos:	68.46	-4.54		-0.13		-1.20	-4.70		000	0.000
Medium Trucks:	79.45	-14.91		-0.11		-1.20	-4.88		000	0.00
Heavy Trucks:	84.25	-17.47		-0.11		-1.20	-5.3	1 0.0	000	0.00
Unmitigated Noise										
	Leq Peak Hou			eq Ev		Leq Ni		Ldn		NEL
Autos:	62		61.8		60.4		57.6	64.9	-	65.3
Medium Trucks:	63		62.5 64.0		59.6 59.4		58.7	65.I 69.1	-	66.0
Heavy Trucks: Vehicle Noise:	65	-	64.0 67.6		59.4 64.6		63.2 65.3	69. 72.1		69.8 72.3
					04.0		00.0	12.		12.
Centerline Distanc	e to Noise Co	ontour (in feet)	)	70 d	DA.	65 dF	24	60 dBA	55	dBA
			Ldn:	70 a	BA 88	05 dE	189	60 dBA 408		878
			VEL:		00 91		195	400		906
		CI	*		51		155	421		500

		-RD-77-108 HIG	HWAY N	UISE PH					
	EAC With Proj					ame: Rider			
Road Name: 1					Job Nun	nber: 11559	9		
Road Segment: \	v/o Nevada A	V.							
	ECIFIC INPU	JT DATA					EL INPUT	S	
Highway Data			5	Site Con	ditions (H	ard = 10, S	6oft = 15)		
Average Daily Trai	ffic (Adt): 58	,786 vehicles				Autos	: 15		
Peak Hour Per	centage: 6	.83%		Mee	dium Truck	(s (2 Axles)	: 15		
Peak Hour	Volume: 4,	015 vehicles		Hea	avy Trucks	(3+ Axles)	: 15		
Vehicle	e Speed:	50 mph	1	/ehicle N	Aix				
Near/Far Lane L	Distance:	102 feet	F		cleType	Day	Evening	Night	Daily
Site Data						os: 68.2		19.6%	
Barrio	·Height:	0.0 feet		Me	dium Truc	ks: 69.8	% 8.8%	21.4%	6.74%
Barrier Type (0-Wall,		0.0		H	leavy Truc	ks: 58.3	% 5.1%	36.6%	2.00%
Centerline Dist. to		92.0 feet	L.						
Centerline Dist. to C		92.0 feet	<u> </u>	Voise So		ations (in	feet)		
Barrier Distance to C		0.0 feet			Autos:	0.000			
Observer Height (Abc		5.0 feet			n Trucks:	2.297			
• •	levation:	0.0 feet		Heav	y Trucks:	8.004	Grade Ad	ustment.	0.0
Road E	levation:	0.0 feet	1	ane Equ	ivalent D	istance (in	feet)		
Roa	d Grade: (	0.0%			Autos:	76.733			
L	eft View: -	90.0 degrees		Mediur	n Trucks:	76.618			
Rig	ght View:	90.0 degrees		Heav	y Trucks:	76.629			
FHWA Noise Model C	alculations								
VehicleType F	REMEL TI	raffic Flow Di	istance	Finite	Road	Fresnel	Barrier Att	en Ber	m Atten
Autos:	70.20	3.34	-2.89	Э	-1.20	-4.76	0.0	000	0.00
Medium Trucks:	81.00	-7.97	-2.88		-1.20	-4.88		000	0.00
Heavy Trucks:	85.38	-13.25	-2.88	3	-1.20	-5.18	0.0	000	0.00
Unmitigated Noise Le									
	Peak Hour	Leq Day	Leq Ev		Leq Nig		Ldn		VEL
Autos:	69.5	68.7		67.2		64.5	71.7		72.
Medium Trucks:	68.9	68.2		65.3		64.4	71.5	-	71.
Heavy Trucks:	68.0	66.6		62.0		65.8	72.2		72.
Vehicle Noise:	73.6	72.7		70.1		69.7	76.0	3	76.
Centerline Distance to	o Noise Cont	our (in feet)							
			70 c		65 dB		60 dBA		dBA
		Ldn:		253		545	1,174 1.221		2,529
		CNEL:		263		567			2.630

Monday, August 10, 2020

	FHW	/A-RD-77-108	HIGHWA	Y NOI	SE PF	REDICTI		DEL			
	2: EAC With P 2: Markham S 2: w/o Redland	t. í					Name: F umber: 1				
	PECIFIC IN	PUT DATA							L INPUTS	;	
Highway Data				Site	e Con	ditions	(Hard = 1	10, S	oft = 15)		
Average Daily T	raffic (Adt):	720 vehicle	s				A	utos:	15		
Peak Hour F	Percentage:	6.83%					icks (2 A	/			
Peak Ho	our Volume:	49 vehicles			Hea	avy Truc	:ks (3+ A	xles):	15		
Veh	icle Speed:	35 mph		Vel	hicle N	lix					
Near/Far Lan	e Distance:	56 feet				cleType	1	Day	Evening	Night	Daily
Site Data								58.2%		19.6%	
Barr	rier Height:	0.0 feet			Me	dium Tr	ucks: 6	9.8%	6 8.8%	21.4%	6.78%
Barrier Type (0-Wa		0.0			E	leavy Tr	ucks: 8	58.3%	5.1%	36.6%	2.01%
Centerline Dis		47.0 feet		A ( - )				6 m #	41		
Centerline Dist. to	o Observer:	47.0 feet		NO	ise So		evations		eet)		
Barrier Distance to	o Observer:	0.0 feet				Autos n Trucks					
Observer Height (A	Above Pad):	5.0 feet		/					Grade Adji	otmont	
Pa	d Elevation:	0.0 feet			Heav	y Trucks	s: 8.0	04	Grade Aujt	istinent.	0.0
Road	d Elevation:	0.0 feet		Lar	ne Equ	ıivalent	Distanc	e (in	feet)		
R	oad Grade:	0.0%				Autos	s: 38.0	79			
	Left View:	-90.0 degree	s	Λ	Mediur	n Trucks	s: 37.8	46			
	Right View:	90.0 degree	s		Heav	y Trucks	s: 37.8	69			
FHWA Noise Mode	I Calculations	;		-							
VehicleType	REMEL	Traffic Flow	Distand	e	Finite	Road	Fresne	e/	Barrier Atte	n Ber	m Atten
Autos:	64.30	-14.23		1.67		-1.20	-	4.63	0.0	00	0.00
Medium Trucks:	75.75	-25.52		1.71		-1.20	-	4.87	0.0	00	0.00
Heavy Trucks:	81.57	-30.79		1.71		-1.20	-	5.46	0.0	00	0.00
Unmitigated Noise											
	Leq Peak Hou			q Even		Leq	Night		Ldn	CI	VEL
Autos:	50.		9.7		48.3		45.6		52.8		53.
Medium Trucks:	50.		50.0		47.1		46.2		53.3		53.
Heavy Trucks:	51.		9.8		45.2		49.0		55.5		55.
Vehicle Noise:	55.		54.6		51.8		52.0		58.8		59.
Centerline Distance	e to Noise Co	ntour (in feet)		70 dBA		65 (	104		50 dBA		dBA
		,	dn:	ru aBA	· .	050			50 dBA 39	55	
			.an: IEL:		8 9		18 19		39 40		84 87
		CN	EL.		9				40		87

	FHW	A-RD-77-108 HIG	HWAY	NOISE PF	REDICTIC	N MODEL			
Road Nam	io: EAC With Pr e: Ramona Exv nt: e/o Nevada	vý.				<i>lame:</i> Ride mber: 1155			
SITE	SPECIFIC IN	PUT DATA			NC	DISE MOD	EL INPUTS	6	
Highway Data				Site Con	ditions (H	lard = 10, 3	Soft = 15)		
Average Daily	Traffic (Adt):	55,382 vehicles				Auto	s: 15		
Peak Hour	Percentage:	6.83%		Mee	dium Truc	ks (2 Axles	<i>;):</i> 15		
Peak H	lour Volume:	3,783 vehicles		Hei	avy Truck	s (3+ Axles	<i>;):</i> 15		
Ve	hicle Speed:	50 mph	-	Vehicle N	liv				
Near/Far La	ne Distance:	102 feet	-		cleType	Day	Evening	Night	Daily
Site Data						itos: 68.2		•	91.27%
Bai	rrier Height:	0.0 feet		Me	dium Tru	cks: 69.8	% 8.8%	21.4%	6.73%
Barrier Type (0-W		0.0		H	leavy Tru	cks: 58.3	% 5.1%	36.6%	2.00%
Centerline Dis	. ,	92.0 feet	-	Noise So	urce Ele	vations (in	feet)		
Centerline Dist.	to Observer:	92.0 feet	ŀ	110/30 00	Autos:		1000		
Barrier Distance	to Observer:	0.0 feet		Modiur	n Trucks:				
Observer Height (	Above Pad):	5.0 feet			y Trucks:		Grade Adj	ustment	0.0
Pa	ad Elevation:	0.0 feet			·			aounom.	0.0
Roa	ad Elevation:	0.0 feet		Lane Equ	ıivalent E	Distance (ii	n feet)		
1	Road Grade:	0.0%			Autos:	76.733			
	Left View:	-90.0 degrees		Mediur	n Trucks:	76.618			
	Right View:	90.0 degrees		Heav	y Trucks:	76.629			
FHWA Noise Mode	el Calculations								
VehicleType	REMEL	Traffic Flow D	istance	Finite	Road	Fresnel	Barrier Atte	en Beri	m Atten
Autos:	70.20	3.09	-2.8	9	-1.20	-4.7	6 0.0	00	0.000
Medium Trucks:	81.00	-8.23	-2.8	8	-1.20	-4.8	8 0.0	00	0.000
Heavy Trucks:	85.38	-13.51	-2.8	8	-1.20	-5.1	8 0.0	00	0.000
Unmitigated Noise	e Levels (witho	ut Topo and barı	rier atter	nuation)					
	Leq Peak Hour			vening	Leq N	•	Ldn		IEL
Autos:	69.2			67.0		64.2	71.5		71.9
Medium Trucks:	68.			65.0		64.1	71.2		71.5
Heavy Trucks:	67.8			61.7		65.5	72.0		72.1
Vehicle Noise:	73.4	4 72.4		69.8		69.4	76.3		76.6
Centerline Distance	ce to Noise Cor	ntour (in feet)							
				dBA	65 dE		60 dBA	55	dBA
		Ldn.		243		524	1,128		2,430
		CNEL		253		545	1,173		2,527

	FHV	VA-RD-77-108	HIGHWA	AY NO	DISE PF	REDICT		DEL			
	: EAC With F : Ramona Ex : e/o Webste	wy.					Name: I umber:		2 & 4		
SITE S	PECIFIC IN	PUT DATA				N	IOISE N	IODE	L INPUT	5	
Highway Data				S	ite Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily T Peak Hour F Peak Ho	. ,	50,463 vehicle 6.83% 3,447 vehicles					ucks (2 A cks (3+ A	/	15		
Veh	icle Speed:	50 mph		V	ehicle I	Niv					
Near/Far Lan	e Distance:	102 feet				icleType		Dav	Evening	Night	Daily
Site Data					VCIII			68.2%	•	19.6%	,
	ier Height:	0.0 feet			Me	edium Ti	rucks:	69.8%	8.8%	21.4%	6.73%
Barrier Type (0-Wa		0.0			F	leavy T	rucks:	58.3%	5.1%	36.6%	2.00%
Centerline Dist	to Barrier:	92.0 feet		N	oise So	ource El	evations	s (in fe	eet)		
Centerline Dist. to	Observer:	92.0 feet		-		Auto		000	,		
Barrier Distance to		0.0 feet			Mediur	n Truck		297			
Observer Height (A	bove Pad):	5.0 feet				y Truck		004	Grade Adj	ustment	: 0.0
	d Elevation:	0.0 feet									
	d Elevation:	0.0 feet		Li	ane Equ		Distanc		teet)		
R	oad Grade:	0.0%				Auto		733			
	Left View: Right View:	-90.0 degree 90.0 degree				n Truck y Truck		618 629			
FHWA Noise Model	Calculation	5									
VehicleType	REMEL	Traffic Flow	Distan	се	Finite	Road	Fresn	el	Barrier Atte	en Ber	m Atten
Autos:	70.20	2.68		-2.89		-1.20		-4.76	0.0	000	0.000
Medium Trucks:	81.00	-8.64		-2.88		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	85.38	-13.92		-2.88		-1.20		-5.18	0.0	000	0.000
Unmitigated Noise			barrier a	ttenu	ation)						
	.eq Peak Hou			eq Eve	ening	Leq	Night		Ldn		NEL
Autos:	68		68.0		66.6		63.8		71.1		71.5
Medium Trucks:	68		67.6		64.6		63.7		70.8		71.1
Heavy Trucks:	67		65.9		61.3		65.1		71.6		71.7
Vehicle Noise:	73	.0	72.0		69.4		69.0	)	75.9	)	76.2
Centerline Distance	e to Noise Co	ontour (in feet)									
				70 dE		65	dBA	6	60 dBA	55	dBA
			Ldn:		228		492		1,060		2,283
		CI	VEL:		237		512		1,102		2,375

	FHWA-I	RD-77-108 HIG	HWAY N	OISE PF	REDICTIC	N MOL	JEL			
	AC With Proje	ect			Project N			8.4		
Road Name: R	amona Exwy.				Job Nu	mber: 1	1559			
Road Segment: el	o Perris Bl.									
SITE SPE	CIFIC INPU	T DATA						L INPUT	5	
Highway Data			5	Site Con	ditions (F	lard =	10, So	oft = 15)		
Average Daily Traff	ic (Adt): 44,	170 vehicles				A	Autos:	15		
Peak Hour Perc	entage: 6.	83%		Mee	dium Truc	ks (2 A	xles):	15		
Peak Hour \	/olume: 3,0	17 vehicles		Hei	avy Truck	s (3+ A	xles):	15		
Vehicle	Speed:	50 mph	1	/ehicle N	Nix					
Near/Far Lane D	istance: 1	02 feet	F		cleType		Dav	Evening	Night	Dailv
Site Data							58.2%	•	19.6%	
Barrier	Height:	0.0 feet		Me	edium Tru		59.8%		21.4%	
Barrier Type (0-Wall, 1		0.0		H	leavy Tru	cks:	58.3%	5.1%	36.6%	
Centerline Dist. to		2.0 feet	_		-					
Centerline Dist. to Ol		2.0 feet	1	Voise So	ource Ele			eet)		
Barrier Distance to Ol		0.0 feet			Autos:					
Observer Height (Abov		5.0 feet			n Trucks:					
	,	0.0 feet		Heav	y Trucks:	8.0	04	Grade Adj	ustment.	0.0
Road El		0.0 feet	1	ane Equ	uivalent I	Distanc	e (in f	eet)		
Road		0%			Autos:	76.7	'33			
Le	ft View: -9	0.0 degrees		Mediur	n Trucks:	76.6	518			
Rigi	ht View: 9	0.0 degrees		Heav	y Trucks:	76.6	629			
FHWA Noise Model Ca	lculations									
VehicleType R	EMEL Tra	affic Flow Di	istance	Finite	Road	Fresne	e/	Barrier Atte	en Ber	m Atten
Autos:	70.20	2.10	-2.89	Э	-1.20		4.76	0.0	000	0.00
Medium Trucks:	81.00	-9.19	-2.88		-1.20		4.88		000	0.00
Heavy Trucks:	85.38	-14.47	-2.88	3	-1.20		5.18	0.0	000	0.00
Unmitigated Noise Lev										
	Peak Hour	Leq Day	Leq Ev		Leq N	•		Ldn		VEL
Autos:	68.2	67.4		66.0		63.2		70.5		70.
Medium Trucks:	67.7	67.0		64.1		63.1		70.2	-	70.
Heavy Trucks:	66.8	65.3		60.7		64.6		71.0		71.
Vehicle Noise:	72.4	71.5		68.9		68.5		75.4	ļ	75.
Centerline Distance to	Noise Conto	ur (in feet)			_					
			70 c		65 dl		6	0 dBA		dBA
		Ldn:		209		451		972		2,095
		CNEL		218		469		1.011		2.178

Monday, August 10, 2020

F	WA-RD-77-108	HIGHWA	N N	OISE PF	REDICTI	ON MOI	DEL			
Scenario: EAC With						Name: F				
Road Name: Ramona E					Job N	umber: 1	1559			
Road Segment: e/o Indian	Av.									
SITE SPECIFIC I	NPUT DATA							L INPUTS	6	
Highway Data			5	Site Con	ditions		- ·	,		
Average Daily Traffic (Adt):	49,028 vehicle	s				-	lutos:			
Peak Hour Percentage:	6.83%					icks (2 A	,			
Peak Hour Volume:	3,349 vehicles			He	avy Truc	cks (3+ A	xles):	15		
Vehicle Speed:	50 mph		١	/ehicle I	/ix					
Near/Far Lane Distance:	102 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data					4	Autos:	68.2%	6 12.3%	19.6%	91.27%
Barrier Height:	0.0 feet			Me	edium Ti	ucks:	69.8%	6.8%	21.4%	6.73%
Barrier Type (0-Wall, 1-Berm):	0.0			F	leavy Ti	ucks:	58.3%	5.1%	36.6%	2.00%
Centerline Dist. to Barrier:	92.0 feet			Voise So	uree El	ovetiene	lin 6	a a fi		
Centerline Dist. to Observer:	92.0 feet		1	voise su	Auto:		000	eelj		
Barrier Distance to Observer:	0.0 feet			Madiu	n Truck:					
Observer Height (Above Pad):	5.0 feet				y Truck		.97 )04	Grade Adji	ictment	0.0
Pad Elevation:	0.0 feet								asunem.	0.0
Road Elevation:	0.0 feet		L	.ane Equ	uivalent	Distanc	e (in	feet)		
Road Grade:	0.0%				Autos	s: 76.7	733			
Left View:	-90.0 degree	s		Mediur	n Truck:	s: 76.6	518			
Right View:	90.0 degree	s		Heav	y Truck:	s: 76.6	629			
FHWA Noise Model Calculatio	ns									
VehicleType REMEL	Traffic Flow	Distan	ce	Finite	Road	Fresn	e/	Barrier Atte	n Ber	m Atten
Autos: 70.2	2.56		2.89	9	-1.20		4.76	0.0	00	0.00
Medium Trucks: 81.0			2.88	-	-1.20		-4.88	0.0		0.00
Heavy Trucks: 85.3	3 -14.04		2.88	3	-1.20		-5.18	0.0	00	0.00
Unmitigated Noise Levels (with		-		,						
VehicleType Leq Peak Ho Autos: 6		57.9	q Ev	ening 66.4	Leq	Night 63.7		Ldn		VEL
		57.9 57.4				63.6		70.9 70.7		71.
				64.5 61.2		65.0		70.7		70.
		35.8 71.9				68.9		71.4		71.
		1.9		69.3		68.9		/5.8		76.
Centerline Distance to Noise C	Contour (in feet)		70 a	ID A	65	dBA		50 dBA	FF	dBA
	,	dn:	/0 0	іБА 224	031	483		1.040	- 55	2.240
		IEL:		224		403 502		1,040		2,240
	Ch	166.		200		502		1,081		2,32

FHWA-RD-77-108 HIGH	HWAY N	IOISE PR	EDICTI	ON MOI	DEL					
Scenario: EAC With Project Road Name: Ramona Exwy. Road Segment: w/o Redlands Av.		Project Name: Rider 2 & 4 Job Number: 11559								
SITE SPECIFIC INPUT DATA						L INPUT	S			
Highway Data		Site Cond	litions (	'Hard =	10, So	oft = 15)				
Average Daily Traffic (Adt): 40,826 vehicles				A	Autos:	15				
Peak Hour Percentage: 6.83%		Med	lium Tru	icks (2 A	xles):	15				
Peak Hour Volume: 2,788 vehicles		Hea	vy Truc	ks (3+ A	xles):	15				
Vehicle Speed: 50 mph	-	Vehicle M	liv							
Near/Far Lane Distance: 102 feet	-		leType		Dav	Evening	Night	Daily		
Site Data		venie			68.2%	•	19.6%			
		Me	dium Tn		69.8%		21.4%			
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0			eavy Tr		58.3%					
Centerline Dist. to Barrier: 92.0 feet										
Centerline Dist. to Observer: 92.0 feet	1	Noise Sol				et)				
Barrier Distance to Observer: 0.0 feet			Autos							
Observer Height (Above Pad): 5.0 feet		Medium								
Pad Elevation: 0.0 feet		Heavy	Trucks	: 8.0	04	Grade Ad	ljustmen	t: 0.0		
Road Elevation: 0.0 feet		Lane Equ	ivalent	Distanc	e (in f	eet)				
Road Grade: 0.0%			Autos	: 76.7	733					
Left View: -90.0 degrees		Medium	Trucks	: 76.6	518					
Right View: 90.0 degrees		Heavy	r Trucks	: 76.6	629					
FHWA Noise Model Calculations										
VehicleType REMEL Traffic Flow Dis	stance	Finite F	Road	Fresn	e/	Barrier Att	ten Be	rm Atten		
Autos: 70.20 1.76	-2.8	9	-1.20		-4.76	0.0	000	0.000		
Medium Trucks: 81.00 -9.54	-2.8	-	-1.20		-4.88		000	0.000		
Heavy Trucks: 85.38 -14.81	-2.8	8	-1.20		-5.18	0.0	000	0.000		
Unmitigated Noise Levels (without Topo and barrie		,								
VehicleType Leq Peak Hour Leq Day	Leq E	•	Leq I			Ldn		NEL		
Autos: 67.9 67.1		65.6		62.9		70.		70.5		
Medium Trucks: 67.4 66.7		63.7		62.8		69.		70.2		
Heavy Trucks: 66.5 65.0		60.4		64.2		70.		70.8		
Vehicle Noise: 72.1 71.1		68.5		68.1		75.	U	75.3		
Centerline Distance to Noise Contour (in feet)	70	dBA	65 0	ID A		0 dBA		5 dBA		
Ldn:	70 0	199	05 0	іва 428	0	<i>0 ава</i> 922		1.987		
Lan: CNEL:		207		428 445		922		2,067		
CNEL.		207		445		908	,	2,007		

	FHW	A-RD-77-108	HIG	HWAY		REDICTIC	N MODEL			
Scenario: EAC Road Name: Ramo Road Segment: e/o R	ona Exv	wy.					ame: Rider nber: 11559			
SITE SPECIF	IC INF	PUT DATA					ISE MODI		3	
Highway Data					Site Con	ditions (H	lard = 10, S	oft = 15)		
Average Daily Traffic (A	dt): 4	45,476 vehicle	es				Autos			
Peak Hour Percente	ige:	6.83%					ks (2 Axles)			
Peak Hour Volu		3,106 vehicle	s		He	avy Truck	s (3+ Axles)	: 15		
Vehicle Spe		50 mph			Vehicle	Mix				
Near/Far Lane Dista	nce:	102 feet			Veh	icleType	Day	Evening	Night	Daily
Site Data						Au	tos: 68.29	6 12.3%	19.6%	91.23%
Barrier Hei	aht.	0.0 feet			М	edium Tru	cks: 69.89	6 8.8%	21.4%	6.76%
Barrier Type (0-Wall, 1-Be		0.0			I	Heavy Tru	cks: 58.3%	6 5.1%	36.6%	2.01%
Centerline Dist. to Bar	rier:	92.0 feet			Noise Se	ource Elev	ations (in i	eet)		
Centerline Dist. to Obser	ver:	92.0 feet				Autos:	0.000			
Barrier Distance to Obser		0.0 feet			Mediu	m Trucks:	2.297			
Observer Height (Above P		5.0 feet				/y Trucks:	8.004	Grade Adj	ustment	: 0.0
Pad Eleva		0.0 feet			1 F		N-4 (1	641		
Road Eleva Road Gra		0.0 feet			Lane Eq	Autos:	istance (in 76.733	leelj		
Road Gra Left V		0.0%			Madiu	m Trucks:	76.618			
Right V		-90.0 degree				/y Trucks:	76.629			
FHWA Noise Model Calcu	ations	-								
VehicleType REM	EL	Traffic Flow	Di	stance	Finite	Road	Fresnel	Barrier Atte	en Ber	m Atten
Autos:	70.20	2.23		-2.	89	-1.20	-4.76	0.0	00	0.000
Medium Trucks:	B1.00	-9.07		-2.	88	-1.20	-4.88	0.0	00	0.000
Heavy Trucks:	85.38	-14.35		-2.	88	-1.20	-5.18	0.0	00	0.000
Unmitigated Noise Levels			barri	ier atte	nuation)					
VehicleType Leq Pea				Leq E	Evening	Leq N	•	Ldn		NEL
Autos:	68.3	-	67.5		66.1		63.4	70.6		71.0
Medium Trucks:	67.8	-	67.1		64.2		63.3	70.4		70.6
Heavy Trucks:	66.9	-	65.5		60.9		64.7	71.1		71.2
Vehicle Noise:	72.5	-	71.6		69.0		68.6	75.5	•	75.7
Centerline Distance to No.	ise Cor	ntour (in feet	)							
			, , l	70	dBA	65 dE		60 dBA	55	dBA
			Ldn:		214		460	991		2,135
		C	NEL:		222		478	1,031		2,220

	FHW	A-RD-77-108 H	IIGH\	NAY NC	ISE PR	EDICTIO	N MOE	DEL			
Scenario:	EAC With Pr	roject				Project N	ame: F	Rider 2	& 4		
Road Name:	Rider St.					Job Nur	nber: 1	1559			
Road Segment:	e/o Perris Bl										
	ECIFIC IN	PUT DATA								S	
Highway Data				Si	te Cond	litions (H	lard = 1	10, So	ft = 15)		
Average Daily Tra	ffic (Adt):	16,619 vehicles					A	utos:	15		
Peak Hour Per	centage:	6.83%			Med	lium Truc	ks (2 A	xles):	15		
Peak Hour	Volume:	1,135 vehicles			Hea	vy Truck	s (3+ A	xles):	15		
Vehicl	e Speed:	45 mph		V	ehicle M	lix					
Near/Far Lane I	Distance:	56 feet				leType	L	Day	Evening	Night	Daily
Site Data								58.2%		19.6%	
Barrie	r Height:	0.0 feet			Me	dium Tru	cks: 6	69.8%	8.8%	21.4%	6.64
Barrier Type (0-Wall,	•	0.0			H	eavy Tru	cks: 8	58.3%	5.1%	36.6%	1.979
Centerline Dist. t		47.0 feet						Gent	- 41		
Centerline Dist. to 0		47.0 feet		N	oise Soi	urce Elev			et)		
Barrier Distance to (	Observer:	0.0 feet				Autos:	0.0				
Observer Height (Abo	ove Pad):	5.0 feet				Trucks:	2.2		0		
• •	levation:	0.0 feet			Heavy	/ Trucks:	8.0	04	Grade Ad	usiment.	0.0
Road E	levation:	0.0 feet		Lá	ne Equ	ivalent D	istanc	e (in f	eet)		
Roa	d Grade:	0.0%				Autos:	38.0	79			
L	eft View:	-90.0 degrees	;		Medium	Trucks:	37.8	46			
Ri	ght View:	90.0 degrees	;		Heavy	/ Trucks:	37.8	69			
FHWA Noise Model C	alculations										
VehicleType I	REMEL	Traffic Flow	Dist	ance	Finite F		Fresne	el i	Barrier Att	en Ber	m Atten
Autos:	68.46	-1.68		1.67		-1.20	-	4.63	0.0	000	0.00
Medium Trucks:	79.45	-13.07		1.71		-1.20		4.87		000	0.00
Heavy Trucks:	84.25	-18.34		1.71		-1.20	-	5.46	0.0	000	0.00
Unmitigated Noise Le			-								
	q Peak Hour			Leq Eve		Leq Ni	•		Ldn		VEL
Autos:	67.3		6.5		65.0		62.3		69.5		69
Medium Trucks:	66.		6.2		63.2		62.3		69.4		69
Heavy Trucks:	66.		4.9		60.3		64.2		70.6		70.
Vehicle Noise:	71.		0.7		68.0		67.8		74.1	7	74
Centerline Distance t	o Noise Co	ntour (in feet)									
			L	70 dE		65 dE		6	0 dBA		dBA
			dn: =L:		96 100		207 215		446		96
									463		991

Monday, August 10, 2020

FH	WA-RD-77-108	HIGHW	AY N	OISE PR	REDICTI		EL			
Scenario: EAC With Road Name: Morgan St Road Segment: e/o Perris						Name: R umber: 1		& 4		
SITE SPECIFIC II	NPUT DATA							INPUTS	5	
Highway Data			S	Site Cond	ditions (	Hard = 1	0, So	ft = 15)		
Average Daily Traffic (Adt):	1,797 vehicle	s				A	utos:	15		
Peak Hour Percentage:	6.83%			Med	dium Tru	icks (2 A)	des):	15		
Peak Hour Volume:	123 vehicles			Hea	avy Truc	ks (3+ A)	des):	15		
Vehicle Speed:	40 mph		L.	ehicle N	liv					
Near/Far Lane Distance:	56 feet		-		cleType	Г	Day	Evening	Night	Daily
Site Data				10/11			8.2%	12.3%	19.6%	92.149
Barrier Height:	0.0 feet			Me	dium Tr	ucks: 6	9.8%	8.8%	21.4%	6.06%
Barrier Type (0-Wall, 1-Berm):	0.0			h	leavy Tr	ucks: 5	8.3%	5.1%	36.6%	1.80%
Centerline Dist. to Barrier:	47.0 feet									
Centerline Dist. to Observer:	47.0 feet		٨	loise So		evations		et)		
Barrier Distance to Observer:	0.0 feet				Autos					
Observer Height (Above Pad):	5.0 feet				n Trucks					
Pad Elevation:	0.0 feet			Heav	y Trucks	8.0	04	Grade Adjı	ustment:	0.0
Road Elevation:	0.0 feet		L	ane Equ	ivalent	Distance	e (in f	eet)		
Road Grade:	0.0%				Autos	: 38.0	79			
Left View:	-90.0 degree	s		Mediun	n Trucks	: 37.8	46			
Right View:	90.0 degree			Heav	y Trucks	37.8	69			
FHWA Noise Model Calculation	s									
VehicleType REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresne	1	Barrier Atte	n Beri	n Atten
Autos: 66.51	-10.79		1.67		-1.20	-	4.63	0.0	00	0.00
Medium Trucks: 77.72	-22.61		1.71		-1.20	-	4.87	0.0	00	0.00
Heavy Trucks: 82.99	-27.89		1.71		-1.20	-	5.46	0.0	00	0.00
Unmitigated Noise Levels (with										
VehicleType Leq Peak Ho			.eq Ev		Leq I			Ldn		IEL
		55.4		54.0		51.2		58.5		58.
		54.9		52.0		51.0		58.1		58.
		54.1		49.5		53.4		59.8		59.
		59.6		57.0		56.8		63.6		63.
Centerline Distance to Noise C	ontour (in feet)	-							-	
			70 d		65 0		6	0 dBA	55	dBA
		dn:		18		38		82		177
	CA	IEL:		18		40		85		184

FH	WA-RD-77-108 H	IIGHWAY	NOISE PF	REDICTI		EL			
Scenario: EAC With Road Name: Rider St. Road Segment: w/o Redlar	,				Name: Ri umber: 11				
SITE SPECIFIC II	NPUT DATA			N	IOISE MO	DEL IN	PUTS		
Highway Data			Site Con	ditions	(Hard = 10	0, Soft = :	15)		
Average Daily Traffic (Adt):	16,656 vehicles	3			AL	itos: 1	5		
Peak Hour Percentage:	6.83%		Me	dium Tru	ucks (2 Ax	les): 1	5		
Peak Hour Volume:	1,138 vehicles		He	avy Truc	cks (3+ Ax	les): 1	5		
Vehicle Speed:	45 mph								
Near/Far Lane Distance:	56 feet		Vehicle I			au	ning N	liabt	Deilu
Site Data			veni	cleType				light	Daily
				ء dium Tr				21.4%	91.39% 6.64%
Barrier Height:	0.0 feet			leavy Tr				36.6%	1.97%
Barrier Type (0-Wall, 1-Berm):	0.0			leavy II	UCKS. 50	5.370 0	3.170 J	0.070	1.97%
Centerline Dist. to Barrier:	47.0 feet		Noise So	urce El	evations (	(in feet)			
Centerline Dist. to Observer:	47.0 feet			Autos	s: 0.00	0			
Barrier Distance to Observer:	0.0 feet		Mediur	n Trucks	s: 2.29	7			
Observer Height (Above Pad):	5.0 feet		Heav	y Trucks	s: 8.00	4 Grad	de Adjus	tment:	0.0
Pad Elevation:	0.0 feet		Lana Fre		Distance	(in fr + 4)			
Road Elevation:	0.0 feet		Lane Equ			. ,			
Road Grade:	0.0%			Autos					
Left View:	-90.0 degrees			n Trucks					
Right View:	90.0 degrees	6	Heav	y Trucks	s: 37.86	99			
FHWA Noise Model Calculation	-								
VehicleType REMEL	Traffic Flow	Distance			Fresnel		er Atten		n Atten
Autos: 68.46			.67	-1.20		1.63	0.000		0.00
Medium Trucks: 79.45			.71	-1.20		1.87	0.000		0.000
Heavy Trucks: 84.25	-18.33	1	.71	-1.20	-5	5.46	0.000	)	0.00
Unmitigated Noise Levels (with									
VehicleType Leq Peak Ho		'	Evening	Leq	Night	Ldn		CN	
		6.5 6.2	65.0 63.2		62.3 62.3		69.5 69.4		69.9 69.7
		5.0	60.3		64.2		70.6		70.
		0.7	68.0		67.8		/4./		74.9
Centerline Distance to Noise C	ontour (in feet)	7	0 dBA	65.	dBA	60 dB		55 0	
	,	dn:	<i>0 ава</i> 96	050	207	00 dB	A 446	550	ива 961
	CN		96 100		207		446		961
	CIV	L.L.	100		210		404		999

	FH\	VA-RD-77-108	HIGH	WAY N	IOISE PI	REDICT	ION MOD	EL			
Scenar	rio: EAC With F	Project				Project	Name: R	ider 2	2 & 4		
	ne: Rider St.					Job N	lumber: 1	1559			
Road Segme	ent: e/o Redlan	ds Av.									
	SPECIFIC IN	IPUT DATA								6	
Highway Data					Site Con	aitions	(Hard = 1	· ·	,		
Average Daily		18,394 vehicle	es					utos:	15		
	r Percentage:	6.83%					ucks (2 A)		15		
	Hour Volume:	1,256 vehicle	s		He	avy Tru	cks (3+ A)	(les):	15		
	ehicle Speed:	45 mph			Vehicle I	Mix					
Near/Far La	ane Distance:	56 feet			Veh	icleType	e D	)ay	Evening	Night	Daily
Site Data							Autos: 6	8.2%	12.3%	19.6%	91.339
Ba	arrier Height:	0.0 feet			Me	edium T	rucks: 6	9.8%	8.8%	21.4%	6.689
Barrier Type (0-V	•	0.0			ŀ	leavy T	rucks: 5	8.3%	5.1%	36.6%	1.989
	ist. to Barrier:	47.0 feet		H	N 0-			(i f.	- 41		
Centerline Dist.	to Observer:	47.0 feet		Ľ	Noise Sc	Auto	evations		eet)		
Barrier Distance	to Observer:	0.0 feet			Marthur	Auto m Truck					
Observer Height	(Above Pad):	5.0 feet							Grade Adj	uctmont	
P	ad Elevation:	0.0 feet			neav	ry Truck	5. 0.0	J4	Oldde Auj	usunom	. 0.0
Ro	ad Elevation:	0.0 feet		1	Lane Eq	uivalen	t Distance	e (in i	feet)		
	Road Grade:	0.0%				Auto	s: 38.0	79			
	Left View:	-90.0 degre	es		Mediur	m Truck	s: 37.8	46			
	Right View:	90.0 degre	es		Heav	ry Truck	s: 37.8	69			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresne	1	Barrier Atte	en Ber	m Atten
Autos:	68.46	-1.24		1.6	7	-1.20	-	4.63	0.0	00	0.00
Medium Trucks:	79.45	-12.60		1.7	1	-1.20	-	4.87	0.0	00	0.00
Heavy Trucks:	84.25	-17.87		1.7	1	-1.20	-	5.46	0.0	00	0.00
Unmitigated Nois											
VehicleType	Leq Peak Hou			Leq E	vening		Night		Ldn		NEL
Autos:	01		66.9		65.5		62.7		70.0		70.
Medium Trucks:			66.7		63.7		62.8		69.9		70.
Heavy Trucks:		-	65.4		60.8		64.6		71.1		71.
	72	.1	71.1		68.5		68.2		75.1		75.4
Vehicle Noise:		ntour lin foot	)								
	ce to Noise Co	mour (in reel	<u> </u>								
Vehicle Noise: Centerline Distan	ce to Noise Co	mour (in reel		70 0	dBA	65	-	C	i0 dBA	55	dBA
	ce to Noise Co		Ldn:	70 0	dBA 103 107	65	ава 222 231	C.	478 497	55	1,030 1,070

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APPENDIX 9.1:

# **OPERATIONAL STATIONARY-SOURCE NOISE CALCULATIONS**



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### 11559 - IDI Rider 2 and 4

CadnaA Noise Prediction Model: 11559-31.cna Date: 24.09.20 Analyst: B. Lawson

### Calculation Configuration

Configurat	tion
Parameter	Value
General	
Country	(user defined)
Max. Error (dB)	0.00
Max. Search Radius (#(Unit,LEN))	2000.01
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (#(Unit,LEN))	999.99
Min. Length of Section (#(Unit,LEN))	1.01
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Reference Time Day (min)	960.00
Reference Time Night (min)	480.00
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	5.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
max. Order of Reflection	2
Search Radius Src	100.00
Search Radius Rcvr	100.00
Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rvcr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Incl. Ground Att. over Barrier
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (#(Unit,TEMP))	10
rel. Humidity (%)	70
Ground Absorption G	0.50
Wind Speed for Dir. (#(Unit,SPEED))	3.0
Roads (RLS-90)	
Strictly acc. to RLS-90	
Railways (FTA/FRA)	
Aircraft (???)	
Strictly acc. to AzB	

#### **Receiver Noise Levels**

Name	м.	ID	Lev	el Lr	Limit.	Value		Land	l Use	Height	:	C	oordinates	
			Day	Night	Day	Night	Туре	Auto	Noise Type			Х	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
RECEIVERS		R1	44.5	44.5	80.0	60.0				5.00	а	6267953.99	2251042.36	5.00
RECEIVERS		R2	53.7	53.7	80.0	60.0				5.00	а	6269521.47	2249726.46	5.00
RECEIVERS		R3	47.6	47.6	80.0	60.0				5.00	а	6270550.18	2249080.48	5.00
RECEIVERS		R4	53.0	52.9	80.0	60.0				5.00	а	6270531.57	2247228.86	5.00
RECEIVERS		R5	49.5	49.5	80.0	60.0				5.00	а	6270525.65	2246507.74	5.00
RECEIVERS		R6	55.7	55.7	80.0	60.0				5.00	а	6269079.12	2246723.03	5.00
RECEIVERS		R7	60.0	59.9	80.0	60.0				5.00	а	6268391.65	2247030.05	5.00
RECEIVERS		R8	44.5	44.5	80.0	60.0				5.00	а	6267528.08	2247205.43	5.00
RECEIVERS		BIO-1	57.9	57.9	80.0	60.0				5.00	а	6269722.31	2248681.98	5.00
RECEIVERS		BIO-2	55.4	55.4	80.0	60.0				5.00	а	6270123.36	2247308.43	5.00

### Point Source(s)

	-	- (- /				_											
Name	М.	ID	R	esult. PW	/L		Lw/L	i	Op	erating Ti	ime	К0	Height	: ]	Co	oordinates	
			Day	Evening	Night	Туре	Value	norm.	Day	Special	Night				Х	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	(dB)	(ft)		(ft)	(ft)	(ft)
POINTSOURCE		AC01	89.4	89.4	89.4	Lw	89.4		585.00	0.00	252.00	0.0	5.00	g	6268278.36	2249525.05	50.00
POINTSOURCE		AC02	89.4	89.4	89.4	Lw	89.4		585.00	0.00	252.00	0.0	5.00	g	6268281.88	2248538.86	50.00
POINTSOURCE		AC03	89.4	89.4	89.4	Lw	89.4		585.00	0.00	252.00	0.0	5.00	g	6268170.96	2247302.88	50.00
POINTSOURCE		AC04	89.4	89.4	89.4	Lw	89.4		585.00	0.00	252.00	0.0	5.00	g	6269316.39	2247334.58	50.00
POINTSOURCE		TRASH01	102.8	102.8	102.8	Lw	102.8		75.00	0.00	45.00	0.0	5.00	а	6269139.22	2247119.65	5.00
POINTSOURCE		TRASH02	102.8	102.8	102.8	Lw	102.8		75.00	0.00	45.00	0.0	5.00	а	6268259.85	2247123.10	5.00

Name	M.	ID	R	esult. PW	'L		Lw/L	i	Оре	erating Ti	ime	К0	Height		Co	oordinates	
			Day	Evening	Night	Туре	Value	norm.	Day	Special	Night				Х	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	(dB)	(ft)		(ft)	(ft)	(ft)
POINTSOURCE		TRASH03	102.8	102.8	102.8	Lw	102.8		75.00	0.00	45.00	0.0	5.00	а	6268128.12	2249430.40	5.00
POINTSOURCE		TRASH04	102.8	102.8	102.8	Lw	102.8		75.00	0.00	45.00	0.0	5.00	а	6268112.78	2248626.32	5.00
POINTSOURCE		TRASH05	102.8	102.8	102.8	Lw	102.8		75.00	0.00	45.00	0.0	5.00	а	6268269.84	2248126.23	5.00

### Area Source(s)

Name	М.	ID	R	esult. PW	'L	R	esult. PW	L''		Lw / L	i	Op	erating Ti	me	Height
			Day	Evening	Night	Day	Evening	Night	Туре	Value	norm.	Day	Special	Night	(ft)
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	
AREASOURCE		LOADING01	118.5	118.5	118.5	77.1	77.1	77.1	Lw	118.5					8
AREASOURCE		LOADING02	118.5	118.5	118.5	75.5	75.5	75.5	Lw	118.5					8
AREASOURCE		LOADING03	118.5	118.5	118.5	76.4	76.4	76.4	Lw	118.5					8
AREASOURCE		LOADING04	118.5	118.5	118.5	76.3	76.3	76.3	Lw	118.5					8
AREASOURCE		PARKING01	93.8	93.8	93.8	59.2	59.2	59.2	Lw	93.8					5
AREASOURCE		PARKING02	93.8	93.8	93.8	63.7	63.7	63.7	Lw	93.8					5
AREASOURCE		PARKING03	93.8	93.8	93.8	59.2	59.2	59.2	Lw	93.8					5
AREASOURCE		PARKING04	93.8	93.8	93.8	58.7	58.7	58.7	Lw	93.8					5
AREASOURCE		PARKING05	93.8	93.8	93.8	56.0	56.0	56.0	Lw	93.8					5
AREASOURCE		PARKING06	93.8	93.8	93.8	63.4	63.4	63.4	Lw	93.8					5

Name		lei	ght		Coordinat	ec	
Nume	Begin		End	x	v	z	Ground
				(ft)	y (ft)		
AREASOURCE	(ft) 8.00	а	(ft)	6268118.50	2249443.41	(ft) 8.00	(ft) 0.00
7 11127 10 0 0 1102	0.00	ŭ		6268298.67	2249440.00	8.00	0.00
				6268288.47	2249440.00	8.00	0.00
				6268101.81	2248603.40	8.00	0.00
					2248603.31		
				6268111.25 6268164.21	2249240.28	8.00 8.00	0.00
				6268167.11	2249238.83	8.00	0.00
				6268119.23	2249338.94	8.00	0.00
AREASOURCE	8.00	а		6268260.32	2247952.54	8.00	0.00
AREAGOURCE	8.00	a		6268256.35	2247990.05	8.00	0.00
				6268255.63	2247550.05	8.00	0.00
				6269414.90	2248130.85	8.00	0.00
				6269411.30	2248151.05	8.00	0.00
				6269419.94	2247948.32		
				6269361.71	2247948.32	8.00 8.00	0.00
				6269361.71	2247929.28	8.00	0.00
AREASOURCE	8.00	а		6268253.21	2247947.14	8.00	0.00
AREASOURCE	8.00	d		6268255.99	2247292.13	8.00	0.00
				6269230.02	2247295.41	8.00 8.00	0.00
				6269229.45	2247162.84		
				6269149.10	2247162.84	8.00	0.00
				6269147.95	2247111.76	8.00	0.00
				6268252.64	2247114.63	8.00	0.00
AREASOURCE	8.00	а		6268808.79	2249543.15	8.00	0.00
				6268933.25	2249541.34	8.00	0.00
				6268929.67	2249233.10	8.00	0.00
				6268938.15	2249232.91	8.00	0.00
				6268934.57	2248921.09	8.00	0.00
				6268987.36	2248920.71	8.00	0.00
				6268981.51	2248390.01	8.00	0.00
				6268795.57	2248392.41	8.00	0.00
				6268796.32	2248486.64	8.00	0.00
AREASOURCE	5.00	а		6268292.17	2249619.11	5.00	0.00
				6268669.69	2249615.91	5.00	0.00
				6268670.15	2249597.17	5.00	0.00
				6268829.21	2249593.06	5.00	0.00
				6268829.21	2249548.27	5.00	0.00
				6268305.88	2249555.58	5.00	0.00
				6268306.79	2249574.32	5.00	0.00
				6268290.80	2249576.15	5.00	0.00
AREASOURCE	5.00	а		6268116.18	2248598.27	5.00	0.00
				6268180.61	2248597.46	5.00	0.00
				6268178.60	2248480.68	5.00	0.00
				6268176.99	2248434.77	5.00	0.00
				6268176.99	2248417.85	5.00	0.00
				6268114.57	2248417.85	5.00	0.00
				6268114.57	2248446.44	5.00	0.00
				6268133.09	2248446.44	5.00	0.00
				6268133.90	2248472.62	5.00	0.00
				6268115.37	2248472.62	5.00	0.00
AREASOURCE	5.00	а		6268242.23	2248444.43	5.00	0.00
				6268242.23	2248470.61	5.00	0.00
				6268278.47	2248469.40	5.00	0.00
				6268278.07	2248487.92	5.00	0.00

	leig		v	Coordinat v		Ground
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			6269471.81	2247113.24	5.00	0.00
			6269279.73 6269279.55		5.00 5.00	0.00
	Begin (ft) (ft) (ft) (ft) (ft) (ft) (ft) (ft)	Begin	Begin         End           (ft)         (ft)           i         (ft)           i         (ft)           i         (ft)           i         i           i	Begin         End         x           (ft)         (ft)         (ft)           (ft)         (ft)         (ft) <tr< td=""><td>Begin         End         x         y           (ft)         (ft)         (ft)         (ft)         (ft)           (ft)         (ft)         (ft)         (ft)         (ft)</td><td>Begin         End         x         y         z           (ft)         (ft)         (ft)         (ft)         (ft)         (ft)           (ft)         (ft)         (ft)         (ft)         (ft)         (ft)           (ft)         (ft)         (ft)         (ft)         (ft)         (ft)           (ft)         626832.47         2248437.92         5.00           (ft)         626863.47         2248437.97         5.00           (ft)         626803.13         224752.71         5.00           (ft)         626803.13         224717.33         5.00           (ft)         626802.04         224723.05         5.00           (ft)         626802.05         224721.43         5.00           (ft)         626802.06         24720.27         5.00           (ft)         626802.03         224718.13         5.00           (ft)         626802.72         224719.23         5.00           (ft)         626802.73         224718.14         5.00           (ft)         626803.73         224718.13         5.00           (ft)         626803.72         224718.14         5.00           (ft)         626803.12</td></tr<>	Begin         End         x         y           (ft)         (ft)         (ft)         (ft)         (ft)           (ft)         (ft)         (ft)         (ft)         (ft)	Begin         End         x         y         z           (ft)         (ft)         (ft)         (ft)         (ft)         (ft)           (ft)         (ft)         (ft)         (ft)         (ft)         (ft)           (ft)         (ft)         (ft)         (ft)         (ft)         (ft)           (ft)         626832.47         2248437.92         5.00           (ft)         626863.47         2248437.97         5.00           (ft)         626803.13         224752.71         5.00           (ft)         626803.13         224717.33         5.00           (ft)         626802.04         224723.05         5.00           (ft)         626802.05         224721.43         5.00           (ft)         626802.06         24720.27         5.00           (ft)         626802.03         224718.13         5.00           (ft)         626802.72         224719.23         5.00           (ft)         626802.73         224718.14         5.00           (ft)         626803.73         224718.13         5.00           (ft)         626803.72         224718.14         5.00           (ft)         626803.12

### Barrier(s)

Name	М.	ID	Abso	orption	Z-Ext.	Cant	ilever	He	ight		Coordinat	es	
			left	right		horz.	vert.	Begin	End	x	У	z	Ground
					(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
BARRIERS		BARRIERS00001						14.00 a	3	6268253.21	2247262.13	14.00	0.00
										6268253.78	2247234.58	14.00	0.00
BARRIERS		BARRIERS00002						14.00 a	9	6268252.06	2247192.68	14.00	0.00
										6268252.64	2247114.63	14.00	0.00
										6269147.95	2247111.76	14.00	0.00
										6269149.10	2247162.84	14.00	0.00
										6269181.24	2247162.84	14.00	0.00
BARRIERS		BARRIERS00003						14.00 a	3	6269229.45	2247162.84	14.00	0.00
										6269229.45	2247182.35	14.00	0.00

Name	М.	ID	-	Ľ.	Z-Ext.	Canti			-	ght		Coordinat		
	<u> </u>		left	right	(61)	horz.	vert.	Begin	-	End	X (61)	У (С)	Z	Ground
	-				(ft)	(ft)	(ft)	(ft)	-	(ft)	(ft)	(ft)	(ft)	(ft)
BARRIERS	-	BARRIERS00004						14.00	a		6269229.45	2247225.39 2247295.41	14.00	0.00
BARRIERS	-	BARRIERS00005						14.00	а		6269230.02 6268256.35	2247295.41	14.00	0.00
DANNIENS	-	BARRIERSUUUUS						14.00	a		6268255.63	2247990.03	14.00	0.00
BARRIERS	-	BARRIERS00006						14.00	a		6268257.79	2248043.30	14.00	0.00
DAIMENS	-	DANNENSOODOO						14.00			6268255.63	2248085.00	14.00	0.00
									-		6269414.90	2248130.09	14.00	0.00
	-								⊢		6269411.30	2247969.90	14.00	0.00
	-								╞		6269419.94		14.00	0.00
BARRIERS		BARRIERS00007						14.00	a		6268235.30	2249443.41	14.00	0.00
	-								-		6268249.09	2249441.96	14.00	0.00
BARRIERS		BARRIERS00008						14.00	a		6268194.68	2249444.14	14.00	0.00
									F		6268118.50	2249443.41	14.00	0.00
									T		6268119.23	2249340.40	14.00	0.00
											6268167.11	2249338.94	14.00	0.00
											6268167.11	2249309.93	14.00	0.00
BARRIERS		BARRIERS00009						14.00	a		6268164.93	2249267.85	14.00	0.00
											6268164.21	2249238.83	14.00	0.00
											6268111.25	2249240.28	14.00	0.00
	1										6268101.81	2248603.31	14.00	0.00
											6268185.41	2248602.68	14.00	0.00
BARRIERS		BARRIERS00010						14.00	а		6268225.96	2248601.98	14.00	0.00
											6268238.84	2248601.78	14.00	0.00
BARRIERS		BARRIERS00011						14.00	а		6268808.79	2249543.15	14.00	0.00
											6268871.03	2249542.29	14.00	0.00
BARRIERS		BARRIERS00012						14.00	а		6268911.76	2249541.72	14.00	0.00
											6268933.25	2249541.34	14.00	0.00
											6268929.67	2249233.10	14.00	0.00
											6268938.15	2249232.91	14.00	0.00
											6268934.57	2248921.09	14.00	0.00
											6268987.36	2248920.71	14.00	0.00
											6268981.51	2248390.01	14.00	0.00
BARRIER_EXISTING		BARRIER_EXISTING00001						6.00	а		6267698.90	2251028.62	6.00	0.00
											6268033.10	2251030.79	6.00	0.00
											6268033.10		6.00	0.00
BARRIER_EXISTING		BARRIER_EXISTING00002						6.00	а		6270993.17	2249605.01	6.00	0.00
	<u> </u>										6270967.13		6.00	0.00
											6270548.29	2249646.24	6.00	0.00
											6270537.44	2249049.45	6.00	0.00
	<u> </u>										6270615.57	2249047.28	6.00	0.00
BARRIER_EXISTING		BARRIER_EXISTING00003						6.00	а		6270619.91	2248988.69	6.00	0.00
											6270539.61	2248986.52	6.00	0.00
									_		6270537.44	2248428.79	6.00	0.00
									-		6270622.08	2248428.79	6.00	0.00
BARRIER_EXISTING	-	BARRIER_EXISTING00004						6.00	а		6271731.02	2247751.71	6.00	0.00
	-										6271759.23	2247751.71	6.00	0.00
	-										6271798.29		6.00	0.00
	-								-			2248177.05	6.00	0.00
	-		<u> </u>									2248183.56	6.00	0.00
										└──┤		2248159.69	6.00	0.00
	-								-			2248018.63	6.00	0.00
BARRIER_EXISTING	-	BARRIER_EXISTING00005						6.00	a		6270535.27	2247975.23	6.00	0.00
									-		6270535.27	2247836.34	6.00	0.00
BARRIER_EXISTING	-	BARRIER_EXISTING00006	<u> </u>					6.00	a		6270530.93	2247738.69	6.00	0.00
	-				-			6.00	-		6270528.76	2247556.39	6.00	0.00
BARRIER_EXISTING	-	BARRIER_EXISTING00007						6.00	a		6270535.27	2247445.72	6.00	0.00
	-							c	6		6270537.44		6.00	0.00
BARRIER_EXISTING	-	BARRIER_EXISTING00008						6.00	a		6270530.93	2247215.68	6.00	0.00
	-								-			2247100.66	6.00	0.00
	-								$\vdash$		6271047.42		6.00	0.00
	-								-			2247094.15	6.00	0.00
<u> </u>									$\vdash$		6271088.66		6.00	0.00
	-							C 00	6			2247165.77	6.00	0.00
BARRIER_EXISTING	-	BARRIER_EXISTING00009						6.00	a		6267528.47	2247128.67	6.00	0.00
			<u> </u>						-	├	6267527.97	2247249.40	6.00	0.00
	1	1							1		6267413.60	2247249.22	6.00	0.00

### Building(s)

Name	М.	ID	RB	Residents	Absorption	Height			Coordinat	es	
						Begin		х	У	z	Ground
						(ft)		(ft)	(ft)	(ft)	(ft)
BUILDING		RIDER4	х	0		45.00	а	6268255.60	2249540.89	45.00	0.00
								6268808.79	2249543.15	45.00	0.00
								6268796.32	2248486.64	45.00	0.00
								6268305.47	2248493.44	45.00	0.00
								6268248.79	2248502.51	45.00	0.00

Name	М.	ID	RB	Residents	Absorption	Height			Coordinat	es	
						Begin		х	У	z	Ground
						(ft)		(ft)	(ft)	(ft)	(ft)
								6268238.84	2248601.78	45.00	0.00
								6268288.47	2248603.40	45.00	0.00
								6268298.67	2249440.00	45.00	0.00
								6268249.09	2249441.96	45.00	0.00
BUILDING		RIDER2	х	0		45.00	а	6268140.33	2247987.13	45.00	0.00
								6268256.35	2247990.05	45.00	0.00
								6268260.32	2247952.54	45.00	0.00
								6269361.81	2247947.14	45.00	0.00
								6269358.56	2247327.75	45.00	0.00
								6269353.16	2247301.81	45.00	0.00
								6269230.02	2247295.41	45.00	0.00
								6268255.99	2247299.65	45.00	0.00
								6268253.21	2247262.13	45.00	0.00
								6268136.01	2247267.22	45.00	0.00
								6268133.85	2247467.19	45.00	0.00

## 11559 - IDI Rider 2 and 4

CadnaA Noise Prediction Model: 11559-31\_CNEL.cna Date: 24.09.20 Analyst: B. Lawson

### Calculation Configuration

Configurat	ion
Parameter	Value
General	Value
Country	(user defined)
Max. Error (dB)	0.00
Max. Search Radius (#(Unit,LEN))	2000.01
Min. Dist Src to Rcvr	0.00
Partition	0.00
Raster Factor	0.50
Max. Length of Section (#(Unit,LEN))	999.99
Min. Length of Section (#(Unit,LEN))	1.01
Min. Length of Section (%)	0.00
	On
Proj. Line Sources	
Proj. Area Sources Ref. Time	On
	960.00
Reference Time Day (min)	
Reference Time Night (min)	480.00
Daytime Penalty (dB)	0.00 5.00
Recr. Time Penalty (dB)	
Night-time Penalty (dB)	10.00
DTM Steadard Height (m)	0.00
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	-
max. Order of Reflection	2
Search Radius Src	100.00
Search Radius Rcvr	100.00
Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rvcr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Incl. Ground Att. over Barrier
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (#(Unit,TEMP))	10
rel. Humidity (%)	70
Ground Absorption G	0.50
Wind Speed for Dir. (#(Unit,SPEED))	3.0
Roads (RLS-90)	
Strictly acc. to RLS-90	
Railways (FTA/FRA)	
Aircraft (???)	
Strictly acc. to AzB	

### **Receiver Noise Levels**

Name	М.	ID		Level Lr		Lir	nit. Val	ue		Land	Use	Height	:	C	oordinates	
			Day	Night	CNEL	Day	Night	CNEL	Туре	Auto	Noise Type			Х	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)		(ft)	(ft)	(ft)
RECEIVERS		R1	36.1	36.1	42.8	80.0	60.0	60.0				5.00	а	6267953.99	2251042.36	5.00
RECEIVERS		R2	45.3	45.3	52.0	80.0	60.0	60.0				5.00	а	6269521.47	2249726.46	5.00
RECEIVERS		R3	39.2	39.2	45.9	80.0	60.0	60.0				5.00	а	6270550.18	2249080.48	5.00
RECEIVERS		R4	44.5	44.5	51.2	80.0	60.0	60.0				5.00	а	6270531.57	2247228.86	5.00
RECEIVERS		R5	41.1	41.1	47.8	80.0	60.0	60.0				5.00	а	6270525.65	2246507.74	5.00
RECEIVERS		R6	47.3	47.3	53.9	80.0	60.0	60.0				5.00	а	6269079.12	2246723.03	5.00
RECEIVERS		R7	51.5	51.5	58.2	80.0	60.0	60.0				5.00	а	6268391.65	2247030.05	5.00
RECEIVERS		R8	36.1	36.1	42.7	80.0	60.0	60.0				5.00	а	6267528.08	2247205.43	5.00
RECEIVERS		BIO-1	49.5	49.5	56.1	80.0	60.0	60.0				5.00	а	6269722.31	2248681.98	5.00
RECEIVERS		BIO-2	47.0	47.0	53.7	80.0	60.0	60.0				5.00	а	6270123.36	2247308.43	5.00

### Point Source(s)

		• •															
Name	М.	ID	R	esult. PW	/L		Lw/L	i	Op	erating Ti	ime	К0	Height		Co	oordinates	
			Day	Evening	Night	Туре	Value	norm.	Day	Special	Night				Х	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	(dB)	(ft)		(ft)	(ft)	(ft)
POINTSOURCE		AC01	80.0	80.0	80.0	Lw	80		585.00	0.00	252.00	0.0	5.00	g	6268278.36	2249525.05	50.00
POINTSOURCE		AC02	80.0	80.0	80.0	Lw	80		585.00	0.00	252.00	0.0	5.00	g	6268281.88	2248538.86	50.00
POINTSOURCE		AC03	80.0	80.0	80.0	Lw	80		585.00	0.00	252.00	0.0	5.00	g	6268170.96	2247302.88	50.00
POINTSOURCE		AC04	80.0	80.0	80.0	Lw	80		585.00	0.00	252.00	0.0	5.00	g	6269316.39	2247334.58	50.00
POINTSOURCE		TRASH01	88.5	88.5	88.5	Lw	88.5		75.00	0.00	45.00	0.0	5.00	а	6269139.22	2247119.65	5.00
POINTSOURCE		TRASH02	88.5	88.5	88.5	Lw	88.5		75.00	0.00	45.00	0.0	5.00	a	6268259.85	2247123.10	5.00

Name	М.	ID	R	esult. PW	'L		Lw / L	i	Ope	erating Ti	me	К0	Height	C	oordinates	
			Day	Evening	Night	Туре	Value	norm.	Day	Special	Night			x	Y	Z
			(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	(dB)	(ft)	(ft)	(ft)	(ft)
POINTSOURCE		TRASH03	88.5	88.5	88.5	Lw	88.5		75.00	0.00	45.00	0.0	5.00	a 6268128.12	2249430.40	5.00
POINTSOURCE		TRASH04	88.5	88.5	88.5	Lw	88.5		75.00	0.00	45.00	0.0	5.00	a 6268112.78	2248626.32	5.00
POINTSOURCE		TRASH05	88.5	88.5	88.5	Lw	88.5		75.00	0.00	45.00	0.0	5.00	a 6268269.84	2248126.23	5.00

### Area Source(s)

Name	М.	ID	R	esult. PW	'L	R	esult. PW	L''		Lw/L	i	Op	erating Ti	me	Height
			Day	Evening	Night	Day	Evening	Night	Туре	Value	norm.	Day	Special	Night	(ft)
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)			dB(A)	(min)	(min)	(min)	
AREASOURCE		LOADING01	110.1	110.1	110.1	68.7	68.7	68.7	Lw	110.1					8
AREASOURCE		LOADING02	110.1	110.1	110.1	67.1	67.1	67.1	Lw	110.1					8
AREASOURCE		LOADING03	110.1	110.1	110.1	68.0	68.0	68.0	Lw	110.1					8
AREASOURCE		LOADING04	110.1	110.1	110.1	67.9	67.9	67.9	Lw	110.1					8
AREASOURCE		PARKING01	85.0	85.0	85.0	50.4	50.4	50.4	Lw	85					5
AREASOURCE		PARKING02	85.0	85.0	85.0	54.9	54.9	54.9	Lw	85					5
AREASOURCE		PARKING03	85.0	85.0	85.0	50.4	50.4	50.4	Lw	85					5
AREASOURCE		PARKING04	85.0	85.0	85.0	49.9	49.9	49.9	Lw	85					5
AREASOURCE		PARKING05	85.0	85.0	85.0	47.2	47.2	47.2	Lw	85					5
AREASOURCE		PARKING06	85.0	85.0	85.0	54.6	54.6	54.6	Lw	85					5

Name	ł	leight			Coordinat	es	
	Begin	End		х	у	z	Ground
	(ft)	(ft)		(ft)	(ft)	(ft)	(ft)
AREASOURCE	8.00	а		6268118.50	2249443.41	8.00	0.00
				6268298.67	2249440.00	8.00	0.00
				6268288.47	2248603.40	8.00	0.00
				6268101.81	2248603.31	8.00	0.00
				6268111.25	2249240.28	8.00	0.00
				6268164.21	2249238.83	8.00	0.00
				6268167.11	2249338.94	8.00	0.00
				6268119.23	2249340.40	8.00	0.00
AREASOURCE	8.00	a		6268260.32	2247952.54	8.00	0.00
				6268256.35	2247990.05	8.00	0.00
				6268255.63	2248136.85	8.00	0.00
				6269414.90	2248131.09	8.00	0.00
				6269411.30	2247969.90	8.00	0.00
				6269419.94	2247948.32	8.00	0.00
			$\vdash$	6269361.71	2247929.28	8.00	0.00
			-	6269361.81	2247925.28	8.00	0.00
AREASOURCE	8.00	a	-	6268253.21	2247947.14	8.00	0.00
ANEASOUNCE	0.00	a		6268255.99	2247299.65	8.00	0.00
				6269230.02	2247295.03	8.00	0.00
			-				
				6269229.45	2247162.84	8.00	0.00
				6269149.10	2247162.84	8.00	0.00
				6269147.95	2247111.76	8.00	0.00
				6268252.64	2247114.63	8.00	0.00
AREASOURCE	8.00	а		6268808.79	2249543.15	8.00	0.00
				6268933.25	2249541.34	8.00	0.00
				6268929.67	2249233.10	8.00	0.00
				6268938.15	2249232.91	8.00	0.00
				6268934.57	2248921.09	8.00	0.00
				6268987.36	2248920.71	8.00	0.00
				6268981.51	2248390.01	8.00	0.00
				6268795.57	2248392.41	8.00	0.00
				6268796.32	2248486.64	8.00	0.00
AREASOURCE	5.00	а		6268292.17	2249619.11	5.00	0.00
				6268669.69	2249615.91	5.00	0.00
				6268670.15	2249597.17	5.00	0.00
				6268829.21	2249593.06	5.00	0.00
				6268829.21	2249548.27	5.00	0.00
			Ĺ	6268305.88	2249555.58	5.00	0.00
				6268306.79	2249574.32	5.00	0.00
				6268290.80	2249576.15	5.00	0.00
AREASOURCE	5.00	а		6268116.18	2248598.27	5.00	0.00
				6268180.61	2248597.46	5.00	0.00
				6268178.60	2248480.68	5.00	0.00
				6268176.99	2248434.77	5.00	0.00
				6268176.99	2248417.85	5.00	0.00
			T	6268114.57	2248417.85	5.00	0.00
				6268114.57	2248446.44	5.00	0.00
			t	6268133.09	2248446.44	5.00	0.00
			$\vdash$	6268133.90	2248472.62	5.00	0.00
			-	6268115.37	2248472.62	5.00	0.00
AREASOURCE	5.00	2	-	6268242.23	2248444.43	5.00	0.00
ANEAGOUNCE	5.00	a	-	6268242.23	2248444.43	5.00	0.00
				6268278.47	2248469.40	5.00	0.00

Name		101	ght End		Coordinat		Ground
	Begin	$ \dashv$	End	X (61)	<u>у</u>	Z (ft)	Ground
	(ft)	$\square$	(ft)	(ft)	(ft)	(ft)	(ft)
		$\vdash$		6268324.79		5.00	0.00
		$\square$		6268779.06		5.00	0.00
		$\square$		6268782.68		5.00	0.00
		$\square$		6268663.47		5.00	0.00
		$\square$		6268661.86	2248421.07	5.00	0.00
	F 00			6268242.63		5.00	0.00
AREASOURCE	5.00	a		6268039.14	2247522.71	5.00	0.00
		$\square$		6268081.18		5.00	0.00
		$\square$		6268051.38	2247417.33	5.00	0.00
		$\vdash$		6268069.47	2247409.88	5.00	0.00
				6268021.04		5.00	0.00
		$\vdash$		6268020.16	2247223.77	5.00	0.00
		$\square$		6268020.51	2247216.43	5.00	0.00
				6268022.09	2247209.27	5.00	0.00
		$\vdash$		6268024.86		5.00	0.00
		$\vdash$		6268028.73	2247196.23	5.00	0.00
				6268033.60		5.00	0.00
		$\square$		6268039.32	2247186.14	5.00	0.00
		$\mid$		6268045.73	2247182.57	5.00	0.00
		$\mid$		6268052.66	2247180.13	5.00	0.00
		$\vdash$		6268059.89	2247178.90	5.00	0.00
		$\square$		6268182.30	2247177.83	5.00	0.00
		$\square$		6268182.30	2247159.74	5.00	0.00
		$\square$		6268214.77	2247158.14	5.00	0.00
				6268241.38	2247154.41	5.00	0.00
		$\square$		6268242.44		5.00	0.00
				6268223.81	2247134.72	5.00	0.00
				6268226.48		5.00	0.00
				6268081.71	2247115.03	5.00	0.00
				6268065.44		5.00	0.00
				6268049.14	2247114.69	5.00	0.00
				6268033.19		5.00	0.00
				6268017.96	2247124.12	5.00	0.00
				6268003.79	2247132.25	5.00	0.00
				6267991.02	2247142.44	5.00	0.00
				6267979.94	2247154.44	5.00	0.00
				6267970.81		5.00	0.00
				6267963.82	2247182.74	5.00	0.00
				6267959.15	2247198.40	5.00	0.00
				6267956.91	2247214.58	5.00	0.00
				6267957.14	2247230.91	5.00	0.00
				6267959.84	2247247.02	5.00	0.00
				6267981.13		5.00	0.00
AREASOURCE	5.00	а		6269365.04	2247826.42	5.00	0.00
				6269413.38	2247832.46	5.00	0.00
				6269414.13	2247796.97	5.00	0.00
				6269431.50		5.00	0.00
					2247742.59	5.00	0.00
					2247628.56	5.00	0.00
				6269494.93	2247631.58	5.00	0.00
		Ц			2247245.69	5.00	0.00
				6269382.41	2247246.45	5.00	0.00
				6269383.92	2247340.85	5.00	0.00
				6269365.80	2247341.60	5.00	0.00
AREASOURCE	5.00	а		6269270.76	2247178.70	5.00	0.00
				6269424.46	2247178.34	5.00	0.00
				6269424.64	2247159.15	5.00	0.00
				6269471.45	2247158.25	5.00	0.00
				6269471.81	2247113.24	5.00	0.00
				6269279.73	2247114.31	5.00	0.00
				6269279.55	2247133.14	5.00	0.00
				6269271.12	2247133.32	5.00	0.00

### Barrier(s)

Name	М.	ID	Abso	orption	Z-Ext.	Canti	ilever	н	leig	t		Coordinat	es	
			left	right		horz.	vert.	Begin		End	x	У	z	Ground
					(ft)	(ft)	(ft)	(ft)		(ft)	(ft)	(ft)	(ft)	(ft)
BARRIERS		BARRIERS00001						14.00	а		6268253.21	2247262.13	14.00	0.00
											6268253.78	2247234.58	14.00	0.00
BARRIERS		BARRIERS00002						14.00	а		6268252.06	2247192.68	14.00	0.00
											6268252.64	2247114.63	14.00	0.00
											6269147.95	2247111.76	14.00	0.00
											6269149.10	2247162.84	14.00	0.00
											6269181.24	2247162.84	14.00	0.00
BARRIERS		BARRIERS00003						14.00	а		6269229.45	2247162.84	14.00	0.00
											6269229.45	2247182.35	14.00	0.00

Name	M. ID		1	Z-Ext.	-	ilever		-	ght		Coordinat		
		left	right	(6)	horz.	vert.	Begin	1	End	X (61)	<u>у</u>	Z ((1))	Ground
	DADDIEDC00004	_		(ft)	(ft)	(ft)	(ft)	-	(ft)	(ft)	(ft)	(ft)	(ft)
BARRIERS	BARRIERS00004		-				14.00	a		6269229.45	2247225.39 2247295.41	14.00	0.00
BARRIERS	BARRIERS00005						14.00	a		6269230.02 6268256.35	2247295.41	14.00	0.00
DAIMIENS	BARRENSOUDD						14.00	a		6268255.63	2247550.05	14.00	0.00
BARRIERS	BARRIERS00006						14.00	a		6268257.79	2248043.50	14.00	0.00
DAIMENS	DAIMENSOOOO						14.00	ľ		6268255.63	2248136.85	14.00	0.00
								-		6269414.90		14.00	0.00
								t		6269411.30	2247969.90	14.00	0.00
								1		6269419.94		14.00	0.00
BARRIERS	BARRIERS00007						14.00	a		6268235.30		14.00	0.00
								t		6268249.09		14.00	0.00
BARRIERS	BARRIERS00008						14.00	a		6268194.68	2249444.14	14.00	0.00
										6268118.50	2249443.41	14.00	0.00
										6268119.23	2249340.40	14.00	0.00
										6268167.11	2249338.94	14.00	0.00
										6268167.11	2249309.93	14.00	0.00
BARRIERS	BARRIERS00009						14.00	а		6268164.93	2249267.85	14.00	0.00
										6268164.21	2249238.83	14.00	0.00
										6268111.25	2249240.28	14.00	0.00
										6268101.81	2248603.31	14.00	0.00
										6268185.41	2248602.68	14.00	0.00
BARRIERS	BARRIERS00010		-				14.00	а		6268225.96		14.00	0.00
			-	L						6268238.84	2248601.78	14.00	0.00
BARRIERS	BARRIERS00011						14.00	a		6268808.79	2249543.15	14.00	0.00
										6268871.03		14.00	0.00
BARRIERS	BARRIERS00012		-				14.00	a			2249541.72	14.00	0.00
								-		6268933.25	2249541.34	14.00	0.00
								-		6268929.67	2249233.10	14.00	0.00
								+		6268938.15	2249232.91	14.00	0.00
								-		6268934.57	2248921.09	14.00	0.00
								-		6268987.36 6268981.51	2248920.71 2248390.01	14.00	0.00
BARRIER EXISTING	BARRIER EXISTINGO	0001					6.00	a		6267698.90		6.00	0.00
DARREN_EXISTING	DARRIER_EXISTINGO	0001					0.00	a		6268033.10	2251028.02	6.00	0.00
								+		6268033.10		6.00	0.00
BARRIER EXISTING	BARRIER EXISTINGO	0002					6.00	a		6270993.17	2249605.01	6.00	0.00
brance_externite	b, interc_b, io interco						0.00	Ĩ		6270967.13		6.00	0.00
										6270548.29	2249646.24	6.00	0.00
								t		6270537.44	2249049.45	6.00	0.00
										6270615.57	2249047.28	6.00	0.00
BARRIER EXISTING	BARRIER EXISTINGO	0003					6.00	a		6270619.91	2248988.69	6.00	0.00
										6270539.61	2248986.52	6.00	0.00
										6270537.44	2248428.79	6.00	0.00
										6270622.08	2248428.79	6.00	0.00
BARRIER_EXISTING	BARRIER_EXISTING0	0004					6.00	a		6271731.02	2247751.71	6.00	0.00
										6271759.23	2247751.71	6.00	0.00
										6271798.29	2247779.92	6.00	0.00
										6271809.14	2248177.05	6.00	0.00
											2248183.56	6.00	0.00
											2248159.69	6.00	0.00
			<b> </b>								2248018.63	6.00	0.00
BARRIER_EXISTING	BARRIER_EXISTINGO	0005	-				6.00	a		6270535.27		6.00	0.00
			-							6270535.27	2247836.34	6.00	0.00
BARRIER_EXISTING	BARRIER_EXISTING0	0006					6.00	a		6270530.93		6.00	0.00
			-	-				-		6270528.76	2247556.39	6.00	0.00
		000-	1	1			6.00	a	-	6270535.27	2247445.72	6.00	0.00
BARRIER_EXISTING	BARRIER_EXISTINGO	0007						1		6270537.44	2247313.34	6.00	0.00
BARRIER_EXISTING							6.07			C070500 C5			0.0-
	BARRIER_EXISTINGO						6.00	a		6270530.93	2247215.68	6.00	0.00
BARRIER_EXISTING							6.00	a		6270530.93	2247215.68 2247100.66	6.00 6.00	0.00
BARRIER_EXISTING							6.00	a		6270530.93 6271047.42	2247215.68 2247100.66 2247094.15	6.00 6.00 6.00	0.00 0.00
BARRIER_EXISTING							6.00	a		6270530.93 6271047.42 6271051.77	2247215.68 2247100.66 2247094.15 2247094.15	6.00 6.00 6.00 6.00	0.00 0.00 0.00
BARRIER_EXISTING							6.00	a		6270530.93 6271047.42 6271051.77 6271088.66	2247215.68 2247100.66 2247094.15 2247094.15 2247128.88	6.00 6.00 6.00 6.00 6.00	0.00 0.00 0.00 0.00
BARRIER_EXISTING BARRIER_EXISTING	BARRIER_EXISTINGO	0008								6270530.93 6271047.42 6271051.77 6271088.66 6271088.66	2247215.68 2247100.66 2247094.15 2247094.15 2247128.88 2247165.77	6.00 6.00 6.00 6.00 6.00 6.00	0.00 0.00 0.00 0.00 0.00
BARRIER_EXISTING		0008					6.00			6270530.93 6271047.42 6271051.77 6271088.66	2247215.68 2247100.66 2247094.15 2247094.15 2247128.88	6.00 6.00 6.00 6.00 6.00	0.00 0.00 0.00 0.00

### Building(s)

Name	М.	ID	RB	Residents	Absorption	Height			Coordinates			
						Begin		х	У	z	Ground	
						(ft)		(ft)	(ft)	(ft)	(ft)	
BUILDING		RIDER4	х	0		45.00	а	6268255.60	2249540.89	45.00	0.00	
								6268808.79	2249543.15	45.00	0.00	
								6268796.32	2248486.64	45.00	0.00	
								6268305.47	2248493.44	45.00	0.00	
								6268248.79	2248502.51	45.00	0.00	

Name	М.	ID	RB	Residents	Absorption	Height		Coordinates					
						Begin		х	У	z	Ground		
						(ft)		(ft)	(ft)	(ft)	(ft)		
								6268238.84	2248601.78	45.00	0.00		
								6268288.47	2248603.40	45.00	0.00		
								6268298.67	2249440.00	45.00	0.00		
								6268249.09	2249441.96	45.00	0.00		
BUILDING		RIDER2	х	0		45.00	а	6268140.33	2247987.13	45.00	0.00		
								6268256.35	2247990.05	45.00	0.00		
								6268260.32	2247952.54	45.00	0.00		
								6269361.81	2247947.14	45.00	0.00		
								6269358.56	2247327.75	45.00	0.00		
								6269353.16	2247301.81	45.00	0.00		
								6269230.02	2247295.41	45.00	0.00		
								6268255.99	2247299.65	45.00	0.00		
								6268253.21	2247262.13	45.00	0.00		
								6268136.01	2247267.22	45.00	0.00		
								6268133.85	2247467.19	45.00	0.00		