

Majestic Chino Heritage

NOISE IMPACT ANALYSIS
CITY OF CHINO

PREPARED BY:

Bill Lawson, PE, INCE blawson@urbanxroads.com (949) 336-5979

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TABLE OF CONTENTS

		OF CONTENTS	
		DICES	
		EXHIBITS	
		TABLES	
		ABBREVIATED TERMS	
EX	ECUTI	IVE SUMMARY	1
	Off-S	site Project Traffic Noise Analysis	1
	Soil I	mport/Export Haul Truck Off-Site Traffic Noise Analysis	1
		ect Operational Noise Analysis	
	-	ect Operational Vibration Analysis	
	-	ect Site Construction Noise Analysis	
		mport/Export Construction Noise Analysis	
		ect & Soil Import/Export Construction Vibration Analysis	
	Sumr	mary of CEQA Significance Findings	5
1	IN.	TRODUCTION	11
	1.1	Site Location	11
	1.2	Project Description	
2	EII	JNDAMENTALS	
_			
	2.1	Range of Noise	
	2.2	Noise Descriptors	
	2.3 2.4	Sound Propagation Noise Control	
	2.4	Noise Barrier Attenuation	
	2.6	Land Use Compatibility With Noise	
	2.7	Community Response to Noise	
	2.8	Vibration	
3		EGULATORY SETTING	
•	3.1	State of California Noise Requirements	
	3.2	State of California Building Code	
	3.3	City of Chino General Plan Noise Element	
	3.4	Operational Noise Standards	
	3.5	Construction Noise Standards	
	3.6	Vibration Standards	
4	SIC	GNIFICANCE CRITERIA	27
	4.1	CEQA Guidelines Not Further Analyzed	27
	4.2	Significance Criteria Summary	
5		SISTING NOISE LEVEL MEASUREMENTS	
,		Measurement Procedure and Criteria	
	5.1 5.2	Noise Measurement Locations	
	5.2	Noise Measurement Locations	
	ر. ی	INDISC INICUSUITETIT NESULIS	



6	ME	THODS AND PROCEDURES	37
	6.1 6.2 6.3	FHWA Traffic Noise Prediction Model Off-Site Traffic Noise Prediction Model Inputs Vibration Assessment	37
7	OF	F-SITE TRAFFIC NOISE IMPACTS	47
	7.1 7.2 7.3 7.4 7.5	Project Operational Traffic Noise Contours	54 54 54
8 9		CEIVER LOCATIONSERATIONAL IMPACTS	
	9.1 9.2 9.3	Reference Noise Levels Operational Noise Levels Unmitigated Operational Noise Level Compliance	76 77
10) со	NSTRUCTION IMPACTS	79
	10.1 10.2 10.3 10.4 10.5	Construction Noise Levels	
11		FERENCES	
12	CF	RTIFICATION	97

APPENDICES

APPENDIX 3.1: CITY OF CHINO MUNICIPAL CODE

APPENDIX 5.1: STUDY AREA PHOTOS

APPENDIX 5.2: NOISE LEVEL MEASUREMENT WORKSHEETS APPENDIX 7.1: OFF-SITE TRAFFIC NOISE LEVEL CONTOURS APPENDIX 9.1: OPERATIONAL NOISE LEVEL CALCULATIONS



LIST OF EXHIBITS

EXHIBIT ES-A: DAYTIME EXCESS FILL DIRT SITE OFF-SITE TRAFFIC NOISE IMPACTS	7			
EXHIBIT ES-B: OFF-PEAK EXCESS FILL DIRT SITE OFF-SITE TRAFFIC NOISE IMPACTS	8			
EXHIBIT ES-C: TEMPORARY CONSTRUCTION NOISE BARRIER LOCATIONS				
EXHIBIT 1-A: LOCATION MAP	17			
EXHIBIT 1-B: SITE PLAN	13			
EXHIBIT 2-A: TYPICAL NOISE LEVELS	15			
EXHIBIT 2-B: NOISE LEVEL INCREASE PERCEPTION	19			
EXHIBIT 2-C: TYPICAL LEVELS OF GROUND-BORNE VIBRATION	20			
EXHIBIT 5-A: NOISE MEASUREMENT LOCATIONS	35			
EXHIBIT 7-A: HAUL TRUCK HOURS	60			
EXHIBIT 7-B: EXCESS FILL DIRT SITE LOCATION MAP (1 OF 2)	61			
EXHIBIT 7-C: EXCESS FILL DIRT SITE LOCATION MAP (2 OF 2)				
EXHIBIT 7-D: DAYTIME EXCESS FILL DIRT SITE OFF-SITE TRAFFIC NOISE IMPACTS	67			
EXHIBIT 7-E: OFF-PEAK EXCESS FILL DIRT SITE OFF-SITE TRAFFIC NOISE IMPACTS	68			
EXHIBIT 8-A: RECEIVER LOCATIONS	7 1			
EXHIBIT 9-A: OPERATIONAL NOISE SOURCE AND RECEIVER LOCATIONS	75			
EXHIBIT 10-A: PROJECT SITE CONSTRUCTION ACTIVITY AND RECEIVER LOCATIONS	81			
EXHIBIT 10-B: EXCESS DIRT FILL SITE CONSTRUCTION ACTIVITY AND RECEIVER LOCATIONS	82			
<u>LIST OF TABLES</u>	S-B: OFF-PEAK EXCESS FILL DIRT SITE OFF-SITE TRAFFIC NOISE IMPACTS.			
TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS	е			
TABLE 3-1: OPERATIONAL NOISE STANDARDS	24			
TABLE 4-1: SIGNIFICANCE CRITERIA SUMMARY	29			
TABLE 5-1: 24-HOUR AMBIENT NOISE LEVEL MEASUREMENTS				
TABLE 6-1: OFF-SITE ROADWAY PARAMETERS				
<u>.</u>				
·				
TABLE 7-10: EXISTING WITHOUT PROJECT CONDITIONS NOISE CONTOURS	63			



TABLE 7-11: EXISTING WITH DAYTIME IMPORT/EXPORT HAUL TRUCK TRIP NOISE CONTOURS	64
TABLE 7-12: DAYTIME IMPORT/EXPORT OFF-SITE TRUCK TRIP-RELATED TRAFFIC NOISE IMPACTS	5 64
TABLE 7-13: EXISTING WITH OFF-PEAK IMPORT/EXPORT HAUL TRUCK TRIP NOISE CONTOURS	66
TABLE 7-14: OFF-PEAK IMPORT/EXPORT OFF-SITE TRUCK TRIP-RELATED TRAFFIC NOISE IMPACT	S 66
TABLE 9-1: REFERENCE NOISE LEVEL MEASUREMENTS	74
TABLE 9-2: UNMITIGATED PROJECT OPERATIONAL NOISE LEVELS	77
TABLE 9-3: UNMITIGATED OPERATIONAL NOISE LEVEL COMPLIANCE	78
TABLE 10-1: CONSTRUCTION REFERENCE NOISE LEVELS	80
TABLE 10-2: SOIL IMPORT/EXPORT ACTIVITY NOISE LEVELS (DAYTIME & NIGHTTIME)	84
TABLE 10-3: GRADING ACTIVITY NOISE LEVELS	85
TABLE 10-4: BUILDING CONSTRUCTION ACTIVITY NOISE LEVELS	86
TABLE 10-5: PAVING ACTIVITY NOISE LEVELS	87
TABLE 10-6: ARCHITECTURAL COATING ACTIVITY NOISE LEVELS	88
TABLE 10-7: UNMITIGATED CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY	89
TABLE 10-8: CONSTRUCTION EQUIPMENT NOISE LEVEL COMPLIANCE (DBA LEQ)	91
TABLE 10-9: UNMITIGATED CONSTRUCTION EQUIPMENT VIBRATION LEVELS	93

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

FHWA Federal Highway Administration
FTA Federal Transit Administration

INCE Institute of Noise Control Engineering

 $\begin{array}{lll} L_{eq} & & \text{Equivalent continuous (average) sound level} \\ L_{max} & & \text{Maximum level measured over the time interval} \\ L_{min} & & \text{Minimum level measured over the time interval} \end{array}$

mph Miles per hour

PPV Peak Particle Velocity
Project Majestic Chino Heritage

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 Majestic Chino Heritage development ("Project"). The Project site is located on the southeast corner of Mountain Avenue and Bickmore Avenue in the City of Chino. The total development is proposed to consist of up to 2,082,750 square feet of industrial uses. As a part of Project construction, five nearby soil borrow sites (or "Excess Fill Dirt Sites") have been identified to provide the soil export to be used as the import required for the Project site, and as such, construction activity associated with these sites has included in this analysis.

This study has been prepared consistent with applicable City of Chino noise standards, and significance criteria based on guidance provided by Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (1) In addition, since nearby sensitive receiver locations are located in the adjacent City of Chino Hills and City of Eastvale, applicable noise level standards of each jurisdiction are used in this analysis to evaluate potential impacts. Further, additional receiver locations are identified at open space locations in the Project study area for information purposes only; the Project's Biology report will analyze the significance of any potential noise impacts to sensitive wildlife species.

OFF-SITE PROJECT 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 traffic noise increases on the surrounding off-site areas, the changes in traffic noise levels on 34 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 *Majestic Chino Heritage Traffic Impact Analysis*. (2) To assess the off-site noise level impacts associated with the proposed Project, noise contour boundaries were developed for Existing, Opening Year 2022, and Horizon Year 2040 traffic conditions. The analysis shows that the unmitigated Project-related traffic noise level increases under all traffic scenarios will be *less than significant*.

SOIL IMPORT/EXPORT HAUL TRUCK OFF-SITE TRAFFIC NOISE ANALYSIS

Traffic generated by the soil import/export truck haul activity associated with construction of the proposed Project will influence the traffic noise levels in surrounding off-site areas under Existing conditions. To quantify the traffic noise increases on the surrounding off-site areas during Project construction, the changes in traffic noise levels on eight 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 *Majestic Chino Heritage Traffic Impact Analysis*. (2) To assess the off-site noise level impacts associated with the soil import/export haul truck trips, noise contour boundaries were developed for Existing traffic conditions.



The analysis shows that the unmitigated Project-related traffic noise level increases will be *potentially significant* at existing and future noise-sensitive land uses, if built and occupied at the time of soil import/export haul truck activity to and from the Excess Fill Dirt Sites, adjacent to the following roadway segments, as shown on Exhibits ES-A and ES-B, if haul truck activity occurs within the proposed daytime (7:00 a.m. – 3:00 p.m.) or off-peak (6:00 p.m. – 2:00 a.m.) hour conditions:

DAYTIME HAUL TRUCK OFF-SITE TRAFFIC NOISE IMPACTS

- Pine Av. west of W. Preserve Loop (Excess Fill Dirt Site #5);
- Chino Corona Rd. south of Pine Av. (Excess Fill Dirt Sites #3 & #4);
- Chino Corona Rd. east of Cucamonga Av. (Excess Fill Dirt Site #4);
- Hellman Av. south of Pine Av. (Excess Fill Dirt Site #5).

OFF-PEAK HAUL TRUCK OFF-SITE TRAFFIC NOISE IMPACTS

- Pine Av. east of Euclid Av. (Excess Fill Dirt Sites #2 to #5);
- Pine Av. west of Chino Corona Rd. (Excess Fill Dirt Sites #2 to #5);
- Pine Av. west of W. Preserve Loop (Excess Fill Dirt Site #5);
- Pine Av. west of E. Preserve Loop (Excess Fill Dirt Site #5);
- Pine Av. west of Hellman Av. (Excess Fill Dirt Site #5);
- Chino Corona Rd. south of Pine Av. (Excess Fill Dirt Sites #3 & #4);
- Chino Corona Rd. east of Cucamonga Av. (Excess Fill Dirt Site #4);
- Hellman Av. south of Pine Av. (Excess Fill Dirt Site #5).

PROJECT OPERATIONAL NOISE ANALYSIS

Using reference noise levels to represent the expected noise sources from the Majestic Chino Heritage site, this analysis estimates the Project-related stationary-source noise levels at nearby sensitive receiver locations. The normal activities associated with the proposed Majestic Chino Heritage are anticipated to include roof-top air conditioning units, idling trucks, delivery truck activities, backup alarms, as well as loading and unloading of dry goods, and parking lot vehicle movements. For this analysis, the closest noise-sensitive receiver locations to the Project site are located greater than 2,000 feet west of the Project site in the City of Chino Hills. An additional noise-sensitive receiver location is identified east of the Project site, at over 4,000 feet from the Project site, in the City of Chino. The operational noise analysis shows that the Project-related stationary-source noise levels at the nearby sensitive receiver locations will not exceed the City of Chino and City of Chino Hills exterior noise level standards. Therefore, the operational noise level impacts associated with the proposed Project activities, such as the roof-top air conditioning units, idling trucks, delivery truck activities, backup alarms, as well as loading and unloading of dry goods, and parking lot vehicle movements, are considered *less than significant*.



PROJECT OPERATIONAL VIBRATION ANALYSIS

The operation of the Project site will include heavy trucks moving on site to and from the loading dock areas. Truck vibration levels are dependent on vehicle characteristics, load, speed, and pavement conditions. Typical vibration levels for the Majestic Chino Heritage heavy truck activity at normal traffic speeds will approach 0.004 in/sec peak-particle-velocity (PPV) and 0.003 in/sec root-mean-square (RMS) velocity at 25 feet based on the Federal Transit Administration (FTA) *Transit Noise Impact and Vibration Assessment.* (3) Trucks transiting on site will be travelling at very low speeds so it is expected that delivery truck vibration impacts at nearby homes will not exceed the City of Chino 0.05 in/sec RMS vibration level standard, the City of Chino Hills 0.2 in/sec PPV standard, and the City of Eastvale 0.0787 in/sec PPV, and therefore, will be *less than significant*.

PROJECT SITE CONSTRUCTION NOISE ANALYSIS

Construction-related noise impacts are expected to create temporary and intermittent high-level noise conditions at receivers surrounding the Project site. Using sample reference noise levels to represent the planned construction activities of the Majestic Chino Heritage site, this analysis estimates the Project-related construction noise levels at nearby sensitive receiver locations. The analysis shows that the Project-related short-term construction noise levels, including those generated by both daytime and nighttime concrete pouring activity, are expected to approach 38.0 dBA L_{eq} and will not exceed the 65 dBA L_{eq} City of Chino construction noise level threshold at the nearby sensitive receiver locations. Therefore, based on the results of this analysis, all nearby sensitive receiver locations will experience *less than significant* impacts due to Project site construction noise levels.

SOIL IMPORT/EXPORT CONSTRUCTION NOISE ANALYSIS

Using sample reference noise levels to represent the planned construction activities at the Excess Fill Dirt Sites, this analysis estimates the construction noise levels at nearby sensitive receiver locations to each site. The short-term construction noise levels are expected to range from 30.0 to 67.5 dBA L_{eq} and will exceed the 65 dBA L_{eq} City of Chino construction noise level threshold at one of the sensitive receiver locations, R10, near Excess Fill Dirt Site #4. Therefore, based on the results of this analysis, if sensitive receiver location R10 represents built and occupied residential use it will experience *potentially significant* impacts due to construction noise levels generated by activities at Excess Fill Dirt Site #4. As such, a construction noise mitigation plan shall be required, as outlined below, if Excess Fill Dirt Site #4 is used for soil import/export activities, and if R10 represents built and occupied residential use at the time of the soil import/export activities.

All other receiver locations will experience *less than significant* noise impacts due to construction activities at the Excess Fill Dirt Sites.



SOIL IMPORT/EXPORT CONSTRUCTION NOISE MITIGATION MEASURES

A construction noise mitigation plan shall be prepared outlining the noise reduction measures to be implemented during construction activities at Excess Fill Dirt Site #4 if used for soil import/export, and if R10 represents built and occupied residential use at the time of the soil import/export activities. The construction noise mitigation plan shall indicate the mitigation measure(s) to be implemented to reduce construction noise levels at adjacent sensitive residential receiver locations to satisfy the City of Chino 65 dBA Leq construction noise level limit. The following noise reduction measures represent individual examples of mitigation measures which, if implemented, would be capable of reducing construction noise levels at R10. A minimum of one of the following, or equivalent, measures shall be required to be implemented as a part of the construction noise mitigation plan:

- Install minimum 8-foot high temporary construction noise barriers at the construction activity boundaries adjacent to sensitive receiver R10, as shown on Exhibit ES-C, if R10 represents built and occupied noise-sensitive residential uses at the time of construction. The noise control barriers must have a solid face from top to bottom and must block the line-of-sight to the noise source. The noise control barriers must meet the minimum height and be constructed as follows:
 - The temporary noise barriers shall provide a minimum transmission loss of 20 dBA (Federal Highway Administration, Noise Barrier Design Handbook). The noise barrier shall be constructed using an acoustical blanket (e.g. vinyl acoustic curtains or quilted blankets) attached to the construction site perimeter fence or equivalent temporary fence posts;
 - The noise barrier must be maintained, and any damage promptly repaired. Gaps, holes, or weaknesses in the barrier or openings between the barrier and the ground shall be promptly repaired;
 - The noise control barrier and associated elements shall be completely removed, and the site appropriately restored upon the conclusion of the construction activity; or
- Install sound dampening mats or blankets to the engine compartments of heavy mobile equipment (e.g., dozers, graders, scrapers) capable of a minimum 5 dBA noise reduction (FHWA, Construction Noise Special Report). (4) The dampening materials must be capable of the minimum 5 dBA noise reduction and can be made of commercially-available sound dampening materials, including but not limited to polyurethane foam and vinyl sheeting (University of Massachusetts Lowell The Use of Noise Dampening Mats to Reduce Heavy-Equipment Noise). (5)
 - The sound dampening mats or blankets must be installed prior to the use of heavy mobile construction equipment within the Project site;
 - The sound dampening mats or blankets must remain installed for the duration of the use of the equipment during Project construction; or
- Prohibit the use of large construction equipment (greater than 80,000 pounds) within 170 feet of sensitive receiver R10, if R10 represents built and occupied noise-sensitive residential uses at the time of construction. Instead, small rubber-tired or alternative equipment shall be used within this buffer area during construction to reduce noise impacts.



PROJECT & SOIL IMPORT/EXPORT CONSTRUCTION VIBRATION ANALYSIS

The construction vibration analysis is based on the shortest distance to either Project site construction or Excess Fill Dirt Site soil import/export activities. Based on the analysis, construction vibration velocity levels are expected to approach 0.012 in/sec PPV, and 0.009 in/sec RMS. Based on the results of the analysis, the Project construction vibration levels will remain below the City of Chino 0.05 in/sec RMS vibration level standard, the City of Chino Hills 0.2 in/sec PPV standard, and the City of Eastvale 0.0787 in/sec PPV standard at the nearby sensitive receiver locations.

Further, the Project-related construction vibration levels do not represent levels capable of causing building damage to nearby residential homes. The FTA identifies construction vibration levels capable of building damage ranging from 0.12 to 0.5 in/sec PPV. (3) The peak Project-construction vibration levels approaching 0.012 in/sec PPV will remain below the FTA vibration levels for building damage at the residential homes near the Project site. Moreover, the impacts at the site of the closest sensitive receivers are unlikely to be sustained during the entire construction period, but will occur rather only during the times that heavy construction equipment is operating adjacent to the Project site perimeter.

SUMMARY OF CEQA SIGNIFICANCE FINDINGS

The results of this Majestic Chino Heritage Noise Impact Analysis are summarized below based on the significance criteria in Section 4 of this report consistent with Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (1). Table ES-1 shows the findings of significance for each potential noise and vibration impact under CEQA.



TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Analysis	Report	Significano	Findings Mitigated -
Analysis	Section	Unmitigated	Mitigated
Off-Site Traffic Noise Levels (Long-Term Operation)	7	Less Than Significant	-
Off-Site Traffic Noise Levels (Short-Term Dirt Haul Trips)	/	Potentially Significant	Significant
Operational Noise Levels (Stationary Source)	0	Less Than Significant	-
Operational Vibration Levels	9	Less Than Significant	-
Project Construction Noise Levels (Stationary Source)		Less Than Significant	-
Soil Export Construction Noise Levels (Stationary-Source)	10	Potentially Significant	Less Than Significant
Construction Vibration Levels (Project & Soil Export)		Less Than Significant	-



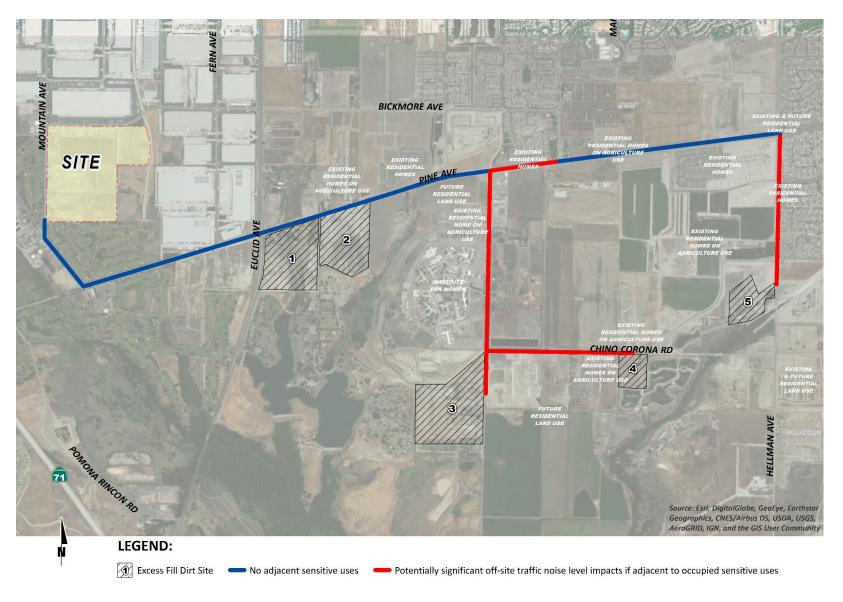


EXHIBIT ES-A: DAYTIME EXCESS FILL DIRT SITE OFF-SITE TRAFFIC NOISE IMPACTS



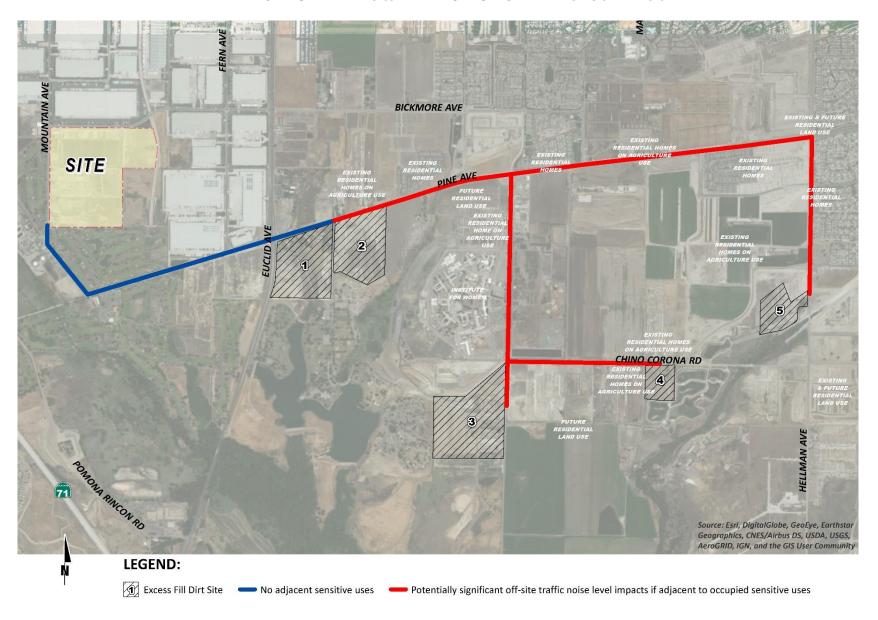


EXHIBIT ES-B: OFF-PEAK EXCESS FILL DIRT SITE OFF-SITE TRAFFIC NOISE IMPACTS





EXHIBIT ES-C: TEMPORARY CONSTRUCTION NOISE BARRIER LOCATIONS



1 Excess Fill Dirt Site Construction Activity = 8-foot high temporary noise barriers required to reduce construction noise levels at occupied sensitive receiver locations



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1 INTRODUCTION

This noise analysis has been completed to determine the noise impacts associated with the development of the proposed Majestic Chino Heritage ("Project"). This noise study briefly describes the proposed Project, provides information regarding noise fundamentals, describes the local regulatory setting, provides the study methods and procedures for transportation noise analysis, and evaluates the future exterior noise environment. In addition, this study includes an analysis of the potential Project-related long-term operational noise and short-term construction noise and vibration impacts.

1.1 SITE LOCATION

The Project site is located on the southeast corner of Mountain Avenue and Bickmore Avenue in the City of Chino, as shown on Exhibit 1-A. The closest noise-sensitive receiver locations to the Project site are located greater than 2,000 feet west of the Project site in the City of Chino Hills. Additional noise-sensitive receiver locations are identified east of the Project site, at over 4,000 feet from the Project site, in the City of Chino and City of Eastvale.

1.2 PROJECT DESCRIPTION

Exhibit 1-B shows the preliminary Project site plan. As indicated on Exhibit 1-B, the total development is proposed to consist of up to 2,082,750 square feet of industrial uses. Consistent with the *Traffic Impact Analysis*, the following land uses are assumed in this report:

- Building 1: 1,168,710 square feet of High-Cube Fulfillment Center Warehouse use
- Building 2: 814,040 square feet of High-Cube Without Cold Storage use
- Remainder of Building 2: 100,000 square feet of High-Cube with Cold Storage use

Total of 2,082,750 square feet

At the time this noise analysis was prepared, the future tenants of the proposed Project were unknown. The on-site Project-related noise sources are expected to include: roof-top air conditioning units, idling trucks, delivery truck activities, backup alarms, as well as loading and unloading of dry goods, and parking lot vehicle movements. This noise analysis is intended to describe noise level impacts associated with the expected typical, 24-hour seven days per week operational activities at the Project site.

Per the *Majestic Chino Heritage Traffic Impact Analysis* prepared by Urban Crossroads, Inc. the Project is expected to generate a net total of approximately 4,440 trip-ends per day (actual vehicles) and includes 824 truck trip-ends per day from the proposed buildings within the Project site. (6) This noise study relies on the actual Project trips (as opposed to the passenger car equivalents) to accurately account for the effect of individual truck trips on the study area roadway network.

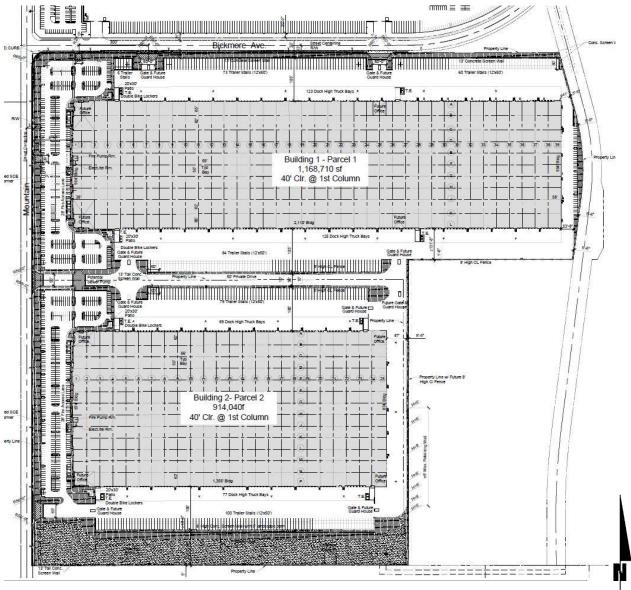




EXHIBIT 1-A: LOCATION MAP



EXHIBIT 1-B: SITE PLAN





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2 FUNDAMENTALS

Noise has been simply defined as "unwanted sound." Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm or when it has adverse effects on health. Noise is measured on a logarithmic scale of sound pressure level known as a decibel (dB). A-weighted decibels (dBA) approximate the subjective response of the human ear to broad frequency noise source by discriminating against very low and very high frequencies of the audible spectrum. They are adjusted to reflect only those frequencies which are audible to the human ear. Exhibit 2-A presents a summary of the typical noise levels and their subjective loudness and effects that are described in more detail below.

EXHIBIT 2-A: TYPICAL NOISE LEVELS

COMMON OUTDOOR ACTIVITIES	COMMON INDOOR ACTIVITIES	A - WEIGHTED SOUND LEVEL dBA	SUBJECTIVE LOUDNESS	EFFECTS OF NOISE
THRESHOLD OF PAIN		140		
NEAR JET ENGINE		130	INTOLERABLE OR DEAFENING	
		120		HEARING LOSS
JET FLY-OVER AT 300m (1000 ft)	ROCK BAND	110		
LOUD AUTO HORN		100		
GAS LAWN MOWER AT 1m (3 ft)		90	VERY NOISY	
DIESEL TRUCK AT 15m (50 ft), at 80 km/hr (50 mph)	FOOD BLENDER AT 1m (3 ft)	80	VERT HOLST	
NOISY URBAN AREA, DAYTIME	VACUUM CLEANER AT 3m (10 ft)	70	LOUD	SPEECH INTERFERENCE
HEAVY TRAFFIC AT 90m (300 ft)	NORMAL SPEECH AT 1m (3 ft)	60	1000	HATERI ERENCI
QUIET URBAN DAYTIME	LARGE BUSINESS OFFICE	50	MODERATE	CLEED
QUIET URBAN NIGHTTIME	THEATER, LARGE CONFERENCE ROOM (BACKGROUND)	40		SLEEP DISTURBANCE
QUIET SUBURBAN NIGHTTIME	LIBRARY	30		
QUIET RURAL NIGHTTIME	BEDROOM AT NIGHT, CONCERT HALL (BACKGROUND)	20	FAINT	
	BROADCAST/RECORDING STUDIO	10	VERY FAINT	NO EFFECT
LOWEST THRESHOLD OF HUMAN HEARING	LOWEST THRESHOLD OF HUMAN HEARING	0	VERT FAINT	

Source: Environmental Protection Agency Office of Noise Abatement and Control, Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety (EPA/ONAC 550/9-74-004) March 1974.

2.1 RANGE OF NOISE

Since the range of intensities that the human ear can detect is so large, the scale frequently used to measure intensity is a scale based on multiples of 10, the logarithmic scale. The scale for measuring intensity is the decibel scale. Each interval of 10 decibels indicates a sound energy ten times greater than before, which is perceived by the human ear as being roughly twice as loud. (7) The most common sounds vary between 40 dBA (very quiet) to 100 dBA (very loud). Normal conversation at three feet is roughly at 60 dBA, while loud jet engine noises equate to 110 dBA



at approximately 100 feet, which can cause serious discomfort. (8) Another important aspect of noise is the duration of the sound and the way it is described and distributed in time.

2.2 Noise Descriptors

Environmental noise descriptors are generally based on averages, rather than instantaneous, noise levels. The most commonly used figure is the equivalent level (L_{eq}). Equivalent sound levels are not measured directly but are calculated from sound pressure levels typically measured in Aweighted decibels (dBA). 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 and is commonly used to describe the "average" noise levels within the environment.

To describe the time-varying character of environmental noise, the statistical or percentile noise descriptors L_{50} , L_{25} , L_8 and L_2 , are commonly used. The percentile noise descriptors are the noise levels equaled or exceeded during 50 percent, 25 percent, 8 percent and 2 percent of a stated time. Sound levels associated with the L_2 and L_8 typically describe transient or short-term events, while levels associated with the L_{50} describe the steady state (or median) noise conditions. The City of Chino relies on the percentile noise levels to describe the stationary source noise level limits. While the L_{50} describes the noise levels occurring 50 percent of the time, the L_{eq} accounts for the total energy (average) observed for the entire hour.

Peak hour or average noise levels, while useful, do not completely describe a given noise environment. Noise levels lower than peak hour may be disturbing if they occur during times when quiet is most desirable, namely evening and nighttime (sleeping) hours. To account for this, the Community Noise Equivalent Level (CNEL), representing a composite 24-hour noise level is utilized. The CNEL is the weighted average of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The time of day corrections require the addition of 5 decibels to dBA L_{eq} sound levels in the evening from 7:00 p.m. to 10:00 p.m., and the addition of 10 decibels to dBA L_{eq} sound levels at night between 10:00 p.m. and 7:00 a.m. These additions are made to account for the noise sensitive time periods during the evening and night hours when sound appears louder. CNEL does not represent the actual sound level heard at any time, but rather represents the total sound exposure. The City of Chino relies on the 24-hour CNEL level to assess land use compatibility with transportation related noise sources.

2.3 SOUND PROPAGATION

When sound propagates over a distance, it changes in level and frequency content. The way noise reduces with distance depends on the following factors.

2.3.1 GEOMETRIC SPREADING

Sound from a localized source (i.e., a stationary point source) propagates uniformly outward in a spherical pattern. The sound level attenuates (or decreases) at a rate of 6 dB for each doubling of distance from a point source. Highways consist of several localized noise sources on a defined path and hence can be treated as a line source, which approximates the effect of several point sources. Noise from a line source propagates outward in a cylindrical pattern, often referred to



as cylindrical spreading. Sound levels attenuate at a rate of 3 dB for each doubling of distance from a line source. (7)

2.3.2 GROUND ABSORPTION

The propagation path of noise from a highway to a receptor is usually very close to the ground. Noise attenuation from ground absorption and reflective wave canceling adds to the attenuation associated with geometric spreading. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is usually sufficiently accurate for distances of less than 200 ft. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receptor, such as a parking lot or body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receptor such as soft dirt, grass, or scattered bushes and trees), an excess ground attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dB per doubling of distance from a line source. (9)

2.3.3 ATMOSPHERIC EFFECTS

Receptors located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels. Sound levels can be increased at large distances (e.g., more than 500 feet) due to atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also have significant effects. (7)

2.3.4 SHIELDING

A large object or barrier in the path between a noise source and a receptor can substantially attenuate noise levels at the receptor. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Shielding by trees and other such vegetation typically only has an "out of sight, out of mind" effect. That is, the perception of noise impact tends to decrease when vegetation blocks the line-of-sight to nearby resident. However, for vegetation to provide a substantial, or even noticeable, noise reduction, the vegetation area must be at least 15 feet in height, 100 feet wide and dense enough to completely obstruct the line-of sight between the source and the receiver. This size of vegetation may provide up to 5 dBA of noise reduction. The FHWA does not consider the planting of vegetation to be a noise abatement measure. (9)

2.4 Noise Control

Noise control is the process of obtaining an acceptable noise environment for an observation point or receptor by controlling the noise source, transmission path, receptor, or all three. This concept is known as the source-path-receptor concept. In general, noise control measures can be applied to these three elements.



2.5 Noise Barrier Attenuation

Effective noise barriers can reduce noise levels by 10 to 15 dBA, cutting the loudness of traffic noise in half. A noise barrier is most effective when placed close to the noise source or receptor. Noise barriers, however, do have limitations. For a noise barrier to work, it must be high enough and long enough to block the path of the noise source. (9)

2.6 LAND USE COMPATIBILITY WITH NOISE

Some land uses are more tolerant of noise than others. For example, schools, hospitals, churches, and residences are more sensitive to noise intrusion than are commercial or industrial developments and related activities. As ambient noise levels affect the perceived amenity or livability of a development, so too can the mismanagement of noise impacts impair the economic health and growth potential of a community by reducing the area's desirability as a place to live, shop and work. For this reason, land use compatibility with the noise environment is an important consideration in the planning and design process. The FHWA encourages State and Local government to regulate land development in such a way that noise-sensitive land uses are either prohibited from being located adjacent to a highway, or that the developments are planned, designed, and constructed in such a way that noise impacts are minimized. (10)

2.7 COMMUNITY RESPONSE TO NOISE

Community responses to noise may range from registering a complaint by telephone or letter, to initiating court action, depending upon everyone's susceptibility to noise and personal attitudes about noise. Several factors are related to the level of community annoyance including:

- Fear associated with noise producing activities;
- Socio-economic status and educational level;
- Perception that those affected are being unfairly treated;
- Attitudes regarding the usefulness of the noise-producing activity;
- Belief that the noise source can be controlled.

Approximately ten percent of the population has a very low tolerance for noise and will object to any noise not of their making. Consequently, even in the quietest environment, some complaints will occur. Another twenty-five percent of the population will not complain even in very severe noise environments. Thus, a variety of reactions can be expected from people exposed to any given noise environment. (11) Surveys have shown that about ten percent of the people exposed to traffic noise of 60 dBA will report being highly annoyed with the noise, and each increase of one dBA is associated with approximately two percent more people being highly annoyed. When traffic noise exceeds 60 dBA or aircraft noise exceeds 55 dBA, people may begin to complain. (11) Despite this variability in behavior on an individual level, the population can be expected to exhibit the following responses to changes in noise levels as shown on Exhibit 2-B. An increase or decrease of 1 dBA cannot be perceived except in carefully controlled laboratory experiments, a change of 3 dBA are considered *barely perceptible*, and changes of 5 dBA are considered *readily perceptible*. (9)



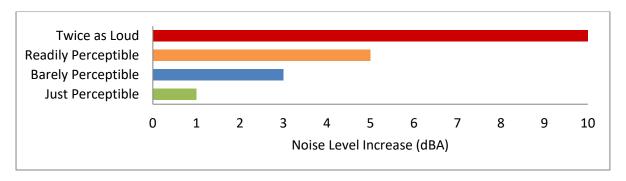


EXHIBIT 2-B: NOISE LEVEL INCREASE PERCEPTION

2.8 VIBRATION

Per the Federal Transit Administration (FTA) *Transit Noise Impact and Vibration Assessment*, vibration is the periodic oscillation of a medium or object. The rumbling sound caused by the vibration of room surfaces is called structure-borne noise. Sources of ground-borne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, such as factory machinery, or transient, such as explosions. As is the case with airborne sound, ground-borne vibrations may be described by amplitude and frequency.

There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts to buildings but is not always suitable for evaluating human response (annoyance) because it takes some time for the human body to respond to vibration signals. Instead, the human body responds to average vibration amplitude often described as the root mean square (RMS). The RMS amplitude is defined as the average of the squared amplitude of the signal and is most frequently used to describe the effect of vibration on the human body. Decibel notation (VdB) is commonly used to measure RMS. Decibel notation (VdB) serves to reduce the range of numbers used to describe human response to vibration. Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receivers for vibration include structures (especially older masonry structures), people (especially residents, the elderly, and sick), and vibration-sensitive equipment.

The background vibration-velocity level in residential areas is generally 50 VdB. Ground-borne vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels. Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground-borne vibration is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration-velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings. Exhibit 2-C illustrates common vibration sources and the human and structural response to ground-borne vibration.

Velocity Typical Sources Level* (50 ft from source) Human/Structural Response 100 Threshold, minor cosmetic damage Blasting from construction projects fragile buildings Bulldozers and other heavy tracked construction equipment Difficulty with tasks such as 90 reading a VDT screen Commuter rail, upper range 80 Residential annoyance, infrequent Rapid transit, upper range events (e.g. commuter rail) Commuter rail, typical Residential annoyance, frequent Bus or truck over bump events (e.g. rapid transit) Rapid transit, typical Limit for vibration sensitive equipment. Approx. threshold for Bus or truck, typical human perception of vibration 60 Typical background vibration 50

EXHIBIT 2-C: TYPICAL LEVELS OF GROUND-BORNE VIBRATION

* RMS Vibration Velocity Level in VdB relative to 10-6 inches/second

Source: Federal Transit Administration (FTA) Transit Noise Impact and Vibration Assessment.



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. (12) 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 BUILDING CODE

The State of California's noise insulation standards are codified in the California Code of Regulations, Title 24, Building Standards Administrative Code, Part 2, and the California Building Code. These noise standards are applied to new construction in California for the purpose of controlling interior noise levels resulting from exterior noise sources. The regulations specify that acoustical studies must be prepared when noise-sensitive structures, such as residential buildings, schools, or hospitals, are developed near major transportation noise sources, and where such noise sources create an exterior noise level of 60 dBA CNEL or higher. Acoustical studies that accompany building plans for noise-sensitive land uses must demonstrate that the structure has been designed to limit interior noise in habitable rooms to acceptable noise levels. For new residential buildings, schools, and hospitals, the acceptable interior noise limit for new construction is 45 dBA CNEL.

3.3 CITY OF CHINO GENERAL PLAN NOISE ELEMENT

The City of Chino has adopted a Noise Element of the General Plan (13) to minimize problems from intrusive sound and to ensure that development does not expose people to unacceptable noise levels. The Noise Element specifies the maximum exterior and interior 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 designed to protect, create, and maintain an environment free from noise that may jeopardize the health or



welfare of sensitive receivers, or degrade quality of life. To protect Chino residents from unacceptable noise levels, the Noise Element contains the following three objectives:

- N-1.1. Ensure appropriate exterior and interior noise levels for existing and new land uses;
- N-1.2 Reduce noise impacts from transportation;
- N-1.3 Control sources of construction noise.

The noise policies specified in the City of Chino Noise Element provide the guidelines necessary to satisfy these objectives. To ensure the appropriate exterior and interior noise levels for existing and new land uses (N-1.1), Table N-3 of the City of Chino General Plan Noise Element, identifies a maximum allowable exterior noise level of 65 dBA CNEL and an interior noise level limit of 45 dBA CNEL for new residential developments impacted by transportation noise sources such as arterial roads, freeways, airports, railroads, and warehousing uses.

The City of Chino General Plan Noise Element does not identify criteria to assess the impacts associated with exterior off-site transportation-related noise impacts at non-noise-sensitive uses, such as industrial, and therefore, the Office of Planning and Research (OPR) land use/noise compatibility criteria, found in Figure 2 of the *General Plan Guidelines*, *Appendix C: Noise Element Guidelines* criteria can be used to assess potential impacts at adjacent land uses. The *normally acceptable* exterior noise level for non-noise-sensitive land use, such as industrial use, is 70 dBA CNEL. Noise levels greater than 70 dBA CNEL are considered *conditionally acceptable* per the *Land Use Compatibility Criteria*. (14)

ADJACENT JURISDICTIONS

The City of Chino residential exterior noise level standard for transportation noise sources of 65 dBA CNEL is generally consistent with the adjacent jurisdictional guidelines of the City of Chino Hills, City of Ontario, and City of Eastvale, as indicated in Table 7-1 of the City of Chino Hills General Plan, The Ontario Plan Safety Section on Noise Hazards (Table LU-7), and Table N-3 of the City of Eastvale General Plan Noise Element, respectively. As such, this noise study relies on the 65 dBA CNEL City of Chino residential exterior noise level standard for transportation noise sources when evaluating Project-related off-site traffic noise level increases at noise-sensitive land uses. (15) (16) (17) In addition, the guidelines of the City of Chino Hills, City of Ontario, and City of Eastvale, as indicated in their respective General Plans, also generally identify 70 dBA CNEL as normally acceptable for non-noise-sensitive uses, such as industrial.

3.4 OPERATIONAL NOISE STANDARDS

To analyze noise impacts originating from a designated fixed location or private property such as the Majestic Chino Heritage, operational noise that may include roof-top air conditioning units, idling trucks, delivery truck activities, backup alarms, as well as loading and unloading of dry goods, and parking lot vehicle movements are typically evaluated against standards established under a City's Municipal Code. Since nearby sensitive receiver locations are located in the adjacent City of Chino Hills, applicable noise level standards of each jurisdiction are used in this analysis to evaluate potential impacts.



3.4.1 CITY OF CHINO MUNICIPAL CODE

The City of Chino Noise Ordinance included in the Municipal Code (Chapter 9.40) establishes the maximum permissible noise level that may intrude into a neighbor's property. The Noise Ordinance (Section 9.40.040) establishes the exterior noise level criteria for residential properties affected by stationary noise sources. While the Municipal Code identifies noise zones for commercial (Zone II), manufacturing and industrial properties (Zone III), it only establishes exterior noise standards for residential property (Section 9.40.030). For residential properties (Noise Zone 1), the exterior noise level shall not exceed 55 dBA during daytime hours (7:00 a.m. to 10:00 p.m.) and shall not exceed 50 dBA during the nighttime hours (10:00 p.m. to 7:00 a.m.) for more than 30 minutes in any hour. (18) These standards shall apply for a cumulative period of 30 minutes in any hour, as well as the standard plus 5 dBA cannot be exceeded for a cumulative period of more than 15 minutes in any hour, or the standard plus 10 dBA for a cumulative period of more than 5 minutes in any hour, or the standard plus 15 dBA for a cumulative period of more than 1 minute in any hour, or the standard plus 20 dBA for any period of time. The City of Chino Municipal Code operational noise level standards are shown on Table 3-1 and included in Appendix 3.1.

3.4.2 CITY OF CHINO HILLS MUNICIPAL CODE

The City of Chino Hills Municipal Code, Chapter 16 *Performance Standards*, Section 16.48.020(B) *Noise Standards*, identifies the City's standards as the "Zone C" noise standard for that receiving land use specified in Table N-1 of the General Plan Noise Element. (19) Consistent with Table 7-1 of the General Plan Noise Element, single-family residential land use shall not exceed a transportation-related exterior noise level of 65 dBA CNEL or an interior noise level of 45 dBA CNEL.

To assess the stationary noise sources associated with the Project, Development Code, Section 16.48.020(B)(2), identifies percentile noise level standards by land use category. The percentile noise levels represent the noise level standard (as show on Table 7-1 of the General Plan Noise Element) for that receiving land use for a cumulative period of more than 30 minutes (L_{50}) in any hour. For a cumulative period of more than fifteen minutes (L_{25}) in any hour, the standard plus 5 dBA may not be exceeded. For a cumulative period of more than five minutes (L_{8}) in any hour, the standard plus 10 dBA may not be exceeded. For any one minute period (L_{2}) in any hour, the standard plus 15 dBA may not be exceeded, and the noise standard plus 20 dBA (L_{max}) may not be exceeded for any period of time. (19) Table 3-1 shows the Chino Hills exterior noise level limits for residential uses.



TABLE 3-1: OPERATIONAL NOISE STANDARDS

			Exterior Noise Level Standards (dBA) ¹			3A) ¹		
City	Land Use	Time Period	L ₅₀ (30 mins)	L ₂₅ (15 mins)	L ₈ (5 mins)	L ₂ (1 min)	L ₂ L _{max}	
Chino ²		Daytime	55	60	65	70	75	
Chino	Residential	Nighttime	50	55	60	65	70	
Chino Hills ³		Any Time	65	70	75	80	85	

 $^{^{1}}$ The percent noise level is the level exceeded "n" percent of the time during the measurement period. L₅₀ is the noise level exceeded 50% of the time.

3.5 CONSTRUCTION NOISE STANDARDS

The City of Chino has set restrictions to control noise impacts associated with construction activities throughout the City. Section 9.40.060(D) of the City's Noise Ordinance indicates that noise sources associated with construction, repair, remodeling, or grading of any real property, are exempt from the provisions of the noise ordinance, provided the construction activities take place between the hours of 7:00 a.m. and 8:00 p.m. Monday through Saturday, with no construction allowed on Sundays and Federal holidays (Section 15.44.030), and provided the noise levels exceeding 65 dBA when measured on residential property do not endanger the public health, welfare and safety. (20) The City can authorize construction activities to occur outside of the hours specified above.

Although construction noise may not pose an immediate a health risk or damage human hearing, it has the potential to adversely affect people's quality of life. Noise annoys, awakens, angers, and frustrates noise-sensitive individuals. It disrupts communication and affects performance capabilities. Noise is one of the biological stressors associated with everyday life. Thus, the numerous effects of noise combine to detract from the quality of people's lives and the environment. (21) In addition, acceptance of temporary construction noise varies with the individual. For this reason, and to present a conservative evaluation of construction noise effects in this report, the numerical noise standard of 65 dBA (with higher noise level allowances for short bursts of louder noise) established in the City of Chino Municipal Code, Section 9.40.060(D) *Special Provisions*, is used in this analysis to determine the significance of construction noise on noise-sensitive receivers.

The reference construction noise limit of 65 dBA L_{eq} provides an acceptable numerical threshold for determining the relative significance of Project construction noise levels at nearby residential receivers. Note that pursuant to the City of Chino Municipal Code, Section 9.40.060(D), the noise limit of 65 dBA is the noise standard for a cumulative period of more than thirty minutes in any hour (L_{50}). In addition, the Municipal Code allows for short bursts or periods of increased construction-related noise as follows:

70 dBA for a cumulative period of no more than fifteen minutes in any hour (L₂₅);



² Source: Section 9.40.040 of the City of Chino Municipal Code (Appendix 3.1).

³ Source: Section 16.48.020 of the City of Chino Hills Development Code and Table 7-1 of the City of Chino Hills Noise Element.

[&]quot;Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

- 75 dBA for a cumulative period of no more than five minutes in any hour (L₈);
- 80 dBA for a cumulative period of more than one minute in any hour (L₂);
- Noise levels greater than 85 dBA experienced at a sensitive receiver for any period (L_{max}).

For the purposes of this analysis, the 65 dBA L_{eq} threshold is used to represent a single numerical average threshold to assess the potential construction noise level impacts at nearby sensitive receivers. While the L_{50} describes the median noise levels occurring 50 percent of the time, the L_{eq} accounts for the total energy (average) observed for the entire hour during construction activities. In addition, the City of Chino Hills and Eastvale do not identify specific construction noise level thresholds, and as such, this analysis relies on the conservative City of Chino 65 dBA L_{eq} threshold.

Mobile construction equipment will operate throughout the Project site and will not remain stationary, and therefore, the stationary-source noise level limits of Section 9.40.040 of the City of Chino Municipal Code are not applied to Project construction noise levels. Moreover, since the City of Chino specifically identifies a 65 dBA exterior noise level limit for construction noise, the previously identified Municipal Code stationary-source noise level limits described in Section 3.4 for operational noise are not used in the evaluation of potential construction noise impacts.

3.6 VIBRATION STANDARDS

To analyze vibration impacts originating from the operation and construction of the Majestic Chino Heritage, vibration-generating activities are typically evaluated against standards established under a City's Municipal Code. The City of Chino and Chino Hills Municipal Code and the City of Eastvale General Plan vibration level standards are used in this analysis to assess potential impacts at nearby sensitive receiver locations within each jurisdiction, respectively.

The Project construction vibration levels are evaluated in this report base on the City of Chino 0.05 in/sec RMS vibration level standard, the City of Chino Hills 0.2 in/sec PPV standard, and the City of Eastvale 0.0787 in/sec PPV standard. (18) (19) (16)



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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. (1) 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 Chino 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 nearby public and private airports, if any, and the Project's land use compatibility.

4.1 CEQA GUIDELINES NOT FURTHER ANALYZED

Based on future Year 2030 conditions provided in the *Chino Airport Master Plan* and the *Airport Comprehensive Land Use Plan*, the Project site is located outside of the 55 to 60 dBA CNEL noise level contour boundary. (22) As such, exterior noise levels due to aircraft overflight activities would not exceed the exterior noise level standards of the City of Chino General Plan Noise Element, and Project interior noise levels would be reduced with standard building construction. Therefore, no impact related to the exposure of people residing or working in the Project area to excessive airport related noise levels is anticipated, and no further analysis is required under Guideline C.

4.2 SIGNIFICANCE CRITERIA SUMMARY

Noise impacts shall be considered significant if any of the following occur as a direct result of the proposed development. The significance criteria is shown on Table 4-1.

OFF-SITE TRAFFIC NOISE

When off-site traffic noise levels, without or with the Project, at existing and future noise-sensitive
land uses (e.g. residential, schools, churches, etc.) exceed the 65 dBA CNEL standard for noisesensitive uses identified in Table N-3 of the City of Chino General Plan Noise Element, and the
Project creates a community noise level increase of greater than 1.5 dBA CNEL (FICON). (23)



When off-site traffic noise levels, without or with the Project, at existing and future non-noise-sensitive land uses (e.g. industrial, etc.) exceed the OPR General Plan Guidelines, Appendix C:
 Noise Element Guidelines, normally acceptable 70 dBA CNEL noise level criteria and the Project creates a community noise level increase of greater than 1.5 dBA CNEL (FICON). (23)

OPERATIONAL NOISE

• If Project-related operational (stationary-source) noise levels exceed the exterior noise level standards for sensitive residential land uses in the City of Chino or City of Chino Hills, as previously shown on Table 3-1.

OPERATIONAL VIBRATION

- If long-term Project-generated operational-source vibration levels could exceed:
 - the vibration standard of 0.05 inch/sec RMS at noise-sensitive receiver locations in the City of Chino;
 - the vibration standard of 0.2 inch/sec PPV at noise-sensitive receiver locations in the City of Chino Hills;
 - the vibration standard of 0.0787 inch/sec PPV at noise-sensitive receiver locations in the City of Eastvale.

CONSTRUCTION NOISE

 If Project-related construction activities create noise levels during the approved hours at sensitive residential receiver locations which exceed the construction noise level limit of 65 dBA L_{eq} (City of Chino Municipal Code, Section 9.40.060(D)).

CONSTRUCTION VIBRATION

- If short-term Project-generated construction-source vibration levels could exceed:
 - the vibration standard of 0.05 inch/sec RMS at noise-sensitive receiver locations in the City of Chino;
 - the vibration standard of 0.2 inch/sec PPV at noise-sensitive receiver locations in the City of Chino Hills;
 - the vibration standard of 0.0787 inch/sec PPV at noise-sensitive receiver locations in the City of Eastvale.



TABLE 4-1: SIGNIFICANCE CRITERIA SUMMARY

Anabasia	Cit	Receiving	Condition(a)	Significa	nce Criteria	
Analysis	City	Land Use	Condition(s)	Daytime	Nighttime	
Off-Site	All	Noise- Sensitive ¹	If off-site traffic noise is > 65 dBA CNEL	≥ 1.5 dBA CNE	Project increase	
Traffic Noise	All	Non-Noise- Sensitive ²	If off-site traffic noise is > 70 dBA CNEL	≥ 1.5 dBA CNEL Project increase		
Operational ³	Multiple	Noise- Sensitive	Exterior Noise Level Limits	See Table 3-1		
	All	Residential	Noise Level Threshold ⁴	65 (BA L _{eq}	
Construction ^{4,5}	Chino		Vibration Level Threshold	0.05 in/sec RMS		
Construction	Chino Hills	Sensitive	Vibration Level Threshold	0.2 in/sec PPV		
	Eastvale		Vibration Level Threshold	0.0787 in/sec PPV		

¹ Based on City of Chino General Plan criteria and FICON guidance (1992).



² Based on the land use compatibility criteria found in the Office of Planning and Research General Plan Guidelines, Figure 2, and the General Plans of the City of Chino, Chino Hills, and Eastvale, and FICON guidance (1992).

³ Municipal Code exterior noise level limits.

⁴ Based on the conservative construction noise level threshold for residential uses identified in the City of Chino Municipal Code, Section 9.40.060(D).

⁵ Vibration thresholds based on the Municipal Codes of the City of Chino and Chino Hills and Eastvale General Plan.

[&]quot;Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.; "RMS" = root-mean-square; "PPV" = peak-particle-velocity

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5 EXISTING NOISE LEVEL MEASUREMENTS

To assess the existing noise level environment, 11 24-hour noise level measurements were taken at sensitive receiver locations in the Project study area. The receiver 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 Tuesday, April 2nd, 2019. 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. (24)

5.2 Noise Measurement Locations

The long-term noise level measurements were positioned as close to the nearest sensitive 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 any 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. (7) 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. (3)

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. 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 sensitive areas and are used to estimate the future noise level impacts. Collecting reference ambient noise level measurements at the nearby sensitive 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 (7:00 a.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) noise levels at each noise level measurement location. Additional median noise levels (L_{50}) are provided on Table 5-1 consistent with applicable Municipal Code exterior noise level standards. Appendix 5.2 provides a summary of the existing ambient noise levels described below:

- Location L1 represents the noise levels near a Big League Dreams and Fairfield Ranch Park, west of the Project site. The noise level measurements collected show an overall 24-hour exterior noise level of 57.8 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 53.9 dBA L_{eq} with an average nighttime noise level of 50.3 dBA L_{eq}.
- Location L2 represents the noise levels on Mountain Avenue, north of El Prado Road south of the Project site boundary. The noise level measurements collected show an overall 24-hour exterior noise level of 62.1 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 59.0 dBA L_{eq} with an average nighttime noise level of 54.4 dBA L_{eq}.
- Location L3 represents the noise levels on Pine Avenue, near Lizze Custom Processing, southeast
 of the Project site. The 24-hour CNEL indicates that the overall exterior noise level is 67.9 dBA
 CNEL. The energy (logarithmic) average daytime noise level was calculated at 62.6 dBA L_{eq} with
 an average nighttime noise level of 61.0 dBA L_{eq}.
- Location L4 represents the noise levels on Johnson Avenue, near Prado Park Equestrian Center, southeast of the Project site. The noise level measurements collected show an overall 24-hour exterior noise level of 58.3 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 53.9 dBA L_{eq} with an average nighttime noise level of 50.9 dBA L_{eq}.
- Location L5 represents the noise levels on Meadowhouse Avenue, near Meadow Square Apartment Homes, east of the Project site. The noise level measurements collected show an overall 24-hour exterior noise level of 65.5 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 60.5 dBA L_{eq} with an average nighttime noise level of 58.3 dBA L_{eq}.
- Location L6 represents the noise levels in Prado Regional Park near campground areas. The noise level measurements collected show an overall 24-hour exterior noise level of 56.3 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 53.8 dBA L_{eq} with an average nighttime noise level of 48.3 dBA L_{eq}.
- Location L7 represents the noise levels on Cucamonga Road, near Vermontes Mulch, southeast of the Project site. The noise level measurements collected show an overall 24-hour exterior noise level of 58.1 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 57.0 dBA L_{eq} with an average nighttime noise level of 48.9 dBA L_{eq}.
- Location L8 represents the noise levels on Chino Corona Road, near County Road, adjacent to existing rural residential homes. The noise level measurements collected show an overall 24-hour exterior noise level of 66.1 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 62.7 dBA Leq with an average nighttime noise level of 58.7 dBA Leq.



- Location L9 represents the noise levels on Hereford Road, near residential construction and a
 vacant area, east of the Project site. The 24-hour CNEL indicates that the overall exterior noise
 level is 61.8 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at
 60.2 dBA L_{eq} with an average nighttime noise level of 53.3 dBA L_{eq}.
- Location L10 represents the noise levels at Walters Street and Hellman Avenue, adjacent to
 existing residential homes. The noise level measurements collected show an overall 24-hour
 exterior noise level of 79.7 dBA CNEL. The energy (logarithmic) average daytime noise level was
 calculated at 75.4 dBA L_{eq} with an average nighttime noise level of 72.6 dBA L_{eq}.
- Location L11 represents the noise levels on Chandler Street, near a vacant area and existing residential neighborhood. The noise level measurements collected show an overall 24-hour exterior noise level of 65.4 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 61.9 dBA L_{eq} with an average nighttime noise level of 57.7 dBA L_{eq}.

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, L₁, L₂, L₅, L₈, L₂₅, L₅₀, L₉₀, L₉₅, and L₉₉ 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 and background Chino Airport aircraft flyover events. The 24-hour existing noise level measurements shown on Table 5-1 present the existing ambient noise conditions.



TABLE 5-1: 24-HOUR AMBIENT NOISE LEVEL MEASUREMENTS

Location ¹	Description	Energy Average Noise Level (dBA L _{eq}) ²		Noise	e Median e Level A L ₅₀) ²	CNEL
		Daytime	Nighttime	Daytime	Nighttime	
L1	Located near a Big League Dreams and Fairfield Ranch Park, west of the Project site.	53.9	50.3	51.7	48.8	57.8
L2	Located on Mountain Avenue, north of El Prado Road south of the Project site boundary.	59.0	54.4	52.9	47.9	62.1
L3	Located on Pine Avenue, near Lizze Custom Processing, southeast of the Project site.	62.6	61.0	58.5	53.2	67.9
L4	Located on Johnson Avenue, near Prado Park Equestrian Center, southeast of the Project site.	53.9	50.9	49.2	47.1	58.3
L5	Located on Meadowhouse Avenue, near Meadow Square Apartment Homes, east of the Project site.	60.5	58.3	56.6	51.9	65.5
L6	Located in Prado Regional Park near campground areas.	53.8	48.3	48.1	45.9	56.3
L7	Located on Cucamonga Road, near Vermontes Mulch, southeast of the Project site.	57.0	48.9	49.1	43.7	58.1
L8	Located on Chino Corona Road, near County Road, adjacent to existing rural residential homes.	62.7	58.7	47.7	43.7	66.1
L9	Located on Hereford Road, near residential construction and a vacant area, east of the Project site.	60.2	53.3	51.5	45.1	61.8
L10	Located at Walters Street and Hellman Avenue, adjacent to existing residential homes.	75.4	72.6	68.9	53.4	79.7
L11	Located on Chandler Street, near a vacant area and existing residential neighborhood.	61.9	57.7	51.1	45.8	65.4

¹ See Exhibit 5-A for the noise level measurement locations.



² Energy (logarithmic) average hourly levels. The long-term 24-hour measurement worksheets are included in Appendix 5.2. "Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

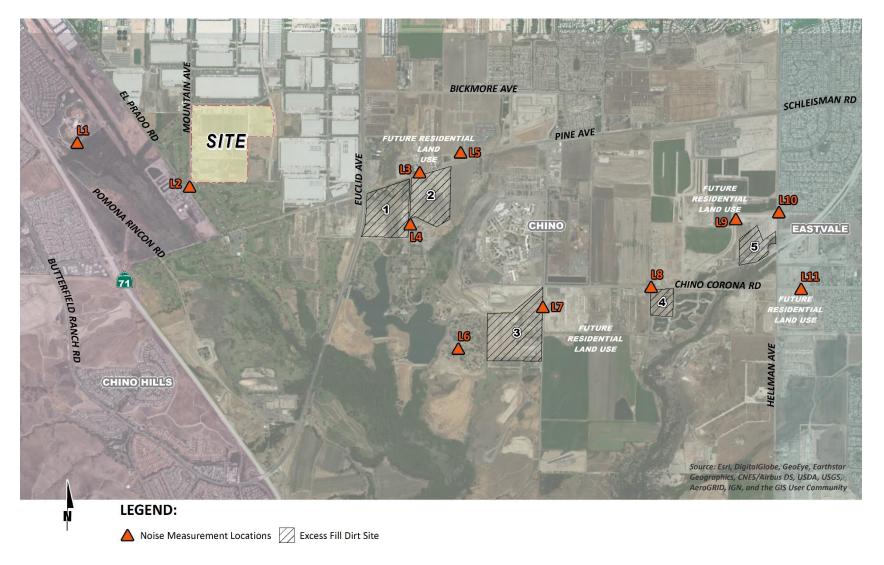


EXHIBIT 5-A: NOISE MEASUREMENT LOCATIONS



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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 estimated roadway noise impacts from vehicular traffic were calculated using a computer program that replicates the Federal Highway Administration (FHWA) Traffic Noise Prediction Model- FHWA-RD-77-108. (25) 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. (26) 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 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. (27)

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 37 study area roadway segments, the distance from the centerline to adjacent land use based on the functional roadway classifications per the City of Chino General Plan Circulation Element, and the posted vehicle speeds.

6.2.1 PROJECT OPERATIONAL TRAFFIC

The Existing, Opening Year 2022, and Horizon Year 2040 average daily traffic volumes used for this study are presented on Table 6-2 and are provided by *Majestic Chino Heritage Traffic Impact Analysis*. (2) 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.



Table 6-4 provides the time of day (daytime, evening, and nighttime) vehicle splits. The daily Project truck trip-ends were assigned to the individual off-site study area roadway segments based on the Project 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 6-5 shows the traffic flow by vehicle type (vehicle mix) used for all without Project traffic scenarios, and Tables 6-6 to 6-8 show the vehicle mixes used for the with Project traffic scenarios.

6.2.2 SOIL IMPORT/EXPORT HAUL TRUCK TRAFFIC

The Existing and Existing with Project (haul truck trips) average daily traffic volumes used for the soil import/export off-site traffic noise analysis are presented on Table 6-3 and are based on the daytime and off-peak hour time periods, described in Section 7.5, and trips identified in the Majestic Chino Heritage Traffic Impact Analysis. (2)



TABLE 6-1: OFF-SITE ROADWAY PARAMETERS

ID	Roadway	Segment	Adjacent Planned (Existing if Different) Land Use ¹	Distance from Centerline to Nearest Adjacent Land Use (Feet) ²	Vehicle Speed (mph) ³
1	Central Av.	n/o El Prado Rd.	Industrial/Urban Reserve	60'	45
2	Central Av.	s/o El Prado Rd.	Industrial	60'	45
3	El Prado Rd.	n/o Kimball Av.	Industrial/Urban Reserve	44'	45
4	Euclid Av.	n/o Walnut Av.	Commercial	84'	55
5	Euclid Av.	n/o Riverside Dr.	Residential/Commercial	84'	55
6	Euclid Av.	n/o Chino Av.	Residential/Commercial	84'	55
7	Euclid Av.	n/o Schaefer Av.	Residential/Commercial	84'	55
8	Euclid Av.	n/o Edison Av.	Residential/Commercial	84'	55
9	Euclid Av.	n/o Eucalyptus Av.	Residential/Commercial	84'	55
10	Euclid Av.	n/o Merrill Av.	Residential/Agricultural	84'	55
11	Euclid Av.	s/o Merrill Av.	Open Space/Airport Related	84'	55
12	Euclid Av.	n/o Kimball Av.	Industrial/Airport Related	84'	55
13	Euclid Av.	n/o Bickmore Av.	Industrial/Commercial	84'	55
14	Archibald Av.	n/o Limonite Av.	Commercial/Residential	84'	55
15	Archibald Av.	s/o Limonite Av.	Commercial/Residential	76'	45
16	Archibald Av.	s/o Schleisman Rd.	Commercial/ Residential	76'	45
17	Kimball Av.	w/o Mountain Av.	Urban Reserve/Industrial	44'	50
18	Kimball Av.	w/o Euclid Av.	Industrial/Airport Related	44'	50
19	Kimball Av.	e/o Euclid Av.	Industrial/Airport Related	49'	50
20	Kimball Av.	w/o Rincon Meadows Av.	Airport Related/Residential	49'	50
21	Kimball Av.	e/o Rincon Meadows Av.	Airport Related/Residential	49'	50
22	Kimball Av.	e/o Mill Creek Av.	Airport Related/Residential	49'	50
23	Kimball Av.	e/o Main St.	Airport Related/Residential	49'	50
24	Kimball Av.	e/o Flight Av.	Industrial/Residential	49'	50
25	Limonite Av.	w/o Archibald Av.	Industrial	76'	50
26	Limonite Av.	e/o Archibald Av.	Commercial/Residential	76'	50
27	Pine Av.	w/o El Prado Rd.	Open Space (Golf Course)	60'	45
28	Pine Av.	w/o Euclid Av.	Industrial/Open Space	60'	45
29	Pine Av.	e/o Euclid Av.	Comm./Recreation (Residential)	60'	45
30	Pine Av.	w/o Chino Corona Rd.	Commercial/Residential	60'	45
31	Pine Av.	w/o W. Preserve Loop	Residential	60'	45
32	Pine Av.	w/o E. Preserve Loop	Residential	60'	45
33	Pine Av.	w/o Hellman Av.	Residential	60'	45
34	Schleisman Rd.	w/o Archibald Av.	Commercial/Residential	76'	45
35 ⁴	Chino Corona Rd.	s/o Pine Av.	Commercial/Residential	30'	45
36 ⁴	Chino Corona Rd.	e/o Cucamonga Av.	Residential/Agricultural	30'	40
37 ⁴	Hellman Av.	s/o Pine Av.	Residential	49'	45

 $^{^{\}mathrm{1}}$ Sources: Land Use Maps of the City of Chino, Chino Hills, Ontario, and Eastvale, and aerial imagery.



² Distance to adjacent land use is based upon the right-of-way distances for each roadway classification provided in the General Plan Circulation Element.

³ Sources: Majestic Chino Heritage Traffic Impact Analysis, prepared by Urban Crossroads, Inc.

⁴ Segments 35 to 37 are only analyzed under Existing and Existing with Project conditions to determine potential off-site traffic noise impacts during dirt haul truck trips associated with Project construction.

TABLE 6-2: OPERATIONAL AVERAGE DAILY TRAFFIC VOLUMES

				Avei	rage Daily T	raffic Volur	nes¹	
ID	Roadway	Segment	Exis 20	_	Openin 20	_	Horizo 20	
			Without Project	With Project	Without Project	With Project	Without Project	With Project
1	Central Av.	n/o El Prado Rd.	29,420	29,772	31,600	31,954	33,180	33,535
2	Central Av.	s/o El Prado Rd.	34,911	35,873	37,909	38,873	39,805	40,021
3	El Prado Rd.	n/o Kimball Av.	24,718	26,099	27,269	28,653	28,632	29,164
4	Euclid Av.	n/o Walnut Av.	30,254	30,863	34,918	35,531	52,793	53,422
5	Euclid Av.	n/o Riverside Dr.	25,283	25,924	29,681	30,326	45,572	46,231
6	Euclid Av.	n/o Chino Av.	25,245	25,994	29,908	30,662	49,051	49,822
7	Euclid Av.	n/o Schaefer Av.	27,794	28,582	32,723	33,515	49,457	50,264
8	Euclid Av.	n/o Edison Av.	29,878	30,668	35,053	35,847	52,051	52,860
9	Euclid Av.	n/o Eucalyptus Av.	27,743	28,639	32,935	33,836	47,542	48,456
10	Euclid Av.	n/o Merrill Av.	31,921	32,894	36,593	37,570	47,149	48,135
11	Euclid Av.	s/o Merrill Av.	30,618	31,662	34,987	36,035	49,987	51,048
12	Euclid Av.	n/o Kimball Av.	30,229	31,272	34,574	35,621	49,377	50,437
13	Euclid Av.	n/o Bickmore Av.	18,579	19,643	22,353	23,421	36,945	38,833
14	Archibald Av.	n/o Limonite Av.	25,446	25,613	29,340	29,511	46,489	46,675
15	Archibald Av.	s/o Limonite Av.	24,166	24,896	27,324	28,057	36,298	36,347
16	Archibald Av.	s/o Schleisman Rd.	21,994	22,146	24,024	24,178	27,702	27,859
17	Kimball Av.	w/o Mountain Av.	19,433	20,629	21,661	22,859	22,744	23,271
18	Kimball Av.	w/o Euclid Av.	22,184	22,245	24,434	24,497	29,863	29,889
19	Kimball Av.	e/o Euclid Av.	17,975	18,063	20,429	20,520	24,348	25,135
20	Kimball Av.	w/o Rincon Meadows Av.	19,031	19,120	21,291	21,382	22,356	23,141
21	Kimball Av.	e/o Rincon Meadows Av.	18,215	18,304	20,432	20,523	21,454	22,238
22	Kimball Av.	e/o Mill Creek Av.	16,458	16,545	18,591	18,680	19,521	20,303
23	Kimball Av.	e/o Main St.	15,466	15,552	17,491	17,579	18,365	19,110
24	Kimball Av.	e/o Flight Av.	13,131	13,143	14,790	14,803	15,529	16,235
25	Limonite Av.	w/o Archibald Av.	n/a	n/a	n/a	n/a	27,217	27,934
26	Limonite Av.	e/o Archibald Av.	18,317	18,897	22,105	22,688	43,320	43,906
27	Pine Av.	w/o El Prado Rd.	25	25	27	27	27,780	29,483
28	Pine Av.	w/o Euclid Av.	7,306	7,979	7,772	8,446	25,288	25,605
29	Pine Av.	e/o Euclid Av.	25,747	26,758	28,876	29,889	37,279	37,606
30	Pine Av.	w/o Chino Corona Rd.	29,771	30,785	32,911	33,928	36,277	36,604
31	Pine Av.	w/o W. Preserve Loop	16,445	17,411	18,578	19,546	19,507	19,782
32	Pine Av.	w/o E. Preserve Loop	26,664	27,639	30,018	30,996	31,519	31,805
33	Pine Av.	w/o Hellman Av.	26,513	27,488	29,448	30,426	30,920	31,206
34	Schleisman Rd.	w/o Archibald Av.	28,660	29,565	31,944	32,852	38,337	38,557
1 500		ritage Traffic Impact Analysis, Urban				•		



¹ Source: Majestic Chino Heritage Traffic Impact Analysis, Urban Crossroads, Inc.
"n/a" = Roadway segment does not represent a paved and/or fully constructed roadway under the given scenario.

TABLE 6-3: SOIL IMPORT/EXPORT AVERAGE DAILY TRAFFIC VOLUMES

			Average Daily Traffic Volumes ¹			
ID	Roadway	Segment	Existing 2019			
			Without Project Daytime Off-Pea Hauling Haulin		With Off-Peak Hauling	
29	Pine Av.	e/o Euclid Av.	25,747	27,093	27,093	
30	Pine Av.	w/o Chino Corona Rd.	29,771	31,117	31,117	
31	Pine Av.	w/o W. Preserve Loop	16,445	17,791	17,791	
32	Pine Av.	w/o E. Preserve Loop	26,664	28,010	28,010	
33	Pine Av.	w/o Hellman Av.	26,513	27,859	27,859	
35	Chino Corona Rd.	s/o Pine Av. 3,068 4,40		4,400	4,400	
36	Chino Corona Rd.	e/o Cucamonga Av.	3,068	4,400	4,400	
37	Hellman Av.	s/o Pine Av.	13,118	14,464	14,464	

¹ Source: Majestic Chino Heritage Traffic Impact Analysis, Urban Crossroads, Inc.

TABLE 6-4: TIME OF DAY VEHICLE SPLITS

Vahiala Tura		Total of Time of		
Vehicle Type	Daytime	Evening	Nighttime	Day Splits
Autos	66.20%	13.50%	20.30%	100.00%
Medium Trucks	77.10%	5.30%	17.60%	100.00%
Heavy Trucks	86.30%	1.50%	12.20%	100.00%

Based on an existing vehicle count taken at Pine Avenue and Chino Corona Road (Majestic Chino Heritage Traffic Impact Analysis, Urban Crossroads, Inc.). Vehicle mix percentage values rounded to the nearest one-hundredth.

TABLE 6-5: WITHOUT PROJECT CONDITIONS VEHICLE MIX

Classification		Total % Traffic Flow		Total
Classification	Autos	Medium Trucks	Heavy Trucks	Total
All Segments	93.40%	4.70%	1.90%	100.00%

Based on an existing vehicle count taken at Pine Avenue and Chino Corona Road (Majestic Chino Heritage Traffic Impact Analysis, Urban Crossroads, Inc.). Vehicle mix percentage values rounded to the nearest one-hundredth.



[&]quot;n/a" = Roadway segment does not represent a paved and/or fully constructed roadway under the given scenario.

[&]quot;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.

[&]quot;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.

TABLE 6-6: EXISTING WITH PROJECT CONDITIONS VEHICLE MIX

				With Pr	oject1								
ID	Roadway	Segment	Autos	Medium Trucks	Heavy Trucks	Total ²							
1	Central Av.	n/o El Prado Rd.	93.47%	4.65%	1.88%	100.00%							
2	Central Av.	s/o El Prado Rd.	92.99%	4.82%	2.19%	100.00%							
3	El Prado Rd.	n/o Kimball Av.	93.11%	4.72%	2.17%	100.00%							
4	Euclid Av.	n/o Walnut Av.	92.46%	5.06%	2.48%	100.00%							
5	Euclid Av.	n/o Riverside Dr.	92.29%	5.12%	2.59%	100.00%							
6	Euclid Av.	n/o Chino Av.	92.32%	5.10%	2.58%	100.00%							
7	Euclid Av.	n/o Schaefer Av.	92.42%	5.06%	2.52%	100.00%							
8	Euclid Av.	n/o Edison Av.	92.49%	5.03%	2.48%	100.00%							
9	Euclid Av.	n/o Eucalyptus Av.	92.45%	5.04%	2.51%	100.00%							
10	Euclid Av.	n/o Merrill Av.	92.59%	4.98%	2.43%	100.00%							
11	Euclid Av.	s/o Merrill Av.	92.57%	4.99%	2.44%	100.00%							
12	Euclid Av.	n/o Kimball Av.	92.56%	4.99%	2.45%	100.00%							
13	Euclid Av.	n/o Bickmore Av.	92.28%	5.07%	2.65%	100.00%							
14	Archibald Av.	n/o Limonite Av.	93.44%	4.67%	1.89%	100.00%							
15	Archibald Av.	s/o Limonite Av.	93.36%	4.66%	1.98%	100.00%							
16	Archibald Av.	s/o Schleisman Rd.	93.33%	4.72%	1.95%	100.00%							
17	Kimball Av.	w/o Mountain Av.	92.98%	4.77%	2.26%	100.00%							
18	Kimball Av.	w/o Euclid Av.	93.23%	4.77%	2.00%	100.00%							
19	Kimball Av.	e/o Euclid Av.	93.43%	4.68%	1.89%	100.00%							
20	Kimball Av.	w/o Rincon Meadows Av.	93.42%	4.68%	1.89%	100.00%							
21	Kimball Av.	e/o Rincon Meadows Av.	93.43%	4.68%	1.89%	100.00%							
22	Kimball Av.	e/o Mill Creek Av.	93.43%	4.68%	1.89%	100.00%							
23	Kimball Av.	e/o Main St.	93.43%	4.68%	1.89%	100.00%							
24	Kimball Av.	e/o Flight Av.	93.40%	4.70%	1.90%	100.00%							
25	Limonite Av.	w/o Archibald Av.	93.40%	4.70%	1.90%	100.00%							
26	Limonite Av.	e/o Archibald Av.	93.29%	4.69%	2.02%	100.00%							
27	Pine Av.	w/o El Prado Rd.	93.40%	4.70%	1.90%	100.00%							
28	Pine Av.	w/o Euclid Av.	92.40%	4.96%	2.64%	100.00%							
29	Pine Av.	e/o Euclid Av.	93.33%	4.66%	2.01%	100.00%							
30	Pine Av.	w/o Chino Corona Rd.	93.34%	4.66%	2.00%	100.00%							
31	Pine Av.	w/o W. Preserve Loop	93.28%	4.64%	2.07%	100.00%							
32	Pine Av.	w/o E. Preserve Loop	93.33%	4.66%	2.01%	100.00%							
33	Pine Av.	w/o Hellman Av.	93.33%	4.66%	2.01%	100.00%							
34	Schleisman Rd.	w/o Archibald Av.	93.32%	4.68%	2.01%	100.00%							
		-		34 Schleisman Rd. w/o Archibald Av. 93.32% 4.68% 2.01% 100.00%									

¹ Source: Majestic Chino Heritage Traffic Impact Analysis, Urban Crossroads, Inc.



 $^{^{\}rm 2}\,\text{Total}$ of vehicle mix percentage values rounded to the nearest one-hundredth.

TABLE 6-7: OPENING YEAR WITH PROJECT CONDITIONS VEHICLE MIX

2 Central Av. \$/o El Prado Rd. 93.03% 4.81% 2.16% 100.00% 3 El Prado Rd. n/o Kimball Av. 93.14% 4.72% 2.15% 100.00% 4 Euclid Av. n/o Walnut Av. 92.58% 5.01% 2.41% 100.00% 5 Euclid Av. n/o Riverside Dr. 92.48% 5.04% 2.48% 100.00% 6 Euclid Av. n/o Schaefer Av. 92.57% 5.01% 2.43% 100.00% 7 Euclid Av. n/o Edison Av. 92.62% 4.99% 2.39% 100.00% 9 Euclid Av. n/o Euclayptus Av. 92.60% 4.99% 2.39% 100.00% 10 Euclid Av. n/o Merrill Av. 92.69% 4.95% 2.38% 100.00% 11 Euclid Av. n/o Kimball Av. 92.69% 4.95% 2.38% 100.00% 12 Euclid Av. n/o Kimball Av. 92.69% 4.95% 2.38% 100.00% 12 Euclid Av. n/o Kimball Av.					With Pi	roject ¹	
2 Central Av. \$/o El Prado Rd. 93.03% 4.81% 2.16% 100.00% 3 El Prado Rd. n/o Kimball Av. 93.14% 4.72% 2.15% 100.00% 4 Euclid Av. n/o Walnut Av. 92.58% 5.01% 2.41% 100.00% 5 Euclid Av. n/o Riverside Dr. 92.48% 5.04% 2.48% 100.00% 6 Euclid Av. n/o Schaefer Av. 92.57% 5.01% 2.43% 100.00% 7 Euclid Av. n/o Edison Av. 92.62% 4.99% 2.39% 100.00% 9 Euclid Av. n/o Euclayptus Av. 92.60% 4.99% 2.39% 100.00% 10 Euclid Av. n/o Merrill Av. 92.69% 4.95% 2.38% 100.00% 11 Euclid Av. n/o Kimball Av. 92.69% 4.95% 2.38% 100.00% 12 Euclid Av. n/o Kimball Av. 92.69% 4.95% 2.38% 100.00% 12 Euclid Av. n/o Kimball Av.	ID	Roadway	Segment	Autos		•	Total ²
Second Process	1	Central Av.	n/o El Prado Rd.	93.47%	4.65%	1.88%	100.00%
4 Euclid Av. n/o Walnut Av. 92.58% 5.01% 2.41% 100.00% 5 Euclid Av. n/o Riverside Dr. 92.45% 5.06% 2.49% 100.00% 6 Euclid Av. n/o Chino Av. 92.48% 5.04% 2.48% 100.00% 7 Euclid Av. n/o Schaefer Av. 92.57% 5.01% 2.43% 100.00% 8 Euclid Av. n/o Edison Av. 92.57% 5.01% 2.43% 100.00% 9 Euclid Av. n/o Eucalyptus Av. 92.60% 4.99% 2.39% 100.00% 10 Euclid Av. n/o Merrill Av. 92.69% 4.95% 2.36% 100.00% 11 Euclid Av. n/o Kimball Av. 92.66% 4.95% 2.38% 100.00% 12 Euclid Av. n/o Bickmore Av. 92.46% 5.01% 2.53% 100.00% 13 Euclid Av. n/o Bickmore Av. 92.46% 5.01% 2.53% 100.00% 15 Archibald Av. n/o Eimonite Av.	2	Central Av.	s/o El Prado Rd.	93.03%	4.81%	2.16%	100.00%
5 Euclid Av. n/o Riverside Dr. 92.45% 5.06% 2.49% 100.00% 6 Euclid Av. n/o Chino Av. 92.48% 5.04% 2.48% 100.00% 7 Euclid Av. n/o Schaefer Av. 92.57% 5.01% 2.43% 100.00% 8 Euclid Av. n/o Edison Av. 92.60% 4.99% 2.39% 100.00% 9 Euclid Av. n/o Eucalyptus Av. 92.60% 4.99% 2.42% 100.00% 10 Euclid Av. n/o Merrill Av. 92.69% 4.95% 2.38% 100.00% 11 Euclid Av. n/o Kimball Av. 92.66% 4.95% 2.38% 100.00% 12 Euclid Av. n/o Kimball Av. 92.66% 4.95% 2.38% 100.00% 12 Euclid Av. n/o Kimball Av. 92.66% 4.95% 2.38% 100.00% 12 Euclid Av. n/o Bickmore Av. 92.46% 5.01% 2.53% 100.00% 13 Euclid Av. n/o Limonite Av.	3	El Prado Rd.	n/o Kimball Av.	93.14%	4.72%	2.15%	100.00%
6 Euclid Av. n/o Chino Av. 92.48% 5.04% 2.48% 100.00% 7 Euclid Av. n/o Schaefer Av. 92.57% 5.01% 2.43% 100.00% 8 Euclid Av. n/o Edison Av. 92.62% 4.99% 2.39% 100.00% 9 Euclid Av. n/o Eucalyptus Av. 92.60% 4.99% 2.42% 100.00% 10 Euclid Av. n/o Merrill Av. 92.60% 4.95% 2.38% 100.00% 11 Euclid Av. n/o Kimball Av. 92.67% 4.95% 2.38% 100.00% 12 Euclid Av. n/o Kimball Av. 92.66% 4.95% 2.38% 100.00% 13 Euclid Av. n/o Bickmore Av. 92.66% 4.95% 2.38% 100.00% 14 Archibald Av. n/o Limonite Av. 93.43% 4.68% 1.89% 100.00% 15 Archibald Av. s/o Schleisman Rd. 93.34% 4.76% 1.97% 100.00% 17 Kimball Av. w/o Buclid Av. </td <td>4</td> <td>Euclid Av.</td> <td>n/o Walnut Av.</td> <td>92.58%</td> <td>5.01%</td> <td>2.41%</td> <td>100.00%</td>	4	Euclid Av.	n/o Walnut Av.	92.58%	5.01%	2.41%	100.00%
7 Euclid Av. n/o Schaefer Av. 92.57% 5.01% 2.43% 100.00% 8 Euclid Av. n/o Edison Av. 92.62% 4.99% 2.39% 100.00% 9 Euclid Av. n/o Eucalyptus Av. 92.60% 4.99% 2.42% 100.00% 10 Euclid Av. n/o Merrill Av. 92.69% 4.95% 2.38% 100.00% 11 Euclid Av. n/o Kimball Av. 92.66% 4.95% 2.38% 100.00% 12 Euclid Av. n/o Kimball Av. 92.66% 4.95% 2.38% 100.00% 13 Euclid Av. n/o Bickmore Av. 92.46% 5.01% 2.53% 100.00% 14 Archibald Av. n/o Ekmore Av. 93.43% 4.68% 1.89% 100.00% 15 Archibald Av. s/o Schleisman Rd. 93.34% 4.76% 1.97% 100.00% 16 Archibald Av. w/o Mountain Av. 93.02% 4.76% 2.22% 100.00% 17 Kimball Av. w/o Euclid	5	Euclid Av.	n/o Riverside Dr.	92.45%	5.06%	2.49%	100.00%
8 Euclid Av. n/o Edison Av. 92.62% 4.99% 2.39% 100.00% 9 Euclid Av. n/o Eucalyptus Av. 92.60% 4.99% 2.42% 100.00% 10 Euclid Av. n/o Merrill Av. 92.69% 4.95% 2.36% 100.00% 11 Euclid Av. s/o Merrill Av. 92.66% 4.95% 2.38% 100.00% 12 Euclid Av. n/o Kimball Av. 92.66% 4.95% 2.38% 100.00% 13 Euclid Av. n/o Bickmore Av. 92.46% 5.01% 2.53% 100.00% 14 Archibald Av. n/o Limonite Av. 93.43% 4.68% 1.89% 100.00% 15 Archibald Av. s/o Schleisman Rd. 93.34% 4.72% 1.95% 100.00% 16 Archibald Av. w/o Mountain Av. 93.22% 4.76% 1.99% 100.00% 17 Kimball Av. w/o Euclid Av. 93.24% 4.76% 1.99% 100.00% 19 Kimball Av. e/o Rinco	6	Euclid Av.	n/o Chino Av.	92.48%	5.04%	2.48%	100.00%
9 Euclid Av. n/o Eucalyptus Av. 92.60% 4.99% 2.42% 100.00% 10 Euclid Av. n/o Merrill Av. 92.69% 4.95% 2.36% 100.00% 11 Euclid Av. s/o Merrill Av. 92.67% 4.95% 2.38% 100.00% 12 Euclid Av. n/o Kimball Av. 92.66% 4.95% 2.38% 100.00% 13 Euclid Av. n/o Bickmore Av. 92.46% 5.01% 2.53% 100.00% 14 Archibald Av. n/o Limonite Av. 93.43% 4.68% 1.89% 100.00% 15 Archibald Av. s/o Schleisman Rd. 93.34% 4.72% 1.95% 100.00% 16 Archibald Av. w/o Mountain Av. 93.24% 4.76% 1.95% 100.00% 17 Kimball Av. w/o Euclid Av. 93.24% 4.76% 1.99% 100.00% 18 Kimball Av. e/o Euclid Av. 93.42% 4.68% 1.89% 100.00% 20 Kimball Av. e/o Rin	7	Euclid Av.	n/o Schaefer Av.	92.57%	5.01%	2.43%	100.00%
10 Euclid Av. n/o Merrill Av. 92.69% 4.95% 2.36% 100.00% 11 Euclid Av. s/o Merrill Av. 92.67% 4.95% 2.38% 100.00% 12 Euclid Av. n/o Kimball Av. 92.66% 4.95% 2.38% 100.00% 13 Euclid Av. n/o Bickmore Av. 92.46% 5.01% 2.53% 100.00% 14 Archibald Av. n/o Limonite Av. 93.43% 4.68% 1.89% 100.00% 15 Archibald Av. s/o Schleisman Rd. 93.34% 4.67% 1.97% 100.00% 16 Archibald Av. s/o Schleisman Rd. 93.34% 4.72% 1.95% 100.00% 17 Kimball Av. w/o Mountain Av. 93.02% 4.76% 2.22% 100.00% 18 Kimball Av. w/o Euclid Av. 93.42% 4.68% 1.89% 100.00% 19 Kimball Av. e/o Euclid Av. 93.42% 4.68% 1.89% 100.00% 21 Kimball Av. e/o R	8	Euclid Av.	n/o Edison Av.	92.62%	4.99%	2.39%	100.00%
11 Euclid Av. \$/o Merrill Av. 92.67% 4.95% 2.38% 100.00% 12 Euclid Av. n/o Kimball Av. 92.66% 4.95% 2.38% 100.00% 13 Euclid Av. n/o Bickmore Av. 92.46% 5.01% 2.53% 100.00% 14 Archibald Av. n/o Limonite Av. 93.43% 4.68% 1.89% 100.00% 15 Archibald Av. s/o Schleisman Rd. 93.36% 4.67% 1.97% 100.00% 16 Archibald Av. s/o Schleisman Rd. 93.34% 4.72% 1.95% 100.00% 17 Kimball Av. w/o Mountain Av. 93.02% 4.76% 2.22% 100.00% 18 Kimball Av. w/o Euclid Av. 93.24% 4.76% 1.99% 100.00% 19 Kimball Av. e/o Euclid Av. 93.42% 4.68% 1.89% 100.00% 20 Kimball Av. e/o Rincon Meadows Av. 93.42% 4.68% 1.89% 100.00% 21 Kimball Av. <	9	Euclid Av.	n/o Eucalyptus Av.	92.60%	4.99%	2.42%	100.00%
12 Euclid Av. n/o Kimball Av. 92.66% 4.95% 2.38% 100.00% 13 Euclid Av. n/o Bickmore Av. 92.46% 5.01% 2.53% 100.00% 14 Archibald Av. n/o Limonite Av. 93.43% 4.68% 1.89% 100.00% 15 Archibald Av. s/o Schleisman Rd. 93.36% 4.67% 1.97% 100.00% 16 Archibald Av. s/o Schleisman Rd. 93.34% 4.72% 1.95% 100.00% 17 Kimball Av. w/o Mountain Av. 93.02% 4.76% 2.22% 100.00% 18 Kimball Av. w/o Euclid Av. 93.24% 4.76% 1.99% 100.00% 19 Kimball Av. e/o Euclid Av. 93.42% 4.68% 1.89% 100.00% 20 Kimball Av. e/o Rincon Meadows Av. 93.42% 4.68% 1.89% 100.00% 21 Kimball Av. e/o Mill Creek Av. 93.43% 4.68% 1.89% 100.00% 22 Kimball Av.	10	Euclid Av.	n/o Merrill Av.	92.69%	4.95%	2.36%	100.00%
13 Euclid Av. n/o Bickmore Av. 92.46% 5.01% 2.53% 100.00% 14 Archibald Av. n/o Limonite Av. 93.43% 4.68% 1.89% 100.00% 15 Archibald Av. s/o Schleisman Rd. 93.36% 4.67% 1.97% 100.00% 16 Archibald Av. s/o Schleisman Rd. 93.34% 4.72% 1.95% 100.00% 17 Kimball Av. w/o Mountain Av. 93.02% 4.76% 2.22% 100.00% 18 Kimball Av. w/o Euclid Av. 93.24% 4.76% 1.99% 100.00% 19 Kimball Av. e/o Euclid Av. 93.42% 4.68% 1.89% 100.00% 20 Kimball Av. e/o Rincon Meadows Av. 93.42% 4.68% 1.89% 100.00% 21 Kimball Av. e/o Mill Creek Av. 93.43% 4.68% 1.89% 100.00% 22 Kimball Av. e/o Main St. 93.43% 4.68% 1.89% 100.00% 23 Kimball Av.	11	Euclid Av.	s/o Merrill Av.	92.67%	4.95%	2.38%	100.00%
14 Archibald Av. n/o Limonite Av. 93.43% 4.68% 1.89% 100.00% 15 Archibald Av. s/o Limonite Av. 93.36% 4.67% 1.97% 100.00% 16 Archibald Av. s/o Schleisman Rd. 93.34% 4.72% 1.95% 100.00% 17 Kimball Av. w/o Mountain Av. 93.02% 4.76% 2.22% 100.00% 18 Kimball Av. w/o Euclid Av. 93.24% 4.76% 1.99% 100.00% 19 Kimball Av. e/o Euclid Av. 93.42% 4.68% 1.89% 100.00% 20 Kimball Av. e/o Rincon Meadows Av. 93.42% 4.68% 1.89% 100.00% 21 Kimball Av. e/o Rincon Meadows Av. 93.42% 4.68% 1.89% 100.00% 22 Kimball Av. e/o Rincon Meadows Av. 93.42% 4.68% 1.89% 100.00% 21 Kimball Av. e/o Rincon Meadows Av. 93.42% 4.68% 1.89% 100.00% 22 Kimba	12	Euclid Av.	n/o Kimball Av.	92.66%	4.95%	2.38%	100.00%
15 Archibald Av. s/o Limonite Av. 93.36% 4.67% 1.97% 100.00% 16 Archibald Av. s/o Schleisman Rd. 93.34% 4.72% 1.95% 100.00% 17 Kimball Av. w/o Mountain Av. 93.02% 4.76% 2.22% 100.00% 18 Kimball Av. w/o Euclid Av. 93.24% 4.76% 1.99% 100.00% 19 Kimball Av. e/o Euclid Av. 93.42% 4.68% 1.89% 100.00% 20 Kimball Av. e/o Rincon Meadows Av. 93.42% 4.68% 1.89% 100.00% 21 Kimball Av. e/o Rincon Meadows Av. 93.42% 4.68% 1.89% 100.00% 22 Kimball Av. e/o Mill Creek Av. 93.43% 4.68% 1.89% 100.00% 23 Kimball Av. e/o Main St. 93.43% 4.68% 1.89% 100.00% 24 Kimball Av. e/o Flight Av. 93.40% 4.70% 1.90% 100.00% 25 Limonite Av.	13	Euclid Av.	n/o Bickmore Av.	92.46%	5.01%	2.53%	100.00%
16 Archibald Av. s/o Schleisman Rd. 93.34% 4.72% 1.95% 100.00% 17 Kimball Av. w/o Mountain Av. 93.02% 4.76% 2.22% 100.00% 18 Kimball Av. w/o Euclid Av. 93.24% 4.76% 1.99% 100.00% 19 Kimball Av. e/o Euclid Av. 93.42% 4.68% 1.89% 100.00% 20 Kimball Av. w/o Rincon Meadows Av. 93.42% 4.68% 1.89% 100.00% 21 Kimball Av. e/o Rincon Meadows Av. 93.42% 4.68% 1.89% 100.00% 22 Kimball Av. e/o Mill Creek Av. 93.42% 4.68% 1.89% 100.00% 23 Kimball Av. e/o Main St. 93.43% 4.68% 1.89% 100.00% 24 Kimball Av. e/o Flight Av. 93.43% 4.68% 1.89% 100.00% 25 Limonite Av. e/o Flight Av. 93.40% 4.70% 1.90% 100.00% 26 Limonite Av.	14	Archibald Av.	n/o Limonite Av.	93.43%	4.68%	1.89%	100.00%
17 Kimball Av. w/o Mountain Av. 93.02% 4.76% 2.22% 100.00% 18 Kimball Av. w/o Euclid Av. 93.24% 4.76% 1.99% 100.00% 19 Kimball Av. e/o Euclid Av. 93.42% 4.68% 1.89% 100.00% 20 Kimball Av. w/o Rincon Meadows Av. 93.42% 4.68% 1.89% 100.00% 21 Kimball Av. e/o Rincon Meadows Av. 93.42% 4.68% 1.89% 100.00% 22 Kimball Av. e/o Mill Creek Av. 93.43% 4.68% 1.89% 100.00% 23 Kimball Av. e/o Main St. 93.43% 4.68% 1.89% 100.00% 24 Kimball Av. e/o Flight Av. 93.40% 4.70% 1.90% 100.00% 25 Limonite Av. w/o Archibald Av. 93.31% 4.69% 2.00% 100.00% 26 Limonite Av. e/o Archibald Av. 93.31% 4.69% 2.00% 100.00% 27 Pine Av. <td< td=""><td>15</td><td>Archibald Av.</td><td>s/o Limonite Av.</td><td>93.36%</td><td>4.67%</td><td>1.97%</td><td>100.00%</td></td<>	15	Archibald Av.	s/o Limonite Av.	93.36%	4.67%	1.97%	100.00%
18 Kimball Av. w/o Euclid Av. 93.24% 4.76% 1.99% 100.00% 19 Kimball Av. e/o Euclid Av. 93.42% 4.68% 1.89% 100.00% 20 Kimball Av. w/o Rincon Meadows Av. 93.42% 4.68% 1.89% 100.00% 21 Kimball Av. e/o Rincon Meadows Av. 93.42% 4.68% 1.89% 100.00% 22 Kimball Av. e/o Mill Creek Av. 93.43% 4.68% 1.89% 100.00% 23 Kimball Av. e/o Main St. 93.43% 4.68% 1.89% 100.00% 24 Kimball Av. e/o Flight Av. 93.40% 4.70% 1.90% 100.00% 25 Limonite Av. w/o Archibald Av. 93.40% 4.70% 1.90% 100.00% 26 Limonite Av. e/o Archibald Av. 93.31% 4.69% 2.00% 100.00% 27 Pine Av. w/o El Prado Rd. 93.40% 4.70% 1.90% 100.00% 28 Pine Av. e/	16	Archibald Av.	s/o Schleisman Rd.	93.34%	4.72%	1.95%	100.00%
19 Kimball Av. e/o Euclid Av. 93.42% 4.68% 1.89% 100.00% 20 Kimball Av. w/o Rincon Meadows Av. 93.42% 4.68% 1.89% 100.00% 21 Kimball Av. e/o Rincon Meadows Av. 93.42% 4.68% 1.89% 100.00% 22 Kimball Av. e/o Mill Creek Av. 93.43% 4.68% 1.89% 100.00% 23 Kimball Av. e/o Main St. 93.43% 4.68% 1.89% 100.00% 24 Kimball Av. e/o Flight Av. 93.40% 4.70% 1.90% 100.00% 25 Limonite Av. w/o Archibald Av. 93.40% 4.70% 1.90% 100.00% 26 Limonite Av. e/o Archibald Av. 93.31% 4.69% 2.00% 100.00% 27 Pine Av. w/o El Prado Rd. 93.40% 4.70% 1.90% 100.00% 28 Pine Av. w/o Euclid Av. 92.45% 4.95% 2.60% 100.00% 29 Pine Av. e/o Euclid Av. 93.34% 4.66% 2.00% 100.00% 30 Pine Av. w/o Chino Corona Rd. 93.35% 4.67% 1.99% 100.00% 3	17	Kimball Av.	w/o Mountain Av.	93.02%	4.76%	2.22%	100.00%
20 Kimball Av. w/o Rincon Meadows Av. 93.42% 4.68% 1.89% 100.00% 21 Kimball Av. e/o Rincon Meadows Av. 93.42% 4.68% 1.89% 100.00% 22 Kimball Av. e/o Mill Creek Av. 93.43% 4.68% 1.89% 100.00% 23 Kimball Av. e/o Main St. 93.43% 4.68% 1.89% 100.00% 24 Kimball Av. e/o Flight Av. 93.40% 4.70% 1.90% 100.00% 25 Limonite Av. w/o Archibald Av. 93.31% 4.69% 2.00% 100.00% 26 Limonite Av. e/o Archibald Av. 93.31% 4.69% 2.00% 100.00% 27 Pine Av. w/o El Prado Rd. 93.40% 4.70% 1.90% 100.00% 28 Pine Av. w/o Euclid Av. 92.45% 4.95% 2.60% 100.00% 29 Pine Av. e/o Euclid Av. 93.34% 4.66% 2.00% 100.00% 30 Pine Av. w/o Chin	18	Kimball Av.	w/o Euclid Av.	93.24%	4.76%	1.99%	100.00%
21 Kimball Av. e/o Rincon Meadows Av. 93.42% 4.68% 1.89% 100.00% 22 Kimball Av. e/o Mill Creek Av. 93.43% 4.68% 1.89% 100.00% 23 Kimball Av. e/o Main St. 93.43% 4.68% 1.89% 100.00% 24 Kimball Av. e/o Flight Av. 93.40% 4.70% 1.90% 100.00% 25 Limonite Av. w/o Archibald Av. 93.40% 4.70% 1.90% 100.00% 26 Limonite Av. e/o Archibald Av. 93.31% 4.69% 2.00% 100.00% 27 Pine Av. w/o El Prado Rd. 93.40% 4.70% 1.90% 100.00% 28 Pine Av. w/o Euclid Av. 92.45% 4.95% 2.60% 100.00% 29 Pine Av. e/o Euclid Av. 93.34% 4.66% 2.00% 100.00% 30 Pine Av. w/o Chino Corona Rd. 93.35% 4.67% 1.99% 100.00% 31 Pine Av. w/o W. Preser	19	Kimball Av.	e/o Euclid Av.	93.42%	4.68%	1.89%	100.00%
22 Kimball Av. e/o Mill Creek Av. 93.43% 4.68% 1.89% 100.00% 23 Kimball Av. e/o Main St. 93.43% 4.68% 1.89% 100.00% 24 Kimball Av. e/o Flight Av. 93.40% 4.70% 1.90% 100.00% 25 Limonite Av. w/o Archibald Av. 93.40% 4.70% 1.90% 100.00% 26 Limonite Av. e/o Archibald Av. 93.31% 4.69% 2.00% 100.00% 27 Pine Av. w/o El Prado Rd. 93.40% 4.70% 1.90% 100.00% 28 Pine Av. w/o Euclid Av. 92.45% 4.95% 2.60% 100.00% 29 Pine Av. e/o Euclid Av. 93.34% 4.66% 2.00% 100.00% 30 Pine Av. w/o Chino Corona Rd. 93.35% 4.67% 1.99% 100.00% 31 Pine Av. w/o W. Preserve Loop 93.33% 4.67% 2.05% 100.00% 32 Pine Av. w/o E. Preserve Loop 93.33% 4.67% 2.00% 100.00%	20	Kimball Av.	w/o Rincon Meadows Av.	93.42%	4.68%	1.89%	100.00%
23 Kimball Av. e/o Main St. 93.43% 4.68% 1.89% 100.00% 24 Kimball Av. e/o Flight Av. 93.40% 4.70% 1.90% 100.00% 25 Limonite Av. w/o Archibald Av. 93.40% 4.70% 1.90% 100.00% 26 Limonite Av. e/o Archibald Av. 93.31% 4.69% 2.00% 100.00% 27 Pine Av. w/o El Prado Rd. 93.40% 4.70% 1.90% 100.00% 28 Pine Av. w/o Euclid Av. 92.45% 4.95% 2.60% 100.00% 29 Pine Av. e/o Euclid Av. 93.34% 4.66% 2.00% 100.00% 30 Pine Av. w/o Chino Corona Rd. 93.35% 4.67% 1.99% 100.00% 31 Pine Av. w/o W. Preserve Loop 93.33% 4.65% 2.05% 100.00% 32 Pine Av. w/o E. Preserve Loop 93.33% 4.67% 2.00% 100.00%	21	Kimball Av.	e/o Rincon Meadows Av.	93.42%	4.68%	1.89%	100.00%
24 Kimball Av. e/o Flight Av. 93.40% 4.70% 1.90% 100.00% 25 Limonite Av. w/o Archibald Av. 93.40% 4.70% 1.90% 100.00% 26 Limonite Av. e/o Archibald Av. 93.31% 4.69% 2.00% 100.00% 27 Pine Av. w/o El Prado Rd. 93.40% 4.70% 1.90% 100.00% 28 Pine Av. w/o Euclid Av. 92.45% 4.95% 2.60% 100.00% 29 Pine Av. e/o Euclid Av. 93.34% 4.66% 2.00% 100.00% 30 Pine Av. w/o Chino Corona Rd. 93.35% 4.67% 1.99% 100.00% 31 Pine Av. w/o W. Preserve Loop 93.30% 4.65% 2.05% 100.00% 32 Pine Av. w/o E. Preserve Loop 93.33% 4.67% 2.00% 100.00%	22	Kimball Av.	e/o Mill Creek Av.	93.43%	4.68%	1.89%	100.00%
25 Limonite Av. w/o Archibald Av. 93.40% 4.70% 1.90% 100.00% 26 Limonite Av. e/o Archibald Av. 93.31% 4.69% 2.00% 100.00% 27 Pine Av. w/o El Prado Rd. 93.40% 4.70% 1.90% 100.00% 28 Pine Av. w/o Euclid Av. 92.45% 4.95% 2.60% 100.00% 29 Pine Av. e/o Euclid Av. 93.34% 4.66% 2.00% 100.00% 30 Pine Av. w/o Chino Corona Rd. 93.35% 4.67% 1.99% 100.00% 31 Pine Av. w/o W. Preserve Loop 93.30% 4.65% 2.05% 100.00% 32 Pine Av. w/o E. Preserve Loop 93.33% 4.67% 2.00% 100.00%	23	Kimball Av.	e/o Main St.	93.43%	4.68%	1.89%	100.00%
26 Limonite Av. e/o Archibald Av. 93.31% 4.69% 2.00% 100.00% 27 Pine Av. w/o El Prado Rd. 93.40% 4.70% 1.90% 100.00% 28 Pine Av. w/o Euclid Av. 92.45% 4.95% 2.60% 100.00% 29 Pine Av. e/o Euclid Av. 93.34% 4.66% 2.00% 100.00% 30 Pine Av. w/o Chino Corona Rd. 93.35% 4.67% 1.99% 100.00% 31 Pine Av. w/o W. Preserve Loop 93.30% 4.65% 2.05% 100.00% 32 Pine Av. w/o E. Preserve Loop 93.33% 4.67% 2.00% 100.00%	24	Kimball Av.	e/o Flight Av.	93.40%	4.70%	1.90%	100.00%
27 Pine Av. w/o El Prado Rd. 93.40% 4.70% 1.90% 100.00% 28 Pine Av. w/o Euclid Av. 92.45% 4.95% 2.60% 100.00% 29 Pine Av. e/o Euclid Av. 93.34% 4.66% 2.00% 100.00% 30 Pine Av. w/o Chino Corona Rd. 93.35% 4.67% 1.99% 100.00% 31 Pine Av. w/o W. Preserve Loop 93.30% 4.65% 2.05% 100.00% 32 Pine Av. w/o E. Preserve Loop 93.33% 4.67% 2.00% 100.00%	25	Limonite Av.	w/o Archibald Av.	93.40%	4.70%	1.90%	100.00%
28 Pine Av. w/o Euclid Av. 92.45% 4.95% 2.60% 100.00% 29 Pine Av. e/o Euclid Av. 93.34% 4.66% 2.00% 100.00% 30 Pine Av. w/o Chino Corona Rd. 93.35% 4.67% 1.99% 100.00% 31 Pine Av. w/o W. Preserve Loop 93.30% 4.65% 2.05% 100.00% 32 Pine Av. w/o E. Preserve Loop 93.33% 4.67% 2.00% 100.00%	26	Limonite Av.	e/o Archibald Av.	93.31%	4.69%	2.00%	100.00%
29 Pine Av. e/o Euclid Av. 93.34% 4.66% 2.00% 100.00% 30 Pine Av. w/o Chino Corona Rd. 93.35% 4.67% 1.99% 100.00% 31 Pine Av. w/o W. Preserve Loop 93.30% 4.65% 2.05% 100.00% 32 Pine Av. w/o E. Preserve Loop 93.33% 4.67% 2.00% 100.00%	27	Pine Av.	w/o El Prado Rd.	93.40%	4.70%	1.90%	100.00%
30 Pine Av. w/o Chino Corona Rd. 93.35% 4.67% 1.99% 100.00% 31 Pine Av. w/o W. Preserve Loop 93.30% 4.65% 2.05% 100.00% 32 Pine Av. w/o E. Preserve Loop 93.33% 4.67% 2.00% 100.00%	28	Pine Av.	w/o Euclid Av.	92.45%	4.95%	2.60%	100.00%
31 Pine Av. w/o W. Preserve Loop 93.30% 4.65% 2.05% 100.00% 32 Pine Av. w/o E. Preserve Loop 93.33% 4.67% 2.00% 100.00%	29	Pine Av.	e/o Euclid Av.	93.34%	4.66%	2.00%	100.00%
32 Pine Av. w/o E. Preserve Loop 93.33% 4.67% 2.00% 100.00%	30	Pine Av.	w/o Chino Corona Rd.	93.35%	4.67%	1.99%	100.00%
32 Pine Av. w/o E. Preserve Loop 93.33% 4.67% 2.00% 100.00%	31	Pine Av.	w/o W. Preserve Loop	93.30%	4.65%	2.05%	100.00%
33 Pine Av W/o Hellman Av 93 33% 4.67% 2.00% 1.00.00%	32	Pine Av.	w/o E. Preserve Loop		4.67%	2.00%	100.00%
[33 Title Av. W/O Hellillall Av. 33.33% 4.07% 2.00% 100.00%	33	Pine Av.	w/o Hellman Av.	93.33%	4.67%	2.00%	100.00%
34 Schleisman Rd. w/o Archibald Av. 93.32% 4.68% 2.00% 100.00%	34	Schleisman Rd.	w/o Archibald Av.	93.32%	4.68%	2.00%	100.00%

¹ Source: Majestic Chino Heritage Traffic Impact Analysis, Urban Crossroads, Inc.



 $^{^{\}rm 2}\,\text{Total}$ of vehicle mix percentage values rounded to the nearest one-hundredth.

TABLE 6-8: HORIZON YEAR WITH PROJECT CONDITIONS VEHICLE MIX

1 Central Av. n/o El Prado Rd. 2 Central Av. s/o El Prado Rd. 3 El Prado Rd. n/o Kimball Av. 4 Euclid Av. n/o Walnut Av. 5 Euclid Av. n/o Riverside Dr. 6 Euclid Av. n/o Chino Av. 7 Euclid Av. n/o Schaefer Av. 8 Euclid Av. n/o Edison Av. 9 Euclid Av. n/o Eucalyptus A 10 Euclid Av. n/o Merrill Av. 11 Euclid Av. s/o Merrill Av. 12 Euclid Av. n/o Kimball Av. 13 Euclid Av. n/o Bickmore Av	Autos	Medium Trucks	Heavy	
2 Central Av. s/o El Prado Rd. 3 El Prado Rd. n/o Kimball Av. 4 Euclid Av. n/o Walnut Av. 5 Euclid Av. n/o Riverside Dr. 6 Euclid Av. n/o Chino Av. 7 Euclid Av. n/o Schaefer Av. 8 Euclid Av. n/o Edison Av. 9 Euclid Av. n/o Eucalyptus A 10 Euclid Av. n/o Merrill Av. 11 Euclid Av. s/o Merrill Av. 12 Euclid Av. n/o Kimball Av.			Trucks	Total ²
3 El Prado Rd. n/o Kimball Av. 4 Euclid Av. n/o Walnut Av. 5 Euclid Av. n/o Riverside Dr. 6 Euclid Av. n/o Chino Av. 7 Euclid Av. n/o Schaefer Av. 8 Euclid Av. n/o Edison Av. 9 Euclid Av. n/o Eucalyptus A 10 Euclid Av. n/o Merrill Av. 11 Euclid Av. s/o Merrill Av. 12 Euclid Av. n/o Kimball Av.	93.46%	4.65%	1.88%	100.00%
4 Euclid Av. n/o Walnut Av. 5 Euclid Av. n/o Riverside Dr. 6 Euclid Av. n/o Chino Av. 7 Euclid Av. n/o Schaefer Av. 8 Euclid Av. n/o Edison Av. 9 Euclid Av. n/o Eucalyptus A 10 Euclid Av. n/o Merrill Av. 11 Euclid Av. s/o Merrill Av. 12 Euclid Av. n/o Kimball Av.	93.43%	4.68%	1.89%	100.00%
5 Euclid Av. n/o Riverside Dr. 6 Euclid Av. n/o Chino Av. 7 Euclid Av. n/o Schaefer Av. 8 Euclid Av. n/o Edison Av. 9 Euclid Av. n/o Eucalyptus A 10 Euclid Av. n/o Merrill Av. 11 Euclid Av. s/o Merrill Av. 12 Euclid Av. n/o Kimball Av.	93.51%	4.62%	1.87%	100.00%
6 Euclid Av. n/o Chino Av. 7 Euclid Av. n/o Schaefer Av. 8 Euclid Av. n/o Edison Av. 9 Euclid Av. n/o Eucalyptus A 10 Euclid Av. n/o Merrill Av. 11 Euclid Av. s/o Merrill Av. 12 Euclid Av. n/o Kimball Av.	92.86%	4.91%	2.24%	100.00%
7 Euclid Av. n/o Schaefer Av. 8 Euclid Av. n/o Edison Av. 9 Euclid Av. n/o Eucalyptus A 10 Euclid Av. n/o Merrill Av. 11 Euclid Av. s/o Merrill Av. 12 Euclid Av. n/o Kimball Av.	92.78%	4.94%	2.29%	100.00%
8 Euclid Av. n/o Edison Av. 9 Euclid Av. n/o Eucalyptus A 10 Euclid Av. n/o Merrill Av. 11 Euclid Av. s/o Merrill Av. 12 Euclid Av. n/o Kimball Av.	92.84%	4.91%	2.26%	100.00%
9 Euclid Av. n/o Eucalyptus A 10 Euclid Av. n/o Merrill Av. 11 Euclid Av. s/o Merrill Av. 12 Euclid Av. n/o Kimball Av.	92.85%	4.90%	2.25%	100.00%
10Euclid Av.n/o Merrill Av.11Euclid Av.s/o Merrill Av.12Euclid Av.n/o Kimball Av.	92.87%	4.89%	2.23%	100.00%
11Euclid Av.s/o Merrill Av.12Euclid Av.n/o Kimball Av.	v. 92.84%	4.90%	2.26%	100.00%
12 Euclid Av. n/o Kimball Av.	92.85%	4.89%	2.26%	100.00%
	92.89%	4.88%	2.24%	100.00%
13 Fuclid Av n/o Rickmore Av	92.88%	4.88%	2.24%	100.00%
1 10 DICKINDLE AV	. 92.76%	4.88%	2.36%	100.00%
14 Archibald Av. n/o Limonite Av.	93.42%	4.69%	1.89%	100.00%
15 Archibald Av. s/o Limonite Av.	93.36%	4.72%	1.93%	100.00%
16 Archibald Av. s/o Schleisman R	d. 93.35%	4.71%	1.94%	100.00%
17 Kimball Av. w/o Mountain A	v. 93.54%	4.60%	1.86%	100.00%
18 Kimball Av. w/o Euclid Av.	93.40%	4.70%	1.90%	100.00%
19 Kimball Av. e/o Euclid Av.	93.44%	4.62%	1.94%	100.00%
20 Kimball Av. w/o Rincon Mea	dows Av. 93.44%	4.62%	1.94%	100.00%
21 Kimball Av. e/o Rincon Meac	lows Av. 93.44%	4.61%	1.94%	100.00%
22 Kimball Av. e/o Mill Creek Av	93.45%	4.61%	1.95%	100.00%
23 Kimball Av. e/o Main St.	93.44%	4.61%	1.95%	100.00%
24 Kimball Av. e/o Flight Av.	93.43%	4.60%	1.97%	100.00%
25 Limonite Av. w/o Archibald Av	93.42%	4.64%	1.94%	100.00%
26 Limonite Av. e/o Archibald Av	. 93.39%	4.68%	1.93%	100.00%
27 Pine Av. w/o El Prado Rd.	92.38%	5.02%	2.60%	100.00%
28 Pine Av. w/o Euclid Av.	93.32%	4.71%	1.97%	100.00%
29 Pine Av. e/o Euclid Av.	93.34%	4.71%	1.95%	100.00%
30 Pine Av. w/o Chino Coron	a Rd. 93.34%	4.71%	1.95%	100.00%
31 Pine Av. w/o W. Preserve	Loop 93.28%	4.72%	2.00%	100.00%
32 Pine Av. w/o E. Preserve I	oop 93.32%	4.72%	1.96%	100.00%
33 Pine Av. w/o Hellman Av.	93.32%	4.72%	1.96%	100.00%
34 Schleisman Rd. w/o Archibald Av	y. 93.33%	4.72%		

 $^{{}^1 \, {\}sf Source: Majestic \, Chino \, Heritage \, Traffic \, Impact \, Analysis, \, Urban \, Crossroads, \, Inc.}$



 $^{^{\}rm 2}\,\text{Total}$ 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 6-9. 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: $PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$

TABLE 6-9: VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

Equipment	PPV (in/sec) at 25 feet
Small bulldozer	0.003
Jackhammer	0.035
Loaded Trucks	0.076
Large bulldozer	0.089

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, September 2018.



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7 OFF-SITE TRAFFIC NOISE IMPACTS

To assess the off-site transportation CNEL noise level impacts associated with development of the proposed Project, noise contours were developed based on *Majestic Chino Heritage Traffic Impact Analysis*. (2) 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:

PROJECT OPERATIONAL TRAFFIC

- <u>Existing Conditions Without Project</u>: This scenario refers to the existing present-day noise conditions without the proposed Project.
 - Existing With Project: This scenario refers to the existing present-day noise conditions with the proposed Project.
- Opening Year 2022 Without the Project: This scenario refers to Opening Year noise conditions without the proposed Project.
 - Opening Year 2022 With Project: This scenario includes all cumulative projects identified in the Traffic Impact Analysis.
- <u>Horizon Year 2040 Without Project</u>: This scenario refers to the background noise conditions at Horizon Year 2040 without the proposed Project.
 - Horizon Year 2040 With Project: This scenario corresponds to Horizon Year 2040 conditions, and includes all cumulative projects identified in the *Traffic Impact Analysis*.

SOIL IMPORT/EXPORT HAUL TRUCK CONSTRUCTION TRAFFIC

- <u>Existing Conditions Without Project</u>: This scenario refers to the existing present-day noise conditions without the proposed Project.
 - Existing With Project: This scenario refers to the existing present-day noise conditions with the proposed soil import/export truck haul trips to the Excess Fill Dirt Sites.

7.1 PROJECT OPERATIONAL 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. 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 and 7-6 present a summary of the exterior traffic noise levels, without barrier attenuation, for the study area roadway segments analyzed from the without Project to the with Project conditions for Existing, Opening Year 2022, and Horizon Year 2040 conditions. Appendix 7.1 includes a summary of the traffic noise level contours for each of the traffic scenarios.



TABLE 7-1: EXISTING WITHOUT PROJECT CONDITIONS NOISE CONTOURS

			Adjacent	CNEL at Nearest		enterline	ntour (Feet)
	Road	Segment	Planned (Existing)	Adjacent	70	65	60
		_	Land Use ¹	Land Use	dBA	dBA	dBA
				(dBA) ²	CNEL	CNEL	CNEL
2 0	Central Av.	n/o El Prado Rd.	Industrial/Urban Reserve	74.5	119	257	553
1 4 1 0	Central Av.	s/o El Prado Rd.	Industrial	75.3	136	293	632
3 EI	El Prado Rd.	n/o Kimball Av.	Industrial/Urban Reserve	74.7	90	194	417
4 E	Euclid Av.	n/o Walnut Av.	Commercial	78.8	322	695	1497
5 E	Euclid Av.	n/o Riverside Dr.	Residential/Commercial	78.0	286	616	1328
6 E	Euclid Av.	n/o Chino Av.	Residential/Commercial	78.0	286	616	1327
7 E	Euclid Av.	n/o Schaefer Av.	Residential/Commercial	78.4	305	657	1414
8 E	Euclid Av.	n/o Edison Av.	Residential/Commercial	78.7	320	689	1484
9 E	Euclid Av.	n/o Eucalyptus Av.	Residential/Commercial	78.4	304	656	1413
10 E	Euclid Av.	n/o Merrill Av.	Residential/Agricultural	79.0	334	720	1551
11 E	Euclid Av.	s/o Merrill Av.	Open Space/Airport Related	78.8	325	700	1509
12 E	Euclid Av.	n/o Kimball Av.	Industrial/Airport Related	78.8	322	694	1496
13 E	Euclid Av.	n/o Bickmore Av.	Industrial/Commercial	76.6	233	502	1081
14 A	Archibald Av.	n/o Limonite Av.	Commercial/Residential	78.0	287	619	1334
15 A	Archibald Av.	s/o Limonite Av.	Commercial/Residential	71.4	94	204	438
16 A	Archibald Av.	s/o Schleisman Rd.	Commercial/ Residential	71.0	89	191	412
17 Ki	Kimball Av.	w/o Mountain Av.	Urban Reserve/Industrial	74.7	90	195	420
18 Ki	Kimball Av.	w/o Euclid Av.	Industrial/Airport Related	75.3	99	213	459
19 Ki	Kimball Av.	e/o Euclid Av.	Industrial/Airport Related	74.1	92	198	426
20 Ki	Kimball Av.	w/o Rincon Meadows Av.	Airport Related/Residential	74.3	95	205	443
21 Ki	Kimball Av.	e/o Rincon Meadows Av.	Airport Related/Residential	74.1	93	200	430
22 Ki	Kimball Av.	e/o Mill Creek Av.	Airport Related/Residential	73.7	87	187	402
23 Ki	Kimball Av.	e/o Main St.	Airport Related/Residential	73.4	83	179	386
24 Ki	Kimball Av.	e/o Flight Av.	Industrial/Residential	72.7	74	160	346
25 Li	imonite Av.	w/o Archibald Av.	Industrial	n/a	n/a	n/a	n/a
26 Li	imonite Av.	e/o Archibald Av.	Commercial/Residential	71.3	93	200	431
27 Pi	Pine Av.	w/o El Prado Rd.	Open Space (Golf Course)	43.8	RW	RW	RW
28 Pi	Pine Av.	w/o Euclid Av.	Industrial/Open Space	68.4	RW	101	219
29 Pi	Pine Av.	e/o Euclid Av.	Comm./Recreation (Residential)	73.9	109	235	506
30 Pi	Pine Av.	w/o Chino Corona Rd.	Commercial/Residential	74.5	120	259	558
31 Pi	Pine Av.	w/o W. Preserve Loop	Residential	71.9	81	174	376
32 Pi	Pine Av.	w/o E. Preserve Loop	Residential	74.0	112	241	518
33 Pi	Pine Av.	w/o Hellman Av.	Residential	74.0	111	240	516
34 Sc	Schleisman Rd.	w/o Archibald Av.	Commercial/Residential	72.2	106	228	491

 $^{^{\}rm 1}$ Sources: Land Use Maps of the City of Chino, Chino Hills, Ontario, and Eastvale, and aerial imagery.



² 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.

[&]quot;RW" = Location of the respective noise contour falls within the right-of-way of the road; "n/a" = Roadway segment does not represent a paved and/or fully constructed roadway under the given scenario.

TABLE 7-2: EXISTING WITH PROJECT CONDITIONS NOISE CONTOURS

Land Use				Adjacent	CNEL at Nearest		nce to Co enterline	
2 Central Av. s/o El Prado Rd. Industrial (Industrial) 75.6 142 307 661 3 El Prado Rd. n/o Kimball Av. Industrial/Urban Reserve 75.0 95 206 443 4 Euclid Av. n/o Walnut Av. Commercial 79.2 344 71 1596 5 Euclid Av. n/o Chino Av. Residential/Commercial 78.5 309 665 1434 6 Euclid Av. n/o Schaefer Av. Residential/Commercial 78.5 309 666 1434 7 Euclid Av. n/o Edison Av. Residential/Commercial 78.9 327 705 1520 8 Euclid Av. n/o Euclayptus Av. Residential/Commercial 78.9 327 705 1520 10 Euclid Av. n/o Merrill Av. Open Space/Airport Related 79.1 348 750 1615 11 Euclid Av. n/o Bickmore Av. Industrial/Commercial 77.3 257 754 1603 1	ID	Road	Segment	Planned (Existing) Land Use ¹		dBA	dBA	
2 Central Av. s/o El Prado Rd. Industrial/Urban Reserve 75.6 142 307 661 3 El Prado Rd. n/o Kimball Av. Industrial/Urban Reserve 75.0 95 206 443 4 Euclid Av. n/o Riverside Dr. Residential/Commercial 78.5 309 665 1434 5 Euclid Av. n/o Chino Av. Residential/Commercial 78.5 309 666 1434 7 Euclid Av. n/o Schaefer Av. Residential/Commercial 78.9 327 705 1520 8 Euclid Av. n/o Edison Av. Residential/Commercial 78.9 327 705 1520 9 Euclid Av. n/o Euclayptus Av. Residential/Commercial 78.9 327 705 1520 10 Euclid Av. n/o Merrill Av. Open Space/Airport Related 79.1 348 750 1615 11 Euclid Av. n/o Bickmore Av. Industrial/Commercial 77.3 257 554 1194 <	1	Central Av.	n/o El Prado Rd.	Industrial/Urban Reserve	74.5	120	258	556
4 Euclid Av. n/o Walnut Av. Commercial 79.2 344 741 1596 5 Euclid Av. n/o Riverside Dr. Residential/Commercial 78.5 309 665 1434 6 Euclid Av. n/o Chino Av. Residential/Commercial 78.5 309 666 1434 7 Euclid Av. n/o Edison Av. Residential/Commercial 78.9 327 705 1520 8 Euclid Av. n/o Edison Av. Residential/Commercial 78.9 327 705 1520 9 Euclid Av. n/o Merrill Av. Residential/Commercial 78.9 327 705 1520 10 Euclid Av. n/o Merrill Av. Open Space/Airport Related 79.3 348 750 1615 11 Euclid Av. n/o Kimball Av. Industrial/Airport Related 79.2 345 744 1603 13 Euclid Av. n/o Bickmore Av. Industrial/Commercial 77.3 257 554 1194 14	2	Central Av.	s/o El Prado Rd.		75.6	142	307	661
4 Euclid Av. n/o Riverside Dr. Residential/Commercial 79.2 344 741 1596 5 Euclid Av. n/o Riverside Dr. Residential/Commercial 78.5 309 665 1434 6 Euclid Av. n/o Chino Av. Residential/Commercial 78.5 309 666 1434 7 Euclid Av. n/o Schaefer Av. Residential/Commercial 78.9 327 705 1520 8 Euclid Av. n/o Eucliyptus Av. Residential/Commercial 78.9 327 705 1520 10 Euclid Av. n/o Merrill Av. Residential/Commercial 78.9 327 705 1520 11 Euclid Av. n/o Merrill Av. Open Space/Airport Related 79.3 348 750 1615 12 Euclid Av. n/o Bickmore Av. Industrial/Airport Related 79.2 345 744 1603 13 Euclid Av. n/o Bickmore Av. Industrial/Commercial 77.3 257 554 1194	3	El Prado Rd.	n/o Kimball Av.	Industrial/Urban Reserve	75.0	95	206	443
6 Euclid Av. n/o Chino Av. Residential/Commercial 78.5 309 666 1434 7 Euclid Av. n/o Schaefer Av. Residential/Commercial 78.9 327 705 1520 8 Euclid Av. n/o Edison Av. Residential/Commercial 79.1 342 737 1587 9 Euclid Av. n/o Merrill Av. Residential/Commercial 79.1 342 737 1587 10 Euclid Av. n/o Merrill Av. Residential/Agricultural 79.4 357 768 1655 11 Euclid Av. n/o Merrill Av. Open Space/Airport Related 79.3 348 750 1615 12 Euclid Av. n/o Bickmore Av. Industrial/Airport Related 79.2 345 744 1603 13 Euclid Av. n/o Limonite Av. Commercial/Residential 78.0 288 620 1336 15 Archibald Av. s/o Schleisman Rd. Commercial/Residential 71.1 90 193 416	4	Euclid Av.	n/o Walnut Av.		79.2	344	741	1596
7 Euclid Av. n/o Schaefer Av. Residential/Commercial 78.9 327 705 1520 8 Euclid Av. n/o Edison Av. Residential/Commercial 79.1 342 737 1587 9 Euclid Av. n/o Merrill Av. Residential/Commercial 78.9 327 705 1520 10 Euclid Av. n/o Merrill Av. Residential/Agricultural 79.4 357 768 1655 11 Euclid Av. s/o Merrill Av. Open Space/Airport Related 79.3 348 750 1615 12 Euclid Av. n/o Kimball Av. Industrial/Airport Related 79.2 345 744 1603 13 Euclid Av. n/o Eimonite Av. Commercial/Residential 77.3 257 554 1194 14 Archibald Av. s/o Schleisman Rd. Commercial/Residential 71.1 90 193 416 15 Archibald Av. s/o Schleisman Rd. Commercial/Residential 71.1 90 193 416			·					1434
7 Euclid Av. n/o Schaefer Av. Residential/Commercial 78.9 327 705 1520 8 Euclid Av. n/o Edison Av. Residential/Commercial 79.1 342 737 1587 9 Euclid Av. n/o Merrill Av. Residential/Commercial 78.9 327 705 1520 10 Euclid Av. n/o Merrill Av. Residential/Agricultural 79.4 357 768 1655 11 Euclid Av. s/o Merrill Av. Open Space/Airport Related 79.3 348 750 1615 12 Euclid Av. n/o Kimball Av. Industrial/Airport Related 79.2 345 744 1603 13 Euclid Av. n/o Limonite Av. Commercial/Residential 78.0 288 620 1336 15 Archibald Av. s/o Schleisman Rd. Commercial/Residential 71.1 90 193 416 16 Archibald Av. s/o Schleisman Rd. Commercial/Residential 71.1 90 193 416	6	Euclid Av.	n/o Chino Av.	Residential/Commercial	78.5	309	666	1434
9 Euclid Av. n/o Eucalyptus Av. Residential/Commercial 78.9 327 705 1520 10 Euclid Av. n/o Merrill Av. Residential/Agricultural 79.4 357 768 1655 11 Euclid Av. s/o Merrill Av. Open Space/Airport Related 79.3 348 750 1615 12 Euclid Av. n/o Kimball Av. Industrial/Commercial 77.3 257 554 1194 13 Euclid Av. n/o Bickmore Av. Industrial/Commercial 77.3 257 554 1194 14 Archibald Av. n/o Limonite Av. Commercial/Residential 78.0 288 620 1336 15 Archibald Av. s/o Schleisman Rd. Commercial/Residential 71.1 90 193 416 17 Kimball Av. w/o Buclid Av. Urban Reserve/Industrial 75.1 97 209 450 18 Kimball Av. w/o Euclid Av. Industrial/Airport Related 75.3 100 215 464	7	Euclid Av.	n/o Schaefer Av.	*	78.9	327	705	1520
9 Euclid Av. n/o Eucalyptus Av. Residential/Commercial 78.9 327 705 1520 10 Euclid Av. n/o Merrill Av. Residential/Agricultural 79.4 357 768 1655 11 Euclid Av. s/o Merrill Av. Open Space/Airport Related 79.3 348 750 1615 12 Euclid Av. n/o Kimball Av. Industrial/Airport Related 79.2 345 744 1603 13 Euclid Av. n/o Bickmore Av. Industrial/Airport Related 77.3 257 554 1194 14 Archibald Av. n/o Limonite Av. Commercial/Residential 78.0 288 620 1336 15 Archibald Av. s/o Schleisman Rd. Commercial/Residential 71.1 90 193 416 17 Kimball Av. w/o Bountain Av. Urban Reserve/Industrial 75.1 97 209 450 18 Kimball Av. w/o Euclid Av. Industrial/Airport Related 75.1 97 209	8	Euclid Av.	n/o Edison Av.	Residential/Commercial	79.1	342	737	1587
10 Euclid Av. n/o Merrill Av. Residential/Agricultural 79.4 357 768 1655 11 Euclid Av. s/o Merrill Av. Open Space/Airport Related 79.3 348 750 1615 12 Euclid Av. n/o Kimball Av. Industrial/Airport Related 79.2 345 774 1603 13 Euclid Av. n/o Bickmore Av. Industrial/Commercial 77.3 257 554 1194 14 Archibald Av. n/o Limonite Av. Commercial/Residential 78.0 288 620 1336 15 Archibald Av. s/o Limonite Av. Commercial/Residential 71.6 97 209 449 16 Archibald Av. s/o Schleisman Rd. Commercial/Residential 71.1 90 193 416 17 Kimball Av. w/o Mountain Av. Urban Reserve/Industrial 75.1 97 209 450 18 Kimball Av. w/o Euclid Av. Industrial/Airport Related 75.1 97 209 450 </td <td>9</td> <td>Euclid Av.</td> <td>n/o Eucalyptus Av.</td> <td>Residential/Commercial</td> <td>78.9</td> <td>327</td> <td></td> <td>1520</td>	9	Euclid Av.	n/o Eucalyptus Av.	Residential/Commercial	78.9	327		1520
11 Euclid Av. s/o Merrill Av. Open Space/Airport Related 79.3 348 750 1615 12 Euclid Av. n/o Kimball Av. Industrial/Airport Related 79.2 345 744 1603 13 Euclid Av. n/o Bickmore Av. Industrial/Commercial 77.3 257 554 1194 14 Archibald Av. n/o Limonite Av. Commercial/Residential 78.0 288 620 1336 15 Archibald Av. s/o Schleisman Rd. Commercial/Residential 71.6 97 209 449 16 Archibald Av. s/o Schleisman Rd. Commercial/Residential 71.1 90 193 416 17 Kimball Av. w/o Mountain Av. Urban Reserve/Industrial 75.1 97 209 450 18 Kimball Av. w/o Euclid Av. Industrial/Airport Related 75.3 100 215 464 19 Kimball Av. e/o Rincon Meadows Av. Airport Related/Residential 74.1 92 198	10	Euclid Av.		•	79.4	357	768	1655
12 Euclid Av. n/o Kimball Av. Industrial/Airport Related 79.2 345 744 1603 13 Euclid Av. n/o Bickmore Av. Industrial/Commercial 77.3 257 554 1194 14 Archibald Av. n/o Limonite Av. Commercial/Residential 78.0 288 620 1336 15 Archibald Av. s/o Limonite Av. Commercial/Residential 71.6 97 209 449 16 Archibald Av. s/o Schleisman Rd. Commercial/Residential 71.1 90 193 416 17 Kimball Av. w/o Mountain Av. Urban Reserve/Industrial 75.1 97 209 450 18 Kimball Av. w/o Euclid Av. Industrial/Airport Related 75.1 97 209 450 19 Kimball Av. e/o Euclid Av. Industrial/Airport Related 75.1 97 209 450 18 Kimball Av. e/o Rincon Meadows Av. Airport Related/Residential 74.2 93 200 <t< td=""><td>11</td><td></td><td>s/o Merrill Av.</td><td></td><td>79.3</td><td>348</td><td>750</td><td>1615</td></t<>	11		s/o Merrill Av.		79.3	348	750	1615
14 Archibald Av. n/o Limonite Av. Commercial/Residential 78.0 288 620 1336 15 Archibald Av. s/o Limonite Av. Commercial/Residential 71.6 97 209 449 16 Archibald Av. s/o Schleisman Rd. Commercial/Residential 71.1 90 193 416 17 Kimball Av. w/o Mountain Av. Urban Reserve/Industrial 75.1 97 209 450 18 Kimball Av. w/o Euclid Av. Industrial/Airport Related 75.3 100 215 464 19 Kimball Av. e/o Euclid Av. Industrial/Airport Related 74.1 92 198 427 20 Kimball Av. e/o Rincon Meadows Av. Airport Related/Residential 74.2 93 200 431 21 Kimball Av. e/o Mill Creek Av. Airport Related/Residential 73.7 87 187 402 23 Kimball Av. e/o Flight Av. Industrial/Residential 72.7 74 160	12	Euclid Av.	n/o Kimball Av.		79.2	345		1603
15 Archibald Av. \$\sigma \text{Commercial/Residential}\$ 71.6 97 209 449 16 Archibald Av. \$\sigma \text{Schleisman Rd.}\$ Commercial/ Residential 71.1 90 193 416 17 Kimball Av. \$\windstall Av. Urban Reserve/Industrial 75.1 97 209 450 18 Kimball Av. \$\windstall Av. Industrial/Airport Related 75.3 100 215 464 19 Kimball Av. \$\ello \text{Euclid Av.}\$ Industrial/Airport Related 74.1 92 198 427 20 Kimball Av. \$\ello \text{Rincon Meadows Av.}\$ Airport Related/Residential 74.3 96 206 443 21 Kimball Av. \$\ello \text{Rincon Meadows Av.}\$ Airport Related/Residential 73.7 87 187 402 21 Kimball Av. \$\ello \text{Mill Creek Av.}\$ Airport Related/Residential 73.7 87 187 402 23 Kimball Av. \$\ello \text{Main Mill Creek Av.}\$ Airport Related/Residential	13	Euclid Av.	n/o Bickmore Av.	Industrial/Commercial	77.3	257	554	1194
16 Archibald Av. \$/o Schleisman Rd. Commercial/ Residential 71.1 90 193 416 17 Kimball Av. w/o Mountain Av. Urban Reserve/Industrial 75.1 97 209 450 18 Kimball Av. w/o Euclid Av. Industrial/Airport Related 75.3 100 215 464 19 Kimball Av. e/o Euclid Av. Industrial/Airport Related 74.1 92 198 427 20 Kimball Av. e/o Rincon Meadows Av. Airport Related/Residential 74.3 96 206 443 21 Kimball Av. e/o Mill Creek Av. Airport Related/Residential 73.7 87 187 402 23 Kimball Av. e/o Main St. Airport Related/Residential 73.4 83 179 386 24 Kimball Av. e/o Flight Av. Industrial/Residential 72.7 74 160 346 25 Limonite Av. e/o Archibald Av. Industrial/Residential 71.5 95 206 <t< td=""><td>14</td><td>Archibald Av.</td><td>n/o Limonite Av.</td><td>Commercial/Residential</td><td>78.0</td><td>288</td><td>620</td><td>1336</td></t<>	14	Archibald Av.	n/o Limonite Av.	Commercial/Residential	78.0	288	620	1336
17 Kimball Av. W/o Mountain Av. Urban Reserve/Industrial 75.1 97 209 450 18 Kimball Av. W/o Euclid Av. Industrial/Airport Related 75.3 100 215 464 19 Kimball Av. e/o Euclid Av. Industrial/Airport Related 74.1 92 198 427 20 Kimball Av. w/o Rincon Meadows Av. Airport Related/Residential 74.3 96 206 443 21 Kimball Av. e/o Rincon Meadows Av. Airport Related/Residential 74.2 93 200 431 22 Kimball Av. e/o Mill Creek Av. Airport Related/Residential 73.7 87 187 402 23 Kimball Av. e/o Main St. Airport Related/Residential 73.4 83 179 386 24 Kimball Av. e/o Flight Av. Industrial/Residential 72.7 74 160 346 25 Limonite Av. w/o Archibald Av. Commercial/Residential 71.5 95 206	15	Archibald Av.	s/o Limonite Av.	Commercial/Residential	71.6	97	209	449
18 Kimball Av. w/o Euclid Av. Industrial/Airport Related 75.3 100 215 464 19 Kimball Av. e/o Euclid Av. Industrial/Airport Related 74.1 92 198 427 20 Kimball Av. w/o Rincon Meadows Av. Airport Related/Residential 74.3 96 206 443 21 Kimball Av. e/o Rincon Meadows Av. Airport Related/Residential 74.2 93 200 431 22 Kimball Av. e/o Mill Creek Av. Airport Related/Residential 73.7 87 187 402 23 Kimball Av. e/o Main St. Airport Related/Residential 73.4 83 179 386 24 Kimball Av. e/o Flight Av. Industrial/Residential 72.7 74 160 346 25 Limonite Av. e/o Archibald Av. Industrial/Residential 71.5 95 206 443 27 Pine Av. w/o El Prado Rd. Open Space (Golf Course) 43.8 RW RW	16	Archibald Av.	s/o Schleisman Rd.	Commercial/ Residential	71.1	90	193	416
19 Kimball Av. e/o Euclid Av. Industrial/Airport Related 74.1 92 198 427 20 Kimball Av. w/o Rincon Meadows Av. Airport Related/Residential 74.3 96 206 443 21 Kimball Av. e/o Rincon Meadows Av. Airport Related/Residential 74.2 93 200 431 22 Kimball Av. e/o Mill Creek Av. Airport Related/Residential 73.7 87 187 402 23 Kimball Av. e/o Main St. Airport Related/Residential 73.7 87 187 402 23 Kimball Av. e/o Main St. Airport Related/Residential 73.7 87 187 402 23 Kimball Av. e/o Main St. Airport Related/Residential 73.7 87 187 402 24 Kimball Av. e/o Flight Av. Industrial/Residential 72.7 74 160 346 25 Limonite Av. e/o Archibald Av. Commercial/Residential 71.5 95 206	17	Kimball Av.	w/o Mountain Av.	Urban Reserve/Industrial	75.1	97	209	450
20 Kimball Av. w/o Rincon Meadows Av. Airport Related/Residential 74.3 96 206 443 21 Kimball Av. e/o Rincon Meadows Av. Airport Related/Residential 74.2 93 200 431 22 Kimball Av. e/o Mill Creek Av. Airport Related/Residential 73.7 87 187 402 23 Kimball Av. e/o Main St. Airport Related/Residential 73.4 83 179 386 24 Kimball Av. e/o Flight Av. Industrial/Residential 72.7 74 160 346 25 Limonite Av. w/o Archibald Av. Industrial/Residential n/a p/a 26 Limonite Av. e/o Archibald Av. Commercial/Residential 71.5 95 206 443 27 Pine Av. w/o Euclid Av. Industrial/Open Space 69.3 RW RW RW RW <	18	Kimball Av.	w/o Euclid Av.	Industrial/Airport Related	75.3	100	215	464
21 Kimball Av. e/o Rincon Meadows Av. Airport Related/Residential 74.2 93 200 431 22 Kimball Av. e/o Mill Creek Av. Airport Related/Residential 73.7 87 187 402 23 Kimball Av. e/o Main St. Airport Related/Residential 73.4 83 179 386 24 Kimball Av. e/o Flight Av. Industrial/Residential 72.7 74 160 346 25 Limonite Av. w/o Archibald Av. Industrial n/a n/a n/a n/a 26 Limonite Av. e/o Archibald Av. Commercial/Residential 71.5 95 206 443 27 Pine Av. w/o El Prado Rd. Open Space (Golf Course) 43.8 RW RW RW 28 Pine Av. w/o Euclid Av. Industrial/Open Space 69.3 RW 115 248 29 Pine Av. e/o Euclid Av. Comm./Recreation (Residential) 74.1 113 243 523 30 Pine Av. w/o Chino Corona Rd. Commercial/Residential 74.7<	19	Kimball Av.	e/o Euclid Av.	Industrial/Airport Related	74.1	92	198	427
22 Kimball Av. e/o Mill Creek Av. Airport Related/Residential 73.7 87 187 402 23 Kimball Av. e/o Main St. Airport Related/Residential 73.4 83 179 386 24 Kimball Av. e/o Flight Av. Industrial/Residential 72.7 74 160 346 25 Limonite Av. w/o Archibald Av. Industrial n/a	20	Kimball Av.	w/o Rincon Meadows Av.	Airport Related/Residential	74.3	96	206	443
23 Kimball Av. e/o Main St. Airport Related/Residential 73.4 83 179 386 24 Kimball Av. e/o Flight Av. Industrial/Residential 72.7 74 160 346 25 Limonite Av. w/o Archibald Av. Industrial n/a n/a n/a n/a 26 Limonite Av. e/o Archibald Av. Commercial/Residential 71.5 95 206 443 27 Pine Av. w/o El Prado Rd. Open Space (Golf Course) 43.8 RW RW RW 28 Pine Av. w/o Euclid Av. Industrial/Open Space 69.3 RW 115 248 29 Pine Av. e/o Euclid Av. Comm./Recreation (Residential) 74.1 113 243 523 30 Pine Av. w/o Chino Corona Rd. Commercial/Residential 74.7 124 266 574 31 Pine Av. w/o W. Preserve Loop Residential 74.3 115 248 535 32	21	Kimball Av.	e/o Rincon Meadows Av.	Airport Related/Residential	74.2	93	200	431
24 Kimball Av. e/o Flight Av. Industrial/Residential 72.7 74 160 346 25 Limonite Av. w/o Archibald Av. Industrial n/a	22	Kimball Av.	e/o Mill Creek Av.	Airport Related/Residential	73.7	87	187	402
25 Limonite Av. W/o Archibald Av. Industrial n/a n/a n/a n/a 26 Limonite Av. e/o Archibald Av. Commercial/Residential 71.5 95 206 443 27 Pine Av. w/o El Prado Rd. Open Space (Golf Course) 43.8 RW RW RW 28 Pine Av. w/o Euclid Av. Industrial/Open Space 69.3 RW 115 248 29 Pine Av. e/o Euclid Av. Comm./Recreation (Residential) 74.1 113 243 523 30 Pine Av. w/o Chino Corona Rd. Commercial/Residential 74.7 124 266 574 31 Pine Av. w/o W. Preserve Loop Residential 72.3 85 183 395 32 Pine Av. w/o E. Preserve Loop Residential 74.2 115 248 535 33 Pine Av. w/o Hellman Av. Residential 74.2 115 247 533	23	Kimball Av.	e/o Main St.	Airport Related/Residential	73.4	83	179	386
26 Limonite Av. e/o Archibald Av. Commercial/Residential 71.5 95 206 443 27 Pine Av. w/o El Prado Rd. Open Space (Golf Course) 43.8 RW RW RW 28 Pine Av. w/o Euclid Av. Industrial/Open Space 69.3 RW 115 248 29 Pine Av. e/o Euclid Av. Comm./Recreation (Residential) 74.1 113 243 523 30 Pine Av. w/o Chino Corona Rd. Commercial/Residential 74.7 124 266 574 31 Pine Av. w/o W. Preserve Loop Residential 72.3 85 183 395 32 Pine Av. w/o E. Preserve Loop Residential 74.2 115 248 535 33 Pine Av. w/o Hellman Av. Residential 74.2 115 247 533	24	Kimball Av.	e/o Flight Av.	Industrial/Residential	72.7	74	160	346
27 Pine Av. w/o El Prado Rd. Open Space (Golf Course) 43.8 RW RW RW 28 Pine Av. w/o Euclid Av. Industrial/Open Space 69.3 RW 115 248 29 Pine Av. e/o Euclid Av. Comm./Recreation (Residential) 74.1 113 243 523 30 Pine Av. w/o Chino Corona Rd. Commercial/Residential 74.7 124 266 574 31 Pine Av. w/o W. Preserve Loop Residential 72.3 85 183 395 32 Pine Av. w/o E. Preserve Loop Residential 74.3 115 248 535 33 Pine Av. w/o Hellman Av. Residential 74.2 115 247 533	25	Limonite Av.	w/o Archibald Av.	Industrial	n/a	n/a	n/a	n/a
28 Pine Av. w/o Euclid Av. Industrial/Open Space 69.3 RW 115 248 29 Pine Av. e/o Euclid Av. Comm./Recreation (Residential) 74.1 113 243 523 30 Pine Av. w/o Chino Corona Rd. Commercial/Residential 74.7 124 266 574 31 Pine Av. w/o W. Preserve Loop Residential 72.3 85 183 395 32 Pine Av. w/o E. Preserve Loop Residential 74.3 115 248 535 33 Pine Av. w/o Hellman Av. Residential 74.2 115 247 533	26	Limonite Av.	e/o Archibald Av.	Commercial/Residential	71.5	95	206	443
29 Pine Av. e/o Euclid Av. Comm./Recreation (Residential) 74.1 113 243 523 30 Pine Av. w/o Chino Corona Rd. Commercial/Residential 74.7 124 266 574 31 Pine Av. w/o W. Preserve Loop Residential 72.3 85 183 395 32 Pine Av. w/o E. Preserve Loop Residential 74.3 115 248 535 33 Pine Av. w/o Hellman Av. Residential 74.2 115 247 533	27	Pine Av.	w/o El Prado Rd.	Open Space (Golf Course)	43.8	RW	RW	RW
30 Pine Av. w/o Chino Corona Rd. Commercial/Residential 74.7 124 266 574 31 Pine Av. w/o W. Preserve Loop Residential 72.3 85 183 395 32 Pine Av. w/o E. Preserve Loop Residential 74.3 115 248 535 33 Pine Av. w/o Hellman Av. Residential 74.2 115 247 533	28	Pine Av.	w/o Euclid Av.	Industrial/Open Space	69.3	RW	115	248
31 Pine Av. w/o W. Preserve Loop Residential 72.3 85 183 395 32 Pine Av. w/o E. Preserve Loop Residential 74.3 115 248 535 33 Pine Av. w/o Hellman Av. Residential 74.2 115 247 533	29	Pine Av.	e/o Euclid Av.	Comm./Recreation (Residential)	74.1	113	243	523
32 Pine Av. w/o E. Preserve Loop Residential 74.3 115 248 535 33 Pine Av. w/o Hellman Av. Residential 74.2 115 247 533	30	Pine Av.	w/o Chino Corona Rd.		74.7	124	266	574
33 Pine Av. w/o Hellman Av. Residential 74.2 115 247 533	31	Pine Av.	w/o W. Preserve Loop	Residential	72.3	85	183	395
	32	Pine Av.	w/o E. Preserve Loop	Residential	74.3	115	248	535
24 Chlaiman Bd. Inda Arabibald An. Common 11/2 11 11 1 72 2 622 625 625	33	Pine Av.	w/o Hellman Av.	Residential	74.2	115	247	533
34 Schielsman kg. W/o Archibaid Av. Commercial/Residential 72.3 109 235 505	34	Schleisman Rd.	w/o Archibald Av.	Commercial/Residential	72.3	109	235	505

 $^{^{\}rm 1}$ Sources: Land Use Maps of the City of Chino, Chino Hills, Ontario, and Eastvale, and aerial imagery.



² 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.

[&]quot;RW" = Location of the respective noise contour falls within the right-of-way of the road; "n/a" = Roadway segment does not represent a paved and/or fully constructed roadway under the given scenario.

TABLE 7-3: OPENING YEAR WITHOUT PROJECT CONDITIONS NOISE CONTOURS

			Adjacent	CNEL at Nearest		nce to Co enterline	
ID	Road	Segment	Planned (Existing)	Adjacent	70	65	60
			Land Use ¹	Land Use	dBA	dBA	dBA
				(dBA) ²	CNEL	CNEL	CNEL
1	Central Av.	n/o El Prado Rd.	Industrial/Urban Reserve	74.8	125	269	580
2	Central Av.	s/o El Prado Rd.	Industrial	75.7	144	310	667
3	El Prado Rd.	n/o Kimball Av.	Industrial/Urban Reserve	75.1	96	207	446
4	Euclid Av.	n/o Walnut Av.	Commercial	79.4	355	764	1647
5	Euclid Av.	n/o Riverside Dr.	Residential/Commercial	78.7	318	686	1478
6	Euclid Av.	n/o Chino Av.	Residential/Commercial 78.7		320	689	1485
7	Euclid Av.	n/o Schaefer Av.	Residential/Commercial	79.1	340	732	1577
8	Euclid Av.	n/o Edison Av.	Residential/Commercial	79.4	356	766	1651
9	Euclid Av.	n/o Eucalyptus Av.	Residential/Commercial	79.1	341	735	1584
10	Euclid Av.	n/o Merrill Av.	Residential/Agricultural	79.6	366	789	1699
11	Euclid Av.	s/o Merrill Av.	Open Space/Airport Related	79.4	355	765	1649
12	Euclid Av.	n/o Kimball Av.	Industrial/Airport Related	79.3	352	759	1636
13	Euclid Av.	n/o Bickmore Av.	Industrial/Commercial	77.4	264	568	1223
14	Archibald Av.	n/o Limonite Av.	Commercial/Residential	78.6	316	681	1466
15	Archibald Av.	s/o Limonite Av.	Commercial/Residential	72.0	103	221	476
16	Archibald Av.	s/o Schleisman Rd.	Commercial/ Residential	71.4	94	203	437
17	Kimball Av.	w/o Mountain Av.	Urban Reserve/Industrial	75.2	97	210	451
18	Kimball Av.	w/o Euclid Av.	Industrial/Airport Related	75.7	105	227	489
19	Kimball Av.	e/o Euclid Av.	Industrial/Airport Related	74.6	100	215	464
20	Kimball Av.	w/o Rincon Meadows Av.	Airport Related/Residential	74.8	103	221	477
21	Kimball Av.	e/o Rincon Meadows Av.	Airport Related/Residential	74.6	100	215	464
22	Kimball Av.	e/o Mill Creek Av.	Airport Related/Residential	74.2	94	202	436
23	Kimball Av.	e/o Main St.	Airport Related/Residential	74.0	90	194	419
24	Kimball Av.	e/o Flight Av.	Industrial/Residential	73.2	81	174	374
25	Limonite Av.	w/o Archibald Av.	Industrial	28.7	RW	RW	RW
26	Limonite Av.	e/o Archibald Av.	Commercial/Residential	72.1	105	227	488
27	Pine Av.	w/o El Prado Rd.	Open Space (Golf Course)	44.1	RW	RW	RW
28	Pine Av.	w/o Euclid Av.	Industrial/Open Space	68.7	RW	106	228
29	Pine Av.	e/o Euclid Av.	Comm./Recreation (Residential)	74.4	118	254	547
30	Pine Av.	w/o Chino Corona Rd.	Commercial/Residential	75.0	128	277	596
31	Pine Av.	w/o W. Preserve Loop	Residential	72.5	88	189	407
32	Pine Av.	w/o E. Preserve Loop	Residential	74.6	121	260	561
	Pine Av.	w/o Hellman Av.	Residential	74.5	119	257	554
34	Schleisman Rd.	w/o Archibald Av.	Commercial/Residential	72.6	114	245	528

¹ Sources: Land Use Maps of the City of Chino, Chino Hills, Ontario, and Eastvale, and aerial imagery.



² 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.

[&]quot;RW" = Location of the respective noise contour falls within the right-of-way of the road; "n/a" = Roadway segment does not represent a paved and/or fully constructed roadway under the given scenario.

TABLE 7-4: OPENING YEAR WITH PROJECT CONDITIONS NOISE CONTOURS

1 Central A 2 Central A 3 El Prado 4 Euclid Av 5 Euclid Av 6 Euclid Av	v. n/o El Prado Rd. v. s/o El Prado Rd. Rd. n/o Kimball Av. n/o Walnut Av. n/o Riverside Dr.	Land Use¹ Land Use (dBA)² d (dBA)² Industrial/Urban Reserve 74.8 1 Industrial 76.0 1 Industrial/Urban Reserve 75.4 1 Commercial 79.7 3	0 65 BA dBA CNEL 25 270 50 323 01 218	60 dBA CNEL 582 696
2 Central A 3 El Prado 4 Euclid Av 5 Euclid Av	xv. s/o El Prado Rd. Rd. n/o Kimball Av. n/o Walnut Av. n/o Riverside Dr.	Land Use didBA)2 CN Industrial/Urban Reserve 74.8 1 Industrial 76.0 1 Industrial/Urban Reserve 75.4 1 Commercial 79.7 3	BA dBA CNEL 25 270 323	dBA CNEL 582
2 Central A 3 El Prado 4 Euclid Av 5 Euclid Av	xv. s/o El Prado Rd. Rd. n/o Kimball Av. n/o Walnut Av. n/o Riverside Dr.	Industrial/Urban Reserve 74.8 1 Industrial 76.0 1 Industrial/Urban Reserve 75.4 1 Commercial 79.7 3	EL CNEL 25 270 50 323	CNEL 582
2 Central A 3 El Prado 4 Euclid Av 5 Euclid Av	xv. s/o El Prado Rd. Rd. n/o Kimball Av. n/o Walnut Av. n/o Riverside Dr.	Industrial 76.0 1	50 323	_
3 El Prado 4 Euclid Av 5 Euclid Av	Rd. n/o Kimball Av. n/o Walnut Av. n/o Riverside Dr.	Industrial/Urban Reserve 75.4 1 Commercial 79.7 3		696
4 Euclid Av 5 Euclid Av	. n/o Walnut Av n/o Riverside Dr.	Commercial 79.7 3	01 218	
5 Euclid Av	. n/o Riverside Dr.			470
			75 808	1742
6 Fuelid Av		Residential/Commercial 79.1 3	10 733	1578
	n/o Chino Av.	Residential/Commercial 79.1 3	12 737	1587
7 Euclid Av	n/o Schaefer Av.	Residential/Commercial 79.5 3	778	1677
8 Euclid Av	n/o Edison Av.	Residential/Commercial 79.8 3	77 812	1749
9 Euclid Av	. n/o Eucalyptus Av	r. Residential/Commercial 79.5 3	782	1685
10 Euclid Av	. n/o Merrill Av.	Residential/Agricultural 80.0 3	37 835	1799
11 Euclid Av	. s/o Merrill Av.	Open Space/Airport Related 79.8 3	77 813	1751
12 Euclid Av	. n/o Kimball Av.	Industrial/Airport Related 79.7 3	75 807	1738
13 Euclid Av	n/o Bickmore Av.	Industrial/Commercial 78.0 2	36 617	1329
14 Archibalo	d Av. n/o Limonite Av.	Commercial/Residential 78.6 3	L7 682	1469
15 Archibalo	d Av. s/o Limonite Av.	Commercial/Residential 72.1 1	05 226	486
16 Archibalo	d Av. s/o Schleisman Ro	I. Commercial/ Residential 71.4 9	5 204	440
17 Kimball A	v. w/o Mountain Av	. Urban Reserve/Industrial 75.6 1	03 223	480
18 Kimball A	v. w/o Euclid Av.	Industrial/Airport Related 75.8 1	07 229	494
19 Kimball A	v. e/o Euclid Av.	Industrial/Airport Related 74.7 1	00 216	465
20 Kimball A	v. w/o Rincon Mead	ows Av. Airport Related/Residential 74.8 1	03 222	478
21 Kimball A	v. e/o Rincon Meado	ows Av. Airport Related/Residential 74.7 1	00 216	465
22 Kimball A	v. e/o Mill Creek Av.	Airport Related/Residential 74.2 9	4 203	436
23 Kimball A	v. e/o Main St.	Airport Related/Residential 74.0 9	0 195	419
24 Kimball A	v. e/o Flight Av.	Industrial/Residential 73.2	1 174	374
25 Limonite	Av. w/o Archibald Av.	Industrial 28.7 R	W RW	RW
26 Limonite	Av. e/o Archibald Av.	Commercial/Residential 72.3 1	08 232	500
27 Pine Av.	w/o El Prado Rd.	Open Space (Golf Course) 44.1 R	W RW	RW
28 Pine Av.	w/o Euclid Av.	Industrial/Open Space 69.5 R	W 119	257
29 Pine Av.	e/o Euclid Av.	Comm./Recreation (Residential) 74.6 1	21 261	563
30 Pine Av.	w/o Chino Corona	Rd. Commercial/Residential 75.1 1	32 284	612
31 Pine Av.	w/o W. Preserve I	oop Residential 72.8 9	2 198	426
32 Pine Av.	w/o E. Preserve Lo		24 268	577
33 Pine Av.	w/o Hellman Av.		23 264	570
34 Schleism	an Rd. w/o Archibald Av.	Commercial/Residential 72.8 1	L7 251	542

 $^{^{\}rm 1}$ Sources: Land Use Maps of the City of Chino, Chino Hills, Ontario, and Eastvale, and aerial imagery.



² 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.

[&]quot;RW" = Location of the respective noise contour falls within the right-of-way of the road; "n/a" = Roadway segment does not represent a paved and/or fully constructed roadway under the given scenario.

TABLE 7-5: HORIZON YEAR WITHOUT PROJECT CONDITIONS NOISE CONTOURS

			Adjacent	CNEL at Nearest		nce to Co enterline	
ID	Road	Segment	Planned (Existing)	Adjacent	70	65	60
			Land Use ¹	Land Use	dBA	dBA	dBA
				(dBA) ²	CNEL	CNEL	CNEL
1	Central Av.	n/o El Prado Rd.	Industrial/Urban Reserve	75.0	129	278	600
2	Central Av.	s/o El Prado Rd.	Industrial	75.9	149	320	689
3	El Prado Rd.	n/o Kimball Av.	Industrial/Urban Reserve	75.3	99	214	460
4	Euclid Av.	n/o Walnut Av.	Commercial	81.2	467	1007	2169
5	Euclid Av.	n/o Riverside Dr.	Residential/Commercial	80.5	424	913	1967
6	Euclid Av.	n/o Chino Av.	Residential/Commercial	80.9	445	959	2066
7	Euclid Av.	n/o Schaefer Av.	Residential/Commercial	80.9	447	964	2077
8	Euclid Av.	n/o Edison Av.	Residential/Commercial	81.1	463	998	2149
9	Euclid Av.	n/o Eucalyptus Av.	Residential/Commercial	80.7	436	939	2023
10	Euclid Av.	n/o Merrill Av.	Residential/Agricultural	80.7	433	934	2012
11	Euclid Av.	s/o Merrill Av.	Open Space/Airport Related	80.9	451	971	2092
12	Euclid Av.	n/o Kimball Av.	Industrial/Airport Related	80.9	447	963	2075
13	Euclid Av.	n/o Bickmore Av.	Industrial/Commercial	79.6	368	794	1710
14	Archibald Av.	n/o Limonite Av.	Commercial/Residential	80.6	429	925	1993
15	Archibald Av.	s/o Limonite Av.	Commercial/Residential	73.2	124	267	575
16	Archibald Av.	s/o Schleisman Rd.	Commercial/ Residential	72.0	103	223	480
17	Kimball Av.	w/o Mountain Av.	Urban Reserve/Industrial	75.4	100	216	466
18	Kimball Av.	w/o Euclid Av.	Industrial/Airport Related	76.6	120	260	559
19	Kimball Av.	e/o Euclid Av.	Industrial/Airport Related	75.4	112	242	522
20	Kimball Av.	w/o Rincon Meadows Av.	Airport Related/Residential	75.0	106	229	493
21	Kimball Av.	e/o Rincon Meadows Av.	Airport Related/Residential	74.9	103	223	480
22	Kimball Av.	e/o Mill Creek Av.	Airport Related/Residential	74.4	97	209	450
23	Kimball Av.	e/o Main St.	Airport Related/Residential	74.2	93	201	432
24	Kimball Av.	e/o Flight Av.	Industrial/Residential	73.5	83	179	387
25	Limonite Av.	w/o Archibald Av.	Industrial	73.0	121	260	561
26	Limonite Av.	e/o Archibald Av.	Commercial/Residential	75.0	165	355	764
27	Pine Av.	w/o El Prado Rd.	Open Space (Golf Course)	74.2	115	247	533
28	Pine Av.	w/o Euclid Av.	Industrial/Open Space	73.8	108	232	500
29	Pine Av.	e/o Euclid Av.	Comm./Recreation (Residential)	75.5	140	301	648
30	Pine Av.	w/o Chino Corona Rd.	Commercial/Residential	75.4	137	295	636
31	Pine Av.	w/o W. Preserve Loop	Residential	72.7	91	195	421
32	Pine Av.	w/o E. Preserve Loop	Residential	74.8	125	269	579
33	Pine Av.	w/o Hellman Av.	Residential	74.7	123	266	572
34	Schleisman Rd.	w/o Archibald Av.	Commercial/Residential	73.4	128	277	596

¹ Sources: Land Use Maps of the City of Chino, Chino Hills, Ontario, and Eastvale, and aerial imagery.



² 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.

[&]quot;RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-6: HORIZON YEAR WITH PROJECT CONDITIONS NOISE CONTOURS

Land Use				Adjacent	CNEL at Nearest		nce to Co enterline	
Central Av. n/o El Prado Rd. Industrial/Urban Reserve 75.0 130 279 602	ID	Road	Segment	Planned (Existing)	Adjacent	_		
1 Central Av. n/o El Prado Rd. Industrial/Urban Reserve 75.0 130 279 602 2 Central Av. s/o El Prado Rd. Industrial 75.9 149 320 690 3 El Prado Rd. n/o Kimball Av. Industrial/Urban Reserve 75.3 100 215 463 4 Euclid Av. n/o Walnut Av. Commercial 81.4 485 1045 2252 5 Euclid Av. n/o Riverside Dr. Residential/Commercial 80.8 443 954 2054 6 Euclid Av. n/o Schaefer Av. Residential/Commercial 81.1 466 1005 2164 8 Euclid Av. n/o Edison Av. Residential/Commercial 81.2 466 1005 2164 8 Euclid Av. n/o Edison Av. Residential/Commercial 81.0 455 981 2113 9 Euclid Av. n/o Merrill Av. Residential/Commercial 81.0 453 976 2104 10				Land OSE				_
2 Central Av. S/o El Prado Rd. Industrial 75.9 149 320 690 3 El Prado Rd. N/o Kimball Av. Industrial/Urban Reserve 75.3 100 215 463 4 Euclid Av. N/o Walnut Av. Commercial 81.4 485 1045 2252 5 Euclid Av. n/o Riverside Dr. Residential/Commercial 80.8 443 954 2054 6 Euclid Av. n/o Chino Av. Residential/Commercial 81.1 464 999 2153 7 Euclid Av. n/o Schaefer Av. Residential/Commercial 81.1 466 1005 2164 8 Euclid Av. n/o Edison Av. Residential/Commercial 81.2 466 1005 2164 8 Euclid Av. n/o Edison Av. Residential/Commercial 81.0 455 981 2113 9 Euclid Av. n/o Eucalyptus Av. Residential/Commercial 81.0 455 981 2113 10 Euclid Av. n/o Merrill Av. Residential/Commercial 81.0 453 976 2104 11 Euclid Av. n/o Merrill Av. Open Space/Airport Related 81.2 470 1013 2183 12 Euclid Av. n/o Rimball Av. Industrial/Airport Related 81.2 470 1013 2183 13 Euclid Av. n/o Bickmore Av. Industrial/Commercial 80.1 395 852 1835 14 Archibald Av. n/o Limonite Av. Commercial/Residential 80.6 430 926 1995 15 Archibald Av. s/o Limonite Av. Commercial/Residential 73.2 124 268 577 16 Archibald Av. s/o Schleisman Rd. Commercial/Residential 75.4 101 218 470 17 Kimball Av. w/o Mountain Av. Urban Reserve/Industrial 75.4 101 218 470 18 Kimball Av. w/o Riccon Meadows Av. Industrial/Airport Related 75.5 115 247 533 19 Kimball Av. e/o Figint Av. Industrial/Airport Related 75.5 115 247 533 20 Kimball Av. e/o Rincon Meadows Av. Airport Related/Residential 73.1 104 225 484 21 Kimball Av. e/o Rincon Meadows Av. Airport Related/Residential 75.1 106 328 772 22 Kimball Av. e/o Mill Creek Av. Airport Related/Residential 75.1 166 358 772 23 Kimball Av. e/o Parcon Related Av	1	Central Av.	n/o El Prado Rd.	Industrial/Urban Reserve	75.0			
4 Euclid Av. n/o Walnut Av. Commercial 81.4 485 1045 2252 5 Euclid Av. n/o Riverside Dr. Residential/Commercial 80.8 443 954 2054 6 Euclid Av. n/o Chino Av. Residential/Commercial 81.1 466 1005 2164 8 Euclid Av. n/o Edison Av. Residential/Commercial 81.2 466 1005 2164 8 Euclid Av. n/o Euclyptus Av. Residential/Commercial 81.0 455 981 2113 10 Euclid Av. n/o Merrill Av. Residential/Agricultural 81.0 455 981 2113 11 Euclid Av. n/o Merrilla V. Open Space/Airport Related 81.2 470 1013 213 12 Euclid Av. n/o Sickmore Av. Industrial/Airport Related 81.2 467 1005 2166 13 Euclid Av. n/o Bickmore Av. Industrial/Residential 73.2 124 268 577	2	Central Av.	s/o El Prado Rd.		75.9	149	320	690
5 Euclid Av. n/o Riverside Dr. Residential/Commercial 80.8 443 954 2054 6 Euclid Av. n/o Chino Av. Residential/Commercial 81.1 464 999 2153 7 Euclid Av. n/o Edison Av. Residential/Commercial 81.2 466 1005 2164 8 Euclid Av. n/o Edison Av. Residential/Commercial 81.4 482 1037 2235 9 Euclid Av. n/o Euclid Av. n/o Euclid Av. Residential/Commercial 81.0 455 981 2113 10 Euclid Av. n/o Merrill Av. Residential/Commercial 81.0 453 976 2104 11 Euclid Av. n/o Kimball Av. No Merrill Av. Open Space/Airport Related 81.2 470 1013 2183 12 Euclid Av. n/o Bickmore Av. Industrial/Commercial 80.1 395 852 1835 14 Archibald Av. n/o Limonite Av. Commercial/Residential 80.6 430 </td <td>3</td> <td>El Prado Rd.</td> <td>n/o Kimball Av.</td> <td>Industrial/Urban Reserve</td> <td>75.3</td> <td>100</td> <td>215</td> <td>463</td>	3	El Prado Rd.	n/o Kimball Av.	Industrial/Urban Reserve	75.3	100	215	463
6 Euclid Av. n/o Chino Av. Residential/Commercial 81.1 464 999 2153 7 Euclid Av. n/o Schaefer Av. Residential/Commercial 81.2 466 1005 2164 8 Euclid Av. n/o Edison Av. Residential/Commercial 81.0 455 981 2113 10 Euclid Av. n/o Merrill Av. Residential/Commercial 81.0 453 976 2104 11 Euclid Av. n/o Merrill Av. Open Space/Airport Related 81.2 470 1013 2183 12 Euclid Av. n/o Kimball Av. Industrial/Airport Related 81.2 467 1005 2166 13 Euclid Av. n/o Bickmore Av. Industrial/Commercial 80.1 395 852 1835 14 Archibald Av. n/o Limonite Av. Commercial/Residential 80.6 430 926 1995 15 Archibald Av. s/o Schleisman Rd. Commercial/Residential 72.1 104 225 484 <	4	Euclid Av.	n/o Walnut Av.	Commercial	81.4	485	1045	2252
7 Euclid Av. n/o Schaefer Av. Residential/Commercial 81.2 466 1005 2164 8 Euclid Av. n/o Edison Av. Residential/Commercial 81.4 482 1037 2235 9 Euclid Av. n/o Eucalyptus Av. Residential/Commercial 81.0 455 981 2113 10 Euclid Av. n/o Merrill Av. Open Space/Airport Related 81.0 453 976 2104 11 Euclid Av. n/o Kimball Av. Industrial/Airport Related 81.2 470 1013 2183 12 Euclid Av. n/o Bickmore Av. Industrial/Airport Related 80.1 395 852 1835 14 Archibald Av. n/o Limonite Av. Commercial/Residential 73.2 124 268 577 16 Archibald Av. s/o Schleisman Rd. Commercial/Residential 72.1 104 225 484 17 Kimball Av. w/o Mountain Av. Urban Reserve/Industrial 75.4 101 218 47	5	Euclid Av.	n/o Riverside Dr.	Residential/Commercial	80.8	443	954	2054
8 Euclid Av. n/o Edison Av. Residential/Commercial 81.4 482 1037 2235 9 Euclid Av. n/o Eucalyptus Av. Residential/Commercial 81.0 455 981 2113 10 Euclid Av. n/o Merrill Av. Residential/Agricultural 81.0 453 976 2104 11 Euclid Av. n/o Kimball Av. Open Space/Airport Related 81.2 470 1013 2183 12 Euclid Av. n/o Bickmore Av. Industrial/Commercial 80.1 395 852 1835 14 Archibald Av. n/o Limonite Av. Commercial/Residential 80.6 430 926 1995 15 Archibald Av. s/o Schleisman Rd. Commercial/Residential 73.2 124 268 577 16 Archibald Av. s/o Schleisman Rd. Commercial/Residential 72.1 104 225 484 17 Kimball Av. w/o Budata W/o Budata Myo Schleisman Rd. Commercial/Residential 75.4	6	Euclid Av.	n/o Chino Av.	Residential/Commercial	81.1	464	999	2153
9 Euclid Av. n/o Eucalyptus Av. Residential/Commercial 81.0 455 981 2113 10 Euclid Av. n/o Merrill Av. Residential/Agricultural 81.0 453 976 2104 11 Euclid Av. s/o Merrill Av. Open Space/Airport Related 81.2 470 1013 2183 12 Euclid Av. n/o Kimball Av. Industrial/Airport Related 81.2 467 1005 2166 13 Euclid Av. n/o Bickmore Av. Industrial/Airport Related 80.1 395 852 1835 14 Archibald Av. n/o Limonite Av. Commercial/Residential 80.6 430 926 1995 15 Archibald Av. s/o Schleisman Rd. Commercial/Residential 73.2 124 268 577 16 Archibald Av. s/o Schleisman Rd. Commercial/Residential 75.4 101 218 470 17 Kimball Av. w/o Bountain Av. Urban Reserve/Industrial 75.4 101 218	7	Euclid Av.	n/o Schaefer Av.	Residential/Commercial	81.2	466	1005	2164
10 Euclid Av. n/o Merrill Av. Residential/Agricultural 81.0 453 976 2104 11 Euclid Av. s/o Merrill Av. Open Space/Airport Related 81.2 470 1013 2183 12 Euclid Av. n/o Kimball Av. Industrial/Airport Related 81.2 467 1005 2166 13 Euclid Av. n/o Bickmore Av. Industrial/Commercial 80.1 395 852 1835 14 Archibald Av. n/o Limonite Av. Commercial/Residential 80.6 430 926 1995 15 Archibald Av. s/o Schleisman Rd. Commercial/Residential 73.2 124 268 577 16 Archibald Av. s/o Schleisman Rd. Commercial/Residential 72.1 104 225 484 17 Kimball Av. w/o Mountain Av. Urban Reserve/Industrial 75.4 101 218 470 18 Kimball Av. w/o Euclid Av. Industrial/Airport Related 76.6 120 260 <	8	Euclid Av.	n/o Edison Av.	Residential/Commercial	81.4	482	1037	2235
11 Euclid Av. s/o Merrill Av. Open Space/Airport Related 81.2 470 1013 2183 12 Euclid Av. n/o Kimball Av. Industrial/Airport Related 81.2 467 1005 2166 13 Euclid Av. n/o Bickmore Av. Industrial/Commercial 80.1 395 852 1835 14 Archibald Av. n/o Limonite Av. Commercial/Residential 80.6 430 926 1995 15 Archibald Av. s/o Schleisman Rd. Commercial/Residential 73.2 124 268 577 16 Archibald Av. s/o Schleisman Rd. Commercial/Residential 72.1 104 225 484 17 Kimball Av. w/o Mountain Av. Urban Reserve/Industrial 75.4 101 218 470 18 Kimball Av. w/o Euclid Av. Industrial/Airport Related 76.6 120 260 559 19 Kimball Av. w/o Rincon Meadows Av. Airport Related/Residential 75.0 106 228	9	Euclid Av.	n/o Eucalyptus Av.	Residential/Commercial	81.0	455	981	2113
11 Euclid Av. s/o Merrill Av. Open Space/Airport Related 81.2 470 1013 2183 12 Euclid Av. n/o Kimball Av. Industrial/Airport Related 81.2 467 1005 2166 13 Euclid Av. n/o Bickmore Av. Industrial/Commercial 80.1 395 852 1835 14 Archibald Av. n/o Limonite Av. Commercial/Residential 80.6 430 926 1995 15 Archibald Av. s/o Schleisman Rd. Commercial/Residential 73.2 124 268 577 16 Archibald Av. s/o Schleisman Rd. Commercial/Residential 72.1 104 225 484 17 Kimball Av. w/o Mountain Av. Urban Reserve/Industrial 75.4 101 218 470 18 Kimball Av. w/o Euclid Av. Industrial/Airport Related 76.6 120 260 559 19 Kimball Av. w/o Rincon Meadows Av. Airport Related/Residential 75.0 106 228	10	Euclid Av.	n/o Merrill Av.	Residential/Agricultural	81.0	453	976	2104
12 Euclid Av. n/o Kimball Av. Industrial/Airport Related 81.2 467 1005 2166 13 Euclid Av. n/o Bickmore Av. Industrial/Commercial 80.1 395 852 1835 14 Archibald Av. n/o Limonite Av. Commercial/Residential 80.6 430 926 1995 15 Archibald Av. s/o Limonite Av. Commercial/Residential 73.2 124 268 577 16 Archibald Av. s/o Schleisman Rd. Commercial/Residential 72.1 104 225 484 17 Kimball Av. w/o Mountain Av. Urban Reserve/Industrial 75.4 101 218 470 18 Kimball Av. w/o Euclid Av. Industrial/Airport Related 76.6 120 260 559 19 Kimball Av. e/o Rincon Meadows Av. Airport Related/Residential 75.2 109 234 504 21 Kimball Av. e/o Rincon Meadows Av. Airport Related/Residential 75.0 106 228	11		s/o Merrill Av.			470	1013	2183
14 Archibald Av. n/o Limonite Av. Commercial/Residential 80.6 430 926 1995 15 Archibald Av. s/o Limonite Av. Commercial/Residential 73.2 124 268 577 16 Archibald Av. s/o Schleisman Rd. Commercial/ Residential 72.1 104 225 484 17 Kimball Av. w/o Mountain Av. Urban Reserve/Industrial 75.4 101 218 470 18 Kimball Av. w/o Euclid Av. Industrial/Airport Related 76.6 120 260 559 19 Kimball Av. e/o Euclid Av. Industrial/Airport Related 75.5 115 247 533 20 Kimball Av. e/o Rincon Meadows Av. Airport Related/Residential 75.2 109 234 504 21 Kimball Av. e/o Mill Creek Av. Airport Related/Residential 74.6 100 215 462 23 Kimball Av. e/o Main St. Airport Related/Residential 74.4 96 206 <td>12</td> <td>Euclid Av.</td> <td>n/o Kimball Av.</td> <td></td> <td>81.2</td> <td>467</td> <td>1005</td> <td>2166</td>	12	Euclid Av.	n/o Kimball Av.		81.2	467	1005	2166
15 Archibald Av. s/o Limonite Av. Commercial/Residential 73.2 124 268 577 16 Archibald Av. s/o Schleisman Rd. Commercial/ Residential 72.1 104 225 484 17 Kimball Av. w/o Mountain Av. Urban Reserve/Industrial 75.4 101 218 470 18 Kimball Av. w/o Euclid Av. Industrial/Airport Related 76.6 120 260 559 19 Kimball Av. e/o Euclid Av. Industrial/Airport Related 75.5 115 247 533 20 Kimball Av. e/o Rincon Meadows Av. Airport Related/Residential 75.2 109 234 504 21 Kimball Av. e/o Mill Creek Av. Airport Related/Residential 75.0 106 228 491 22 Kimball Av. e/o Main St. Airport Related/Residential 74.6 100 215 462 23 Kimball Av. e/o Flight Av. Industrial/Residential 73.7 86 185	13	Euclid Av.	n/o Bickmore Av.	Industrial/Commercial	80.1	395	852	1835
16 Archibald Av. s/o Schleisman Rd. Commercial/ Residential 72.1 104 225 484 17 Kimball Av. w/o Mountain Av. Urban Reserve/Industrial 75.4 101 218 470 18 Kimball Av. w/o Euclid Av. Industrial/Airport Related 76.6 120 260 559 19 Kimball Av. e/o Euclid Av. Industrial/Airport Related 75.5 115 247 533 20 Kimball Av. w/o Rincon Meadows Av. Airport Related/Residential 75.2 109 234 504 21 Kimball Av. e/o Rincon Meadows Av. Airport Related/Residential 75.0 106 228 491 22 Kimball Av. e/o Main St. Airport Related/Residential 74.6 100 215 462 23 Kimball Av. e/o Flight Av. Industrial/Residential 74.4 96 206 444 24 Kimball Av. e/o Flight Av. Industrial/Residential 73.7 86 185	14	Archibald Av.	n/o Limonite Av.	Commercial/Residential	80.6	430	926	1995
17 Kimball Av. w/o Mountain Av. Urban Reserve/Industrial 75.4 101 218 470 18 Kimball Av. w/o Euclid Av. Industrial/Airport Related 76.6 120 260 559 19 Kimball Av. e/o Euclid Av. Industrial/Airport Related 75.5 115 247 533 20 Kimball Av. w/o Rincon Meadows Av. Airport Related/Residential 75.2 109 234 504 21 Kimball Av. e/o Rincon Meadows Av. Airport Related/Residential 75.0 106 228 491 22 Kimball Av. e/o Mill Creek Av. Airport Related/Residential 74.6 100 215 462 23 Kimball Av. e/o Flight Av. Industrial/Residential 74.4 96 206 444 24 Kimball Av. e/o Flight Av. Industrial/Residential 73.7 86 185 399 25 Limonite Av. e/o Archibald Av. Commercial/Residential 75.1 166 358	15	Archibald Av.	s/o Limonite Av.	Commercial/Residential	73.2	124	268	577
18 Kimball Av. w/o Euclid Av. Industrial/Airport Related 76.6 120 260 559 19 Kimball Av. e/o Euclid Av. Industrial/Airport Related 75.5 115 247 533 20 Kimball Av. w/o Rincon Meadows Av. Airport Related/Residential 75.2 109 234 504 21 Kimball Av. e/o Rincon Meadows Av. Airport Related/Residential 75.0 106 228 491 22 Kimball Av. e/o Mill Creek Av. Airport Related/Residential 74.6 100 215 462 23 Kimball Av. e/o Main St. Airport Related/Residential 74.6 100 215 462 23 Kimball Av. e/o Main St. Airport Related/Residential 74.4 96 206 444 24 Kimball Av. e/o Flight Av. Industrial/Residential 73.7 86 185 399 25 Limonite Av. e/o Archibald Av. Commercial/Residential 75.1 166 358	16	Archibald Av.	s/o Schleisman Rd.	Commercial/ Residential	72.1	104	225	484
19 Kimball Av. e/o Euclid Av. Industrial/Airport Related 75.5 115 247 533 20 Kimball Av. w/o Rincon Meadows Av. Airport Related/Residential 75.2 109 234 504 21 Kimball Av. e/o Rincon Meadows Av. Airport Related/Residential 75.0 106 228 491 22 Kimball Av. e/o Mill Creek Av. Airport Related/Residential 74.6 100 215 462 23 Kimball Av. e/o Main St. Airport Related/Residential 74.4 96 206 444 24 Kimball Av. e/o Flight Av. Industrial/Residential 73.7 86 185 399 25 Limonite Av. e/o Archibald Av. Industrial/Residential 75.1 166 358 772 27 Pine Av. w/o El Prado Rd. Open Space (Golf Course) 74.9 128 275 593 28 Pine Av. e/o Euclid Av. Comm./Recreation (Residential) 75.6 141 304	17	Kimball Av.	w/o Mountain Av.	Urban Reserve/Industrial	75.4	101	218	470
20 Kimball Av. w/o Rincon Meadows Av. Airport Related/Residential 75.2 109 234 504 21 Kimball Av. e/o Rincon Meadows Av. Airport Related/Residential 75.0 106 228 491 22 Kimball Av. e/o Mill Creek Av. Airport Related/Residential 74.6 100 215 462 23 Kimball Av. e/o Main St. Airport Related/Residential 74.4 96 206 444 24 Kimball Av. e/o Flight Av. Industrial/Residential 73.7 86 185 399 25 Limonite Av. w/o Archibald Av. Industrial 73.1 123 265 571 26 Limonite Av. e/o Archibald Av. Commercial/Residential 75.1 166 358 772 27 Pine Av. w/o El Prado Rd. Open Space (Golf Course) 74.9 128 275 593 28 Pine Av. w/o Euclid Av. Industrial/Open Space 73.9 109 236 508	18	Kimball Av.	w/o Euclid Av.	Industrial/Airport Related	76.6	120	260	559
21 Kimball Av. e/o Rincon Meadows Av. Airport Related/Residential 75.0 106 228 491 22 Kimball Av. e/o Mill Creek Av. Airport Related/Residential 74.6 100 215 462 23 Kimball Av. e/o Main St. Airport Related/Residential 74.4 96 206 444 24 Kimball Av. e/o Flight Av. Industrial/Residential 73.7 86 185 399 25 Limonite Av. w/o Archibald Av. Industrial/Residential 73.1 123 265 571 26 Limonite Av. e/o Archibald Av. Commercial/Residential 75.1 166 358 772 27 Pine Av. w/o El Prado Rd. Open Space (Golf Course) 74.9 128 275 593 28 Pine Av. w/o Euclid Av. Industrial/Open Space 73.9 109 236 508 29 Pine Av. e/o Euclid Av. Comm./Recreation (Residential) 75.4 138 298 643 31 Pine Av. w/o W. Preserve Loop Residential	19	Kimball Av.	e/o Euclid Av.	Industrial/Airport Related	75.5	115	247	533
22 Kimball Av. e/o Mill Creek Av. Airport Related/Residential 74.6 100 215 462 23 Kimball Av. e/o Main St. Airport Related/Residential 74.4 96 206 444 24 Kimball Av. e/o Flight Av. Industrial/Residential 73.7 86 185 399 25 Limonite Av. w/o Archibald Av. Industrial 73.1 123 265 571 26 Limonite Av. e/o Archibald Av. Commercial/Residential 75.1 166 358 772 27 Pine Av. w/o El Prado Rd. Open Space (Golf Course) 74.9 128 275 593 28 Pine Av. w/o Euclid Av. Industrial/Open Space 73.9 109 236 508 29 Pine Av. e/o Euclid Av. Comm./Recreation (Residential) 75.6 141 304 654 30 Pine Av. w/o Chino Corona Rd. Commercial/Residential 75.4 138 298 643 31 Pine Av. w/o W. Preserve Loop Residential 74.8 <t< td=""><td>20</td><td>Kimball Av.</td><td>w/o Rincon Meadows Av.</td><td>Airport Related/Residential</td><td>75.2</td><td>109</td><td>234</td><td>504</td></t<>	20	Kimball Av.	w/o Rincon Meadows Av.	Airport Related/Residential	75.2	109	234	504
23 Kimball Av. e/o Main St. Airport Related/Residential 74.4 96 206 444 24 Kimball Av. e/o Flight Av. Industrial/Residential 73.7 86 185 399 25 Limonite Av. w/o Archibald Av. Industrial 73.1 123 265 571 26 Limonite Av. e/o Archibald Av. Commercial/Residential 75.1 166 358 772 27 Pine Av. w/o El Prado Rd. Open Space (Golf Course) 74.9 128 275 593 28 Pine Av. w/o Euclid Av. Industrial/Open Space 73.9 109 236 508 29 Pine Av. e/o Euclid Av. Comm./Recreation (Residential) 75.6 141 304 654 30 Pine Av. w/o Chino Corona Rd. Commercial/Residential 75.4 138 298 643 31 Pine Av. w/o W. Preserve Loop Residential 74.8 126 272 586 32 </td <td>21</td> <td>Kimball Av.</td> <td>e/o Rincon Meadows Av.</td> <td>Airport Related/Residential</td> <td>75.0</td> <td>106</td> <td>228</td> <td>491</td>	21	Kimball Av.	e/o Rincon Meadows Av.	Airport Related/Residential	75.0	106	228	491
24 Kimball Av. e/o Flight Av. Industrial/Residential 73.7 86 185 399 25 Limonite Av. w/o Archibald Av. Industrial 73.1 123 265 571 26 Limonite Av. e/o Archibald Av. Commercial/Residential 75.1 166 358 772 27 Pine Av. w/o El Prado Rd. Open Space (Golf Course) 74.9 128 275 593 28 Pine Av. w/o Euclid Av. Industrial/Open Space 73.9 109 236 508 29 Pine Av. e/o Euclid Av. Comm./Recreation (Residential) 75.6 141 304 654 30 Pine Av. w/o Chino Corona Rd. Commercial/Residential 75.4 138 298 643 31 Pine Av. w/o W. Preserve Loop Residential 72.8 92 199 428 32 Pine Av. w/o E. Preserve Loop Residential 74.8 126 272 586 33 Pine Av. w/o Hellman Av. Residential 74.8 125 269	22	Kimball Av.	e/o Mill Creek Av.	Airport Related/Residential	74.6	100	215	462
25 Limonite Av. w/o Archibald Av. Industrial 73.1 123 265 571 26 Limonite Av. e/o Archibald Av. Commercial/Residential 75.1 166 358 772 27 Pine Av. w/o El Prado Rd. Open Space (Golf Course) 74.9 128 275 593 28 Pine Av. w/o Euclid Av. Industrial/Open Space 73.9 109 236 508 29 Pine Av. e/o Euclid Av. Comm./Recreation (Residential) 75.6 141 304 654 30 Pine Av. w/o Chino Corona Rd. Commercial/Residential 75.4 138 298 643 31 Pine Av. w/o W. Preserve Loop Residential 72.8 92 199 428 32 Pine Av. w/o E. Preserve Loop Residential 74.8 126 272 586 33 Pine Av. w/o Hellman Av. Residential 74.8 125 269 579	23	Kimball Av.	e/o Main St.	Airport Related/Residential	74.4	96	206	444
26 Limonite Av. e/o Archibald Av. Commercial/Residential 75.1 166 358 772 27 Pine Av. w/o El Prado Rd. Open Space (Golf Course) 74.9 128 275 593 28 Pine Av. w/o Euclid Av. Industrial/Open Space 73.9 109 236 508 29 Pine Av. e/o Euclid Av. Comm./Recreation (Residential) 75.6 141 304 654 30 Pine Av. w/o Chino Corona Rd. Commercial/Residential 75.4 138 298 643 31 Pine Av. w/o W. Preserve Loop Residential 72.8 92 199 428 32 Pine Av. w/o E. Preserve Loop Residential 74.8 126 272 586 33 Pine Av. w/o Hellman Av. Residential 74.8 125 269 579	24	Kimball Av.	e/o Flight Av.	Industrial/Residential	73.7	86	185	399
27 Pine Av. w/o El Prado Rd. Open Space (Golf Course) 74.9 128 275 593 28 Pine Av. w/o Euclid Av. Industrial/Open Space 73.9 109 236 508 29 Pine Av. e/o Euclid Av. Comm./Recreation (Residential) 75.6 141 304 654 30 Pine Av. w/o Chino Corona Rd. Commercial/Residential 75.4 138 298 643 31 Pine Av. w/o W. Preserve Loop Residential 72.8 92 199 428 32 Pine Av. w/o E. Preserve Loop Residential 74.8 126 272 586 33 Pine Av. w/o Hellman Av. Residential 74.8 125 269 579	25	Limonite Av.	w/o Archibald Av.	Industrial	73.1	123	265	571
28 Pine Av. w/o Euclid Av. Industrial/Open Space 73.9 109 236 508 29 Pine Av. e/o Euclid Av. Comm./Recreation (Residential) 75.6 141 304 654 30 Pine Av. w/o Chino Corona Rd. Commercial/Residential 75.4 138 298 643 31 Pine Av. w/o W. Preserve Loop Residential 72.8 92 199 428 32 Pine Av. w/o E. Preserve Loop Residential 74.8 126 272 586 33 Pine Av. w/o Hellman Av. Residential 74.8 125 269 579	26	Limonite Av.	e/o Archibald Av.	Commercial/Residential	75.1	166	358	772
29 Pine Av. e/o Euclid Av. Comm./Recreation (Residential) 75.6 141 304 654 30 Pine Av. w/o Chino Corona Rd. Commercial/Residential 75.4 138 298 643 31 Pine Av. w/o W. Preserve Loop Residential 72.8 92 199 428 32 Pine Av. w/o E. Preserve Loop Residential 74.8 126 272 586 33 Pine Av. w/o Hellman Av. Residential 74.8 125 269 579	27	Pine Av.	w/o El Prado Rd.	Open Space (Golf Course)	74.9	128	275	593
30 Pine Av. w/o Chino Corona Rd. Commercial/Residential 75.4 138 298 643 31 Pine Av. w/o W. Preserve Loop Residential 72.8 92 199 428 32 Pine Av. w/o E. Preserve Loop Residential 74.8 126 272 586 33 Pine Av. w/o Hellman Av. Residential 74.8 125 269 579	28	Pine Av.	w/o Euclid Av.	Industrial/Open Space	73.9	109	236	508
30 Pine Av. w/o Chino Corona Rd. Commercial/Residential 75.4 138 298 643 31 Pine Av. w/o W. Preserve Loop Residential 72.8 92 199 428 32 Pine Av. w/o E. Preserve Loop Residential 74.8 126 272 586 33 Pine Av. w/o Hellman Av. Residential 74.8 125 269 579	29	Pine Av.	e/o Euclid Av.		75.6	141	304	654
31 Pine Av. w/o W. Preserve Loop Residential 72.8 92 199 428 32 Pine Av. w/o E. Preserve Loop Residential 74.8 126 272 586 33 Pine Av. w/o Hellman Av. Residential 74.8 125 269 579	30	Pine Av.	w/o Chino Corona Rd.		75.4	138	298	643
32 Pine Av. w/o E. Preserve Loop Residential 74.8 126 272 586 33 Pine Av. w/o Hellman Av. Residential 74.8 125 269 579	31	Pine Av.	w/o W. Preserve Loop	·	72.8	92		428
33 Pine Av. w/o Hellman Av. Residential 74.8 125 269 579	_	Pine Av.	•	Residential	+			
	33				74.8		269	579
, - , 1,, - : : : : : : : : : : : : : : : : : :		Schleisman Rd.	w/o Archibald Av.	Commercial/Residential	+			

¹ Sources: Land Use Maps of the City of Chino, Chino Hills, Ontario, and Eastvale, and aerial imagery.



² 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.

[&]quot;RW" = Location of the respective noise contour falls within the right-of-way of the road.

7.2 EXISTING CONDITION PROJECT OPERATIONAL TRAFFIC NOISE LEVEL CONTRIBUTIONS

An analysis of existing traffic noise levels plus traffic noise generated by the proposed Project has been included in this report for informational purposes. However, the analysis of existing traffic noise levels plus traffic noise generated by the proposed Project scenario will not actually occur since the Project would not be fully constructed and operational until Year 2022 cumulative conditions. Moreover, a focused analysis of the construction-related soil import/export truck haul trips is provided n Section 7.5.

Table 7-1 presents the Existing without Project conditions CNEL noise levels. The without Project exterior noise levels are expected to range from 43.8 to 79.0 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-2 shows the Existing with Project conditions will range from 43.8 to 79.4 dBA CNEL. As shown on Table 7-7 the Project will generate a noise level increase of up to 0.8 dBA CNEL on the study area roadway segments.

7.3 OPENING YEAR 2022 PROJECT OPERATIONAL TRAFFIC NOISE LEVEL CONTRIBUTIONS

Table 7-3 presents the Opening Year without Project conditions CNEL noise levels which are expected to range from 44.1 to 79.6 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography.

Table 7-4 shows the Opening Year with Project conditions will range from 44.1 to 80.0 dBA CNEL. As shown on Table 7-8 the Project will generate a noise level increase of up to 0.8 dBA CNEL on the study area roadway segments. Based on the significance criteria in Section 4, the Project-related noise level increases are considered *less than significant* under Opening Year with Project conditions at the land uses adjacent to roadways conveying Project traffic.

7.4 HORIZON YEAR 2040 PROJECT OPERATIONAL TRAFFIC NOISE LEVEL CONTRIBUTIONS

Table 7-5 presents the Horizon Year 2040 without Project conditions CNEL noise levels are expected to range from 72.0 to 81.2 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography.

Table 7-6 shows the Horizon Year 2040 with Project conditions will range from 72.1 to 81.4 dBA CNEL. As shown on Table 7-9 the Project will generate a noise level increase of up to 0.7 dBA CNEL on the study area roadway segments. Based on the significance criteria in Section 4, the Project-related noise level increases are considered *less than significant* under Horizon Year 2040 with Project conditions at the land uses adjacent to roadways conveying Project traffic.



TABLE 7-7: EXISTING OFF-SITE PROJECT-RELATED TRAFFIC NOISE IMPACTS

ID	Road	Segment	Adjacent Planned (Existing) Land Use ¹	CNEL at Adjacent Land Use (dBA) ²			Noise- Sensitive Land	Threshold Exceeded? ²
				No Project	With Project	Project Addition	Use?	
1	Central Av.	n/o El Prado Rd.	Industrial/Urban Reserve	74.5	74.5	0.0	No	No
2	Central Av.	s/o El Prado Rd.	Industrial	75.3	75.6	0.3	No	No
3	El Prado Rd.	n/o Kimball Av.	Industrial/Urban Reserve	74.7	75.0	0.4	No	No
4	Euclid Av.	n/o Walnut Av.	Commercial	78.8	79.2	0.4	No	No
5	Euclid Av.	n/o Riverside Dr.	Residential/Commercial	78.0	78.5	0.5	Yes	No
6	Euclid Av.	n/o Chino Av.	Residential/Commercial	78.0	78.5	0.5	Yes	No
7	Euclid Av.	n/o Schaefer Av.	Residential/Commercial	78.4	78.9	0.5	Yes	No
8	Euclid Av.	n/o Edison Av.	Residential/Commercial	78.7	79.1	0.4	Yes	No
9	Euclid Av.	n/o Eucalyptus Av.	Residential/Commercial	78.4	78.9	0.5	Yes	No
10	Euclid Av.	n/o Merrill Av.	Residential/Agricultural	79.0	79.4	0.4	Yes	No
11	Euclid Av.	s/o Merrill Av.	Open Space/Airport Related	78.8	79.3	0.4	No	No
12	Euclid Av.	n/o Kimball Av.	Industrial/Airport Related	78.8	79.2	0.4	No	No
13	Euclid Av.	n/o Bickmore Av.	Industrial/Commercial	76.6	77.3	0.6	No	No
14	Archibald Av.	n/o Limonite Av.	Commercial/Residential	78.0	78.0	0.0	Yes	No
15	Archibald Av.	s/o Limonite Av.	Commercial/Residential	71.4	71.6	0.2	Yes	No
16	Archibald Av.	s/o Schleisman Rd.	Commercial/ Residential	71.0	71.1	0.1	Yes	No
17	Kimball Av.	w/o Mountain Av.	Urban Reserve/Industrial	74.7	75.1	0.4	No	No
18	Kimball Av.	w/o Euclid Av.	Industrial/Airport Related	75.3	75.3	0.1	No	No
19	Kimball Av.	e/o Euclid Av.	Industrial/Airport Related	74.1	74.1	0.0	No	No
20	Kimball Av.	w/o Rincon Meadows Av.	Airport Related/Residential	74.3	74.3	0.0	Yes	No
21	Kimball Av.	e/o Rincon Meadows Av.	Airport Related/Residential	74.1	74.2	0.0	Yes	No
22	Kimball Av.	e/o Mill Creek Av.	Airport Related/Residential	73.7	73.7	0.0	Yes	No
23	Kimball Av.	e/o Main St.	Airport Related/Residential	73.4	73.4	0.0	Yes	No
24	Kimball Av.	e/o Flight Av.	Industrial/Residential	72.7	72.7	0.0	Yes	No
25	Limonite Av.	w/o Archibald Av.	Industrial	n/a	n/a	n/a	No	n/a
26	Limonite Av.	e/o Archibald Av.	Commercial/Residential	71.3	71.5	0.2	Yes	No
27	Pine Av.	w/o El Prado Rd.	Open Space (Golf Course)	43.8	43.8	0.0	No	No

ID	Road	Segment	Adjacent Planned (Existing) Land Use ¹		EL at Adja nd Use (d	_	Noise- Sensitive Land Use?	Threshold Exceeded? ²	
			Land OSE	No Project	With Project	Project Addition			
28	Pine Av.	w/o Euclid Av.	Industrial/Open Space	68.4	69.3	0.8	No	No	
29	Pine Av.	e/o Euclid Av.	Comm./Recreation (Residential)	73.9	74.1	0.2	Yes	No	
30	Pine Av.	w/o Chino Corona Rd.	Commercial/Residential	74.5	74.7	0.2	Yes	No	
31	Pine Av.	w/o W. Preserve Loop	Residential	71.9	72.3	0.3	Yes	No	
32	Pine Av.	w/o E. Preserve Loop	Residential	74.0	74.3	0.2	Yes	No	
33	Pine Av.	w/o Hellman Av.	Residential	74.0	74.2	0.2	Yes	No	
34	Schleisman Rd.	w/o Archibald Av.	Commercial/Residential	72.2	72.3	0.2	Yes	No	

¹ Sources: Land Use Maps of the City of Chino, Chino Hills, Ontario, and Eastvale, and aerial imagery.



² 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. Values rounded to the nearest one-tenth.

[&]quot;n/a" = Roadway segment does not represent a paved and/or fully constructed roadway under the given scenario.

TABLE 7-8: OPENING YEAR OFF-SITE PROJECT-RELATED TRAFFIC NOISE IMPACTS

ID	Road	Segment	No With Project Project Addition		Noise- Sensitive Land Use?	Threshold Exceeded? ²	
1	Central Av.	n/o El Prado Rd.	74.8	74.8	0.0	No	No
2	Central Av.	s/o El Prado Rd.	75.7	76.0	0.3	No	No
3	El Prado Rd.	n/o Kimball Av.	75.1	75.4	0.4	No	No
4	Euclid Av.	n/o Walnut Av.	79.4	79.7	0.4	No	No
5	Euclid Av.	n/o Riverside Dr.	78.7	79.1	0.4	Yes	No
6	Euclid Av.	n/o Chino Av.	78.7	79.1	0.4	Yes	No
7	Euclid Av.	n/o Schaefer Av.	79.1	79.5	0.4	Yes	No
8	Euclid Av.	n/o Edison Av.	79.4	79.8	0.4	Yes	No
9	Euclid Av.	n/o Eucalyptus Av.	79.1	79.5	0.4	Yes	No
10	Euclid Av.	n/o Merrill Av.	79.6	80.0	0.4	Yes	No
11	Euclid Av.	s/o Merrill Av.	79.4	79.8	0.4	No	No
12	Euclid Av.	n/o Kimball Av.	79.3	79.7	0.4	No	No
13	Euclid Av.	n/o Bickmore Av.	77.4	78.0	0.5	No	No
14	Archibald Av.	n/o Limonite Av.	78.6	78.6	0.0	Yes	No
15	Archibald Av.	s/o Limonite Av.	72.0	72.1	0.1	Yes	No
16	Archibald Av.	s/o Schleisman Rd.	71.4	71.4	0.1	Yes	No
17	Kimball Av.	w/o Mountain Av.	75.2	75.6	0.4	No	No
18	Kimball Av.	w/o Euclid Av.	75.7	75.8	0.1	No	No
19	Kimball Av.	e/o Euclid Av.	74.6	74.7	0.0	No	No
20	Kimball Av.	w/o Rincon Meadows Av.	74.8	74.8	0.0	Yes	No
21	Kimball Av.	e/o Rincon Meadows Av.	74.6	74.7	0.0	Yes	No
22	Kimball Av.	e/o Mill Creek Av.	74.2	74.2	0.0	Yes	No
23	Kimball Av.	e/o Main St.	74.0	74.0	0.0	Yes	No
24	Kimball Av.	e/o Flight Av.	73.2	73.2	0.0	Yes	No
25	Limonite Av.	w/o Archibald Av.	n/a	n/a	n/a	No	n/a
26	Limonite Av.	e/o Archibald Av.	72.1	72.3	0.2	Yes	No
27	Pine Av.	w/o El Prado Rd.	44.1	44.1	0.0	No	No
28	Pine Av.	w/o Euclid Av.	68.7	69.5	0.8	No	No
29	Pine Av.	e/o Euclid Av.	74.4	74.6	0.2	Yes	No
30	Pine Av.	w/o Chino Corona Rd.	75.0	75.1	0.2	Yes	No
31	Pine Av.	w/o W. Preserve Loop	72.5	72.8	0.3	Yes	No
32	Pine Av.	w/o E. Preserve Loop	74.6	74.7	0.2	Yes	No
33	Pine Av.	w/o Hellman Av.	74.5	74.7	0.2	Yes	No
34	Schleisman Rd.	w/o Archibald Av.	72.6	72.8	0.2	Yes	No

¹ 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. Values rounded to the nearest one-tenth.



² Significance Criteria (Section 4).

[&]quot;n/a" = Roadway segment does not represent a paved and/or fully constructed roadway under the given scenario.

TABLE 7-9: HORIZON YEAR 2040 OFF-SITE PROJECT-RELATED TRAFFIC NOISE IMPACTS

ID	Road	Segment	CNEL at Adjacent Land Use (dBA)¹ No With Project Project Addition 75.0 75.0 0.0			Land Use (dBA) ¹ Sel No With Project			Noise- Sensitive Land Use?	Threshold Exceeded? ²
1	Central Av.	n/o El Prado Rd.	75.0	75.0	0.0	No	No			
2	Central Av.	s/o El Prado Rd.	75.9	75.9	0.0	No	No			
3	El Prado Rd.	n/o Kimball Av.	75.3	75.3	0.0	No	No			
4	Euclid Av.	n/o Walnut Av.	81.2	81.4	0.2	No	No			
5	Euclid Av.	n/o Riverside Dr.	80.5	80.8	0.3	Yes	No			
6	Euclid Av.	n/o Chino Av.	80.9	81.1	0.3	Yes	No			
7	Euclid Av.	n/o Schaefer Av.	80.9	81.2	0.3	Yes	No			
8	Euclid Av.	n/o Edison Av.	81.1	81.4	0.3	Yes	No			
9	Euclid Av.	n/o Eucalyptus Av.	80.7	81.0	0.3	Yes	No			
10	Euclid Av.	n/o Merrill Av.	80.7	81.0	0.3	Yes	No			
11	Euclid Av.	s/o Merrill Av.	80.9	81.2	0.3	No	No			
12	Euclid Av.	n/o Kimball Av.	80.9	81.2	0.3	No	No			
13	Euclid Av.	n/o Bickmore Av.	79.6	80.1	0.5	No	No			
14	Archibald Av.	n/o Limonite Av.	80.6	80.6	0.0	Yes	No			
15	Archibald Av.	s/o Limonite Av.	73.2	73.2	0.0	Yes	No			
16	Archibald Av.	s/o Schleisman Rd.	72.0	72.1	0.0	Yes	No			
17	Kimball Av.	w/o Mountain Av.	75.4	75.4	0.1	No	No			
18	Kimball Av.	w/o Euclid Av.	76.6	76.6	0.0	No	No			
19	Kimball Av.	e/o Euclid Av.	75.4	75.5	0.1	No	No			
20	Kimball Av.	w/o Rincon Meadows Av.	75.0	75.2	0.1	Yes	No			
21	Kimball Av.	e/o Rincon Meadows Av.	74.9	75.0	0.2	Yes	No			
22	Kimball Av.	e/o Mill Creek Av.	74.4	74.6	0.2	Yes	No			
23	Kimball Av.	e/o Main St.	74.2	74.4	0.2	Yes	No			
24	Kimball Av.	e/o Flight Av.	73.5	73.7	0.2	Yes	No			
25	Limonite Av.	w/o Archibald Av.	73.0	73.1	0.1	No	No			
26	Limonite Av.	e/o Archibald Av.	75.0	75.1	0.1	Yes	No			
27	Pine Av.	w/o El Prado Rd.	74.2	74.9	0.7	No	No			
28	Pine Av.	w/o Euclid Av.	73.8	73.9	0.1	No	No			
29	Pine Av.	e/o Euclid Av.	75.5	75.6	0.1	Yes	No			
30	Pine Av.	w/o Chino Corona Rd.	75.4	75.4	0.1	Yes	No			
31	Pine Av.	w/o W. Preserve Loop	72.7	72.8	0.1	Yes	No			
32	Pine Av.	w/o E. Preserve Loop	74.8	74.8	0.1	Yes	No			
33	Pine Av.	w/o Hellman Av.	74.7	74.8	0.1	Yes	No			
34	Schleisman Rd.	w/o Archibald Av.	73.4	73.5	0.1	Yes	No			

 $^{^1}$ 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. Values rounded to the nearest one-tenth.



² Significance Criteria (Section 4).

7.5 SOIL IMPORT/EXPORT HAUL TRUCK CONSTRUCTION TRAFFIC

The 96.9-acre Project site is located at the southeast corner of Mountain Avenue and Bickmore Avenue in the City of Chino and is generally below the 566 elevation. In order for the Project to be feasible, it requires that dirt be imported to raise the proposed building elevations so that they are 567-feet above mean sea level. To accomplish this, five nearby borrow sites (or "Excess Fill Dirt Sites") have been identified that can provide export to be used as import for the Project. The order in which soil will be imported from the Excess Fill Dirt Sites is as follows (see Exhibits 7-B and 7-C):

- Excess Fill Dirt Site #1
- Excess Fill Dirt Site #3
- Excess Fill Dirt Site #4
- Excess Fill Dirt Site #5
- Excess Fill Dirt Site #2

It is our understanding that import activities from the Excess Fill Dirt Sites will not overlap with another (i.e., hauling activity at one site is independent from other sites). Soil import/export activity could occur during typical construction daytime (7:00 a.m. – 3:00 p.m.) or off-peak/nighttime (6:00 p.m. – 2:00 a.m.) hours. Notwithstanding, the off-road construction equipment is not anticipated to operate for more than eight hours per day. Exhibit 7-A shows the hauling hours in comparison to the time of day used in calculating the 24-hour CNEL for off-site traffic noise analysis. Exhibits 7-B and 7-C show the truck distribution used in the *Traffic Impact Analysis* and the associated Excess Fill Dirt Sites.

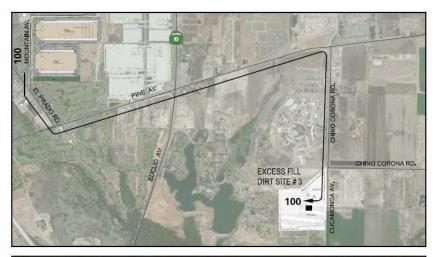


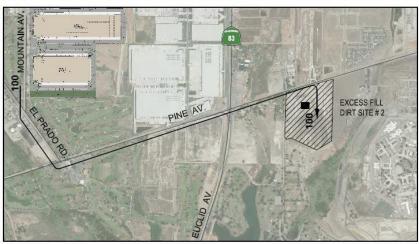
EXHIBIT 7-A: HAUL TRUCK HOURS

Hour	CNEL Timeframe	Hauling Activity
0		
1		Hauling (Off-Peak)
2		(OII-I Cak)
3	Nighttime	
4		No Hauling
5		Activity
6		
7		
8		
9		
10		
11		Hauling (Daytime)
12	Destina	(Daytille)
13	Daytime	
14		
15		
16		No Hauling
17		Activity
18		Hauling (Off-Peak)
19		
20	Evening	Hauling (Off-Peak)
21		(OII-I Cak)
22		
23	Nighttime	Hauling (Off-Peak)
24		(OII-I Cak)

EXHIBIT 7-B: EXCESS FILL DIRT SITE LOCATION MAP (1 OF 2)









LEGEND:

- 10 PERCENT TO/FROM PROJECT
- STAGING AREA



THINO CORONA RD.

DHINO CORONA RD.

EXCESS FILL
DIRT SITE #5

EXHIBIT 7-C: EXCESS FILL DIRT SITE LOCATION MAP (2 OF 2)

LEGEND:

- 10 = PERCENT TO/FROM PROJECT
- STAGING AREA





7.5.1 Daytime Haul Truck Off-Site Traffic Noise Impacts

The following analysis presents the potential off-site traffic noise impacts if all truck haul trips occur within the daytime hours of 7:00 a.m. to 7:00 p.m. for analysis purposes using the CNEL metric. Actual daytime soil import/export haul truck activities are anticipated to occur between the hours of 7:00 a.m. and 3:00 p.m. Table 7-10 presents the Existing without Project conditions CNEL noise levels which are expected to range from 66.4 to 74.5 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-11 shows the Existing with daytime-only soil import/export truck haul trip conditions will range from 72.5 to 75.6 dBA CNEL.

As shown on Table 7-12 the Project will generate a noise level increase ranging from 1.1 to 6.1 dBA CNEL on the study area roadway segments if activity occurs during the daytime hours. Based on the significance criteria in Section 4, the Project soil import/export truck trip-related noise level increases are considered *potentially significant* impacts under Existing conditions at the land uses adjacent to roadways conveying Project traffic.

The analysis shows that the unmitigated Project-related traffic noise level increases will be *potentially significant* at existing and future noise-sensitive land uses, if built and occupied at the time of soil import/export haul truck activity adjacent to the following roadway segments, as shown on Exhibit 7-D:

- Pine Av. west of W. Preserve Loop (Excess Fill Dirt Site #5);
- Chino Corona Rd. south of Pine Av. (Excess Fill Dirt Sites #3 & #4);
- Chino Corona Rd. east of Cucamonga Av. (Excess Fill Dirt Site #4);
- Hellman Av. south of Pine Av. (Excess Fill Dirt Site #5).

TABLE 7-10: EXISTING WITHOUT PROJECT CONDITIONS NOISE CONTOURS

			Adjacent	CNEL at Nearest		nce to Co enterline	
ID	Road Segment Planned (Existing) Land Use ¹		Adjacent Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	
29	Pine Av.	e/o Euclid Av.	Comm./Recreation (Residential)	73.9	109	235	506
30	Pine Av.	w/o Chino Corona Rd.	Commercial/Residential	74.5	120	259	558
31	Pine Av.	w/o W. Preserve Loop	Residential	71.9	81	174	376
32	Pine Av.	w/o E. Preserve Loop	Residential	74.0	112	241	518
33	Pine Av.	w/o Hellman Av.	Residential	74.0	111	240	516
35	Chino Corona Rd.	s/o Pine Av.	Commercial/Residential	67.6	RW	45	96
36	Chino Corona Rd.	e/o Cucamonga Av.	Residential/Agricultural	66.4	RW	37	80
37	Hellman Av.	s/o Pine Av.	Residential	71.6	63	136	292

¹ Sources: Land Use Maps of the City of Chino, Chino Hills, Ontario, and Eastvale, and aerial imagery.



² 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.

[&]quot;RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-11: EXISTING WITH DAYTIME IMPORT/EXPORT HAUL TRUCK TRIP NOISE CONTOURS

			Adjacent	CNEL at Nearest		nce to Co enterline	
ID	Road	Segment	Planned (Existing) Land Use ¹	Adjacent Land Use (dBA) ²	70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
29	Pine Av.	e/o Euclid Av.	Comm./Recreation (Residential)	75.1	132	284	612
30	Pine Av.	w/o Chino Corona Rd.	Commercial/Residential	75.6	142	306	659
31	Pine Av.	w/o W. Preserve Loop	Residential	73.8	107	230	495
32	Pine Av.	w/o E. Preserve Loop	Residential	75.2	134	289	623
33	Pine Av.	w/o Hellman Av.	Residential	75.2	134	288	621
35	Chino Corona Rd.	s/o Pine Av.	Commercial/Residential	73.3	50	108	232
36	Chino Corona Rd.	e/o Cucamonga Av.	Residential/Agricultural	72.5	44	94	203
37	Hellman Av.	s/o Pine Av.	Residential	73.8	88	189	408

¹ Sources: Land Use Maps of the City of Chino, Chino Hills, Ontario, and Eastvale, and aerial imagery.

TABLE 7-12: DAYTIME IMPORT/EXPORT OFF-SITE TRUCK TRIP-RELATED TRAFFIC NOISE IMPACTS

ID	Road	Segment		EL at Adja nd Use (d		Noise- Sensitive Land	Threshold Exceeded? ²	
			No Project	With Project	Project Addition	Use?		
29	Pine Av.	e/o Euclid Av.	73.9	75.1	1.2	Yes	No	
30	Pine Av.	w/o Chino Corona Rd.	74.5	75.6	1.1	Yes	No	
31	Pine Av.	w/o W. Preserve Loop	71.9	73.8	1.9	Yes	Yes	
32	Pine Av.	w/o E. Preserve Loop	74.0	75.2	1.2	Yes	No	
33	Pine Av.	w/o Hellman Av.	74.0	75.2	1.2	Yes	No	
35	Chino Corona Rd.	s/o Pine Av.	67.6	73.3	5.7	Yes	Yes	
36	Chino Corona Rd.	e/o Cucamonga Av.	66.4	72.5	6.1	Yes	Yes	
37	Hellman Av.	s/o Pine Av.	71.6	73.8	2.2	Yes	Yes	

¹ 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. Values rounded to the nearest one-tenth.



² 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.

[&]quot;RW" = Location of the respective noise contour falls within the right-of-way of the road.

 $^{^{\}rm 2}$ Significance Criteria (Section 4).

7.5.2 OFF-PEAK HAUL TRUCK OFF-SITE TRAFFIC NOISE IMPACTS

The following analysis presents the potential off-site traffic noise impacts if all truck haul trips occur within the daytime hours of 7:00 a.m. to 7:00 p.m., evening hours of 7:00 p.m. to 10:00 p.m., and nighttime hours of 10:00 p.m. to 7:00 a.m. for analysis purposes using the CNEL metric. Actual off-peak soil import/export haul truck activities are anticipated to occur between the hours of 6:00 p.m. – 2:00 a.m. Table 7-10 previously provided the Existing without Project conditions CNEL noise levels which are expected to range from 66.4 to 74.5 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-13 shows the Existing with off-peak soil import/export truck haul trip conditions will range from 78.6 to 80.7 dBA CNEL.

As shown on Table 7-14 the Project will generate a noise level increase ranging from 4.8 to 13.5 dBA CNEL on the study area roadway segments if activity occurs during the off-peak hours. Based on the significance criteria in Section 4, the Project soil import/export truck trip-related noise level increases are considered *potentially significant* impacts under Existing conditions at the land uses adjacent to roadways conveying Project traffic.

The analysis shows that the unmitigated Project-related traffic noise level increases will be *potentially significant* at existing and future noise-sensitive land uses, if built and occupied at the time of soil import/export haul truck activity adjacent to the following roadway segments, as shown on Exhibit 7-E:

- Pine Av. east of Euclid Av. (Excess Fill Dirt Sites #2 to #5);
- Pine Av. west of Chino Corona Rd. (Excess Fill Dirt Sites #2 to #5);
- Pine Av. west of W. Preserve Loop (Excess Fill Dirt Site #5);
- Pine Av. west of E. Preserve Loop (Excess Fill Dirt Site #5);
- Pine Av. west of Hellman Av. (Excess Fill Dirt Site #5);
- Chino Corona Rd. south of Pine Av. (Excess Fill Dirt Sites #3 & #4);
- Chino Corona Rd. east of Cucamonga Av. (Excess Fill Dirt Site #4);
- Hellman Av. south of Pine Av. (Excess Fill Dirt Site #5).



TABLE 7-13: EXISTING WITH OFF-PEAK IMPORT/EXPORT HAUL TRUCK TRIP NOISE CONTOURS

	Road	Segment	Adjacent	CNEL at Nearest Adjacent Land Use (dBA) ²	Distance to Contour from Centerline (Feet)		
ID			Planned (Existing) Land Use ¹		70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
29	Pine Av.	e/o Euclid Av.	Comm./Recreation (Residential)	79.1	243	523	1127
30	Pine Av.	w/o Chino Corona Rd.	Commercial/Residential	79.3	250	539	1162
31	Pine Av.	w/o W. Preserve Loop	Residential	78.6	225	484	1044
32	Pine Av.	w/o E. Preserve Loop	Residential	79.2	245	527	1135
33	Pine Av.	w/o Hellman Av.	Residential	79.1	244	526	1134
35	Chino Corona Rd.	s/o Pine Av.	Commercial/Residential	80.7	155	333	718
36	Chino Corona Rd.	e/o Cucamonga Av.	Residential/Agricultural	79.9	137	296	638
37	Hellman Av.	s/o Pine Av.	Residential	79.1	198	426	918

¹ Sources: Land Use Maps of the City of Chino, Chino Hills, Ontario, and Eastvale, and aerial imagery.

TABLE 7-14: OFF-PEAK IMPORT/EXPORT OFF-SITE TRUCK TRIP-RELATED TRAFFIC NOISE IMPACTS

ID	Road	Segment	CNEL at Adjacent Land Use (dBA) ¹			Noise- Sensitive Land	Threshold Exceeded? ²	
			No Project	With Project	Project Addition	Use?		
29	Pine Av.	e/o Euclid Av.	73.9	79.1	5.2	Yes	Yes	
30	Pine Av.	w/o Chino Corona Rd.	74.5	79.3	4.8	Yes	Yes	
31	Pine Av.	w/o W. Preserve Loop	71.9	78.6	6.7	Yes	Yes	
32	Pine Av.	w/o E. Preserve Loop	74.0	79.2	5.2	Yes	Yes	
33	Pine Av.	w/o Hellman Av.	74.0	79.1	5.1	Yes	Yes	
35	Chino Corona Rd.	s/o Pine Av.	67.6	80.7	13.1	Yes	Yes	
36	Chino Corona Rd.	e/o Cucamonga Av.	66.4	79.9	13.5	Yes	Yes	
37	Hellman Av.	s/o Pine Av.	71.6	79.1	7.5	Yes	Yes	

¹ 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. Values rounded to the nearest one-tenth.



² 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.

[&]quot;RW" = Location of the respective noise contour falls within the right-of-way of the road.

 $^{^{\}rm 2}$ Significance Criteria (Section 4).

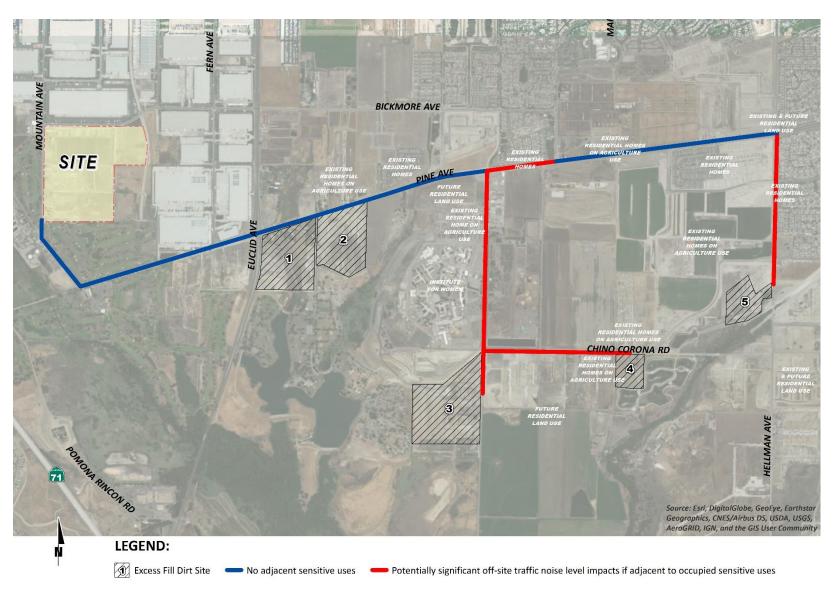


EXHIBIT 7-D: DAYTIME EXCESS FILL DIRT SITE OFF-SITE TRAFFIC NOISE IMPACTS



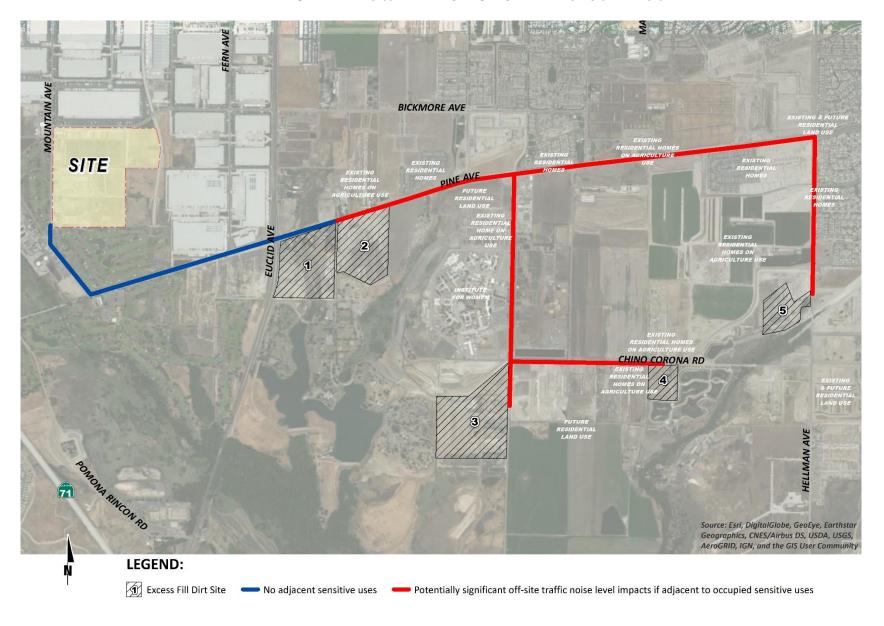


EXHIBIT 7-E: OFF-PEAK EXCESS FILL DIRT SITE OFF-SITE TRAFFIC NOISE IMPACTS



8 RECEIVER LOCATIONS

To assess the potential for long-term operational and short-term construction noise impacts, the following receiver locations as shown on Exhibit 8-A were identified as representative locations for focused analysis. Additional, off-site open space receiver locations are identified to quantify Project operational and construction-related noise levels for information purposes only. The Project's Biology report will analyze the significance of any potential noise impacts to sensitive wildlife species.

Sensitive receivers are generally defined as locations where people reside or where the presence of unwanted sound could otherwise adversely affect the use of the land. Noise-sensitive land uses are generally considered to include: schools, hospitals, single-family dwellings, mobile home parks, churches, libraries, and recreation areas. Moderately noise-sensitive land uses typically include: multi-family dwellings, hotels, motels, dormitories, out-patient clinics, cemeteries, golf courses, country clubs, athletic/tennis clubs, and equestrian clubs. Land uses that are considered relatively insensitive to noise include business, commercial, and professional developments. Land uses that are typically not affected by noise include: industrial, manufacturing, utilities, agriculture, natural open space, undeveloped land, parking lots, warehousing, liquid and solid waste facilities, salvage yards, and transit terminals.

Sensitive receivers near the Project site are described below. Other sensitive land uses in the Project study area that are located at greater distances than those 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.

R1: Located approximately 3,594 feet west of the Project site, R1 represents existing

residential homes east of State Route 71 in the City of Chino Hills. A 24-hour noise level measurement was taken near this location, L1, to describe the existing

ambient noise environment.

R2: Location R2 represents existing park use west of the Project site at approximately

2,938 feet, east of State Route 71 in the City of Chino Hills. A 24-hour noise level measurement was taken near this location, L1, to describe the existing ambient

noise environment.

R3: Located approximately 4,240 feet east of the Project site, and 147 feet north of

Excess Fill Dirt Site #2, R3 represents an existing residential home on agricultural land use on the north side of Pine Avenue in the City of Chino. A 24-hour noise level measurement was taken near this location, L3, to describe the existing

ambient noise environment.

R4: Location R4 represents the existing equestrian center located roughly 135 feet

south of Excess Fill Dirt Site #2, south of Pine Avenue. A 24-hour noise level measurement was taken near this location, L4, to describe the existing ambient

noise environment.

R5: Located approximately 331 feet southeast of Excess Fill Dirt Site #1, R5 represents

existing Prado Regional Park uses. A 24-hour noise level measurement was taken

near this location, L4, to describe the existing ambient noise environment.



R6: Located approximately 487 feet north of Excess Fill Dirt Site #2, R6 represents existing residential homes north of Pine Avenue. A 24-hour noise level measurement was taken near this location, L5, to describe the existing ambient noise environment.

Location R7 represents the existing women's correctional facility located roughly 653 feet north of Excess Fill Dirt Site #3, west of Chino Corona Road. A 24-hour noise level measurement was taken near this location, L7, to describe the existing ambient noise environment.

R8: Located approximately 75 feet west of Excess Fill Dirt Site #3, R8 represents existing Prado Regional Park uses. A 24-hour noise level measurement was taken near this location, L6, to describe the existing ambient noise environment.

R9: Located approximately 88 feet east of Excess Fill Dirt Site #3, R9 represents future, planned residential use east of Chino Corona Road. A 24-hour noise level measurement was taken near this location, L7, to describe the existing ambient noise environment.

R10: Location R10 represents an existing residential home on agricultural use and future residential development west of Excess Fill Dirt Site #4 at roughly 102 feet, south of Chino Corona Road. A 24-hour noise level measurement was taken near this location, L8, to describe the existing ambient noise environment.

R11: Located approximately 151 feet north of Excess Fill Dirt Site #4, R11 represents an existing residential home on agricultural use. A 24-hour noise level measurement was taken near this location, L8, to describe the existing ambient noise environment.

R12: Located approximately 752 feet north of Excess Fill Dirt Site #5, R12 represents existing residential homes west of Hellman Avenue. A 24-hour noise level measurement was taken near this location, L9, to describe the existing ambient noise environment.

R13: Location R13 represents the existing residential homes located roughly 282 feet east of Excess Fill Dirt Site #5, south of Pine Avenue in the City of Eastvale. A 24-hour noise level measurement was taken near this location, L10, to describe the existing ambient noise environment.

R14: Located approximately 1,405 feet southeast of Excess Fill Dirt Site #5, R14 represents existing and future residential uses east of Hellman Avenue in the City of Eastvale. A 24-hour noise level measurement was taken near this location, L11, to describe the existing ambient noise environment.

R15 – R22: Receiver locations R15 to R22 represent open space receiver locations that are identified for informational purposes only. The Project's Biology report will analyze the significance of any potential noise impacts to sensitive wildlife species.

R7:

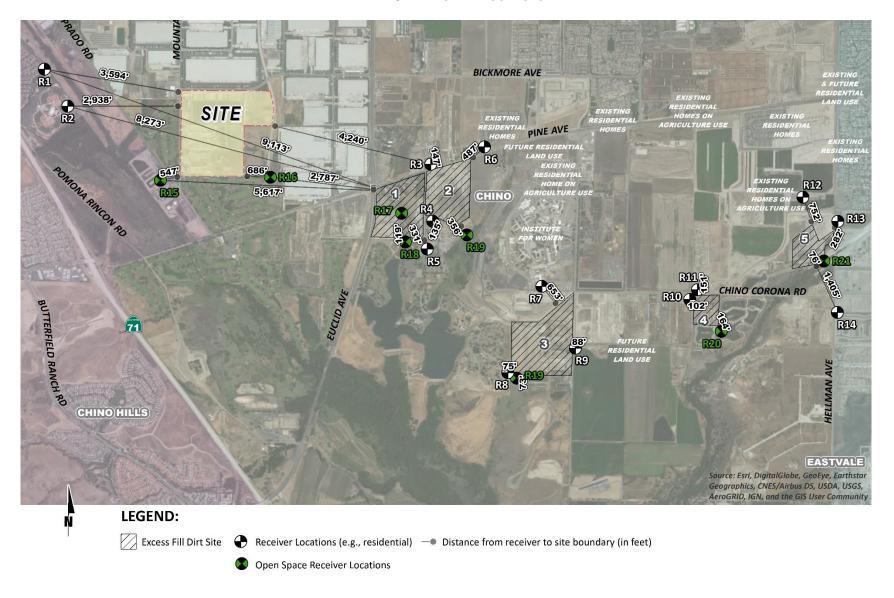


EXHIBIT 8-A: RECEIVER LOCATIONS





9 OPERATIONAL IMPACTS

This section analyzes the potential operational noise impacts due to the Project's stationary noise sources on the off-site sensitive receiver locations identified in Section 8. Exhibit 9-A identifies the receiver locations and noise source locations used to assess the Project-related operational noise levels.

9.1 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 10-1 used to estimate the Project operational noise impacts. It is important to note that the following projected noise levels assume the worst-case noise environment with the roof-top air conditioning units, idling trucks, delivery truck activities, backup alarms, as well as loading and unloading of dry goods, and parking lot vehicle movements all operating continuously. These noise level impacts will likely vary throughout the day.

9.1.1 ROOF-TOP AIR CONDITIONING UNITS

To assess the impacts created by the roof-top air conditioning units at the Project buildings, reference noise levels measurements were taken over a four-day total duration at the Santee Walmart on July 27^{th} , 2015. Located at 170 Town Center Parkway in the City of Santee, the noise level measurements describe a mechanical roof-top air conditioning unit on the roof of an existing Walmart store, in addition to background noise levels from additional roof-top units. The reference noise level represents a Lennox SCA120 series 10-ton model packaged air conditioning unit. Using the uniform reference distance of 50 feet, the noise level is 54.4 dBA L_{50} . The operating conditions of the reference noise level measurement reflect peak summer cooling requirements with measured temperatures approaching 96 degrees Fahrenheit (°F) with average daytime temperatures of 82°F. The roof-top air condition units were observed to operate the most during the daytime hours for a total of 39 minutes per hour. The noise attenuation provided by a parapet wall is not reflected in this reference noise level measurement.

9.1.2 TRUCK IDLING, DELIVERIES, BACKUP ALARMS, AND LOADING/UNLOADING

Short-term reference noise level measurements were collected on Wednesday, January 7th, 2015, by Urban Crossroads, Inc. at the Motivational Fulfillment & Logistics Services distribution facility located at 6810 Bickmore Avenue in the City of Chino. The noise level measurements represent the typical weekday dry goods logistics warehouse operation in a single building, of roughly 285,000 square feet, with a loading dock area on the western side of the building façade. Up to ten trucks were observed in the loading dock area including a combination of track trailer semi-trucks, two-axle delivery trucks, and background forklift operations.

The unloading/docking activity noise level measurement was taken over a fifteen-minute period and represents multiple noise sources taken from the center of loading dock activities generating



a reference noise level of 59.8 dBA L_{50} 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. In addition, during the noise level measurement a truck entered the loading dock area and proceeded to reverse and dock in a nearby loading bay, adding truck engine and air brakes noise.

9.1.3 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 on May 17^{th} , 2017 at the parking lot for the Panasonic Avionics Corporation 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 38.5 dBA L_{50} . The parking lot noise levels are mainly due to cars pulling in and out of spaces during peak lunch hour activity and employees talking. Noise associated with parking lot vehicle movements is expected to operate for the entire hour (60 minutes).

TABLE 9-1: REFERENCE NOISE LEVEL MEASUREMENTS

	D	Distance Noise		Hourly	Noise Level (dBA L₅o)	
Noise Source	Duration From (hh:mm:ss) Source (Feet)		Source Height (Feet)	Activity (Minutes) ⁴	@ Ref. Distance	@ 50 Feet
Roof-Top Air Conditioning Units ¹	01:00:00	5'	5'	39	74.4	54.4
Truck Unloading/Docking Activity ²	00:15:00	30'	8'	60	64.2	59.8
Parking Lot Vehicle Movements ³	01:00:00	10'	5'	60	49.0	35.0

¹ As measured by Urban Crossroads, Inc. on 7/27/2015 at the Santee Walmart located at 170 Town Center Parkway.



² Reference noise level measurements were collected on 1/7/2015 from the existing operations of the Motivational Fulfillment & Logistics Services distribution facility located at 6810 Bickmore Avenue in the City of Chino.

³ As measured by Urban Crossroads, Inc. on 5/17/2017 at the Panasonic Avionics Corporation parking lot in the City of Lake Forest.

⁴ Duration (minutes within the hour) of noise activity during peak hourly conditions.

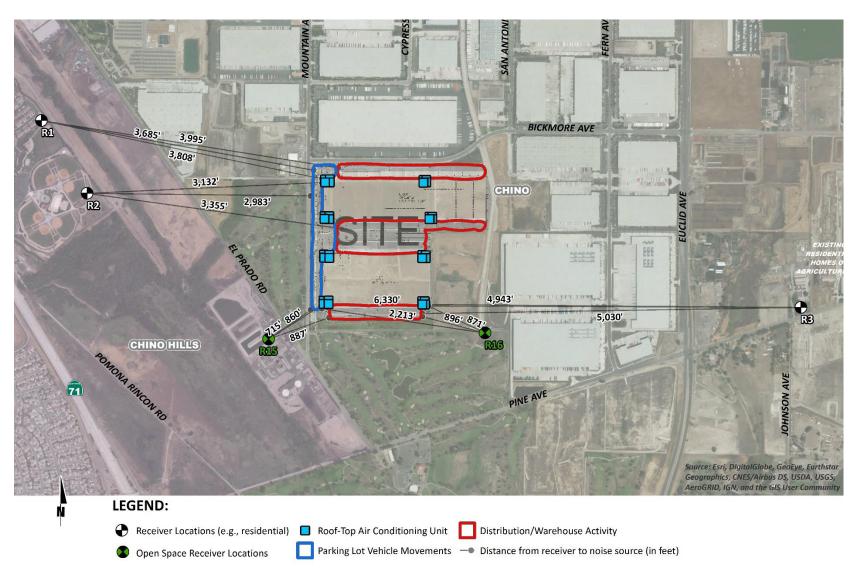


EXHIBIT 9-A: OPERATIONAL NOISE SOURCE AND RECEIVER LOCATIONS



9.2 OPERATIONAL NOISE LEVELS

Based upon the reference noise levels, it is possible to estimate the Project operational stationary-source noise levels at each of the sensitive receiver locations. The operational noise level calculations shown on Table 9-2 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. Hard site conditions are used in the operational noise analysis which result in noise levels that attenuate (or decrease) at a rate of 6 dBA for each doubling of distance from a point source. The basic noise attenuation equation shown below is used to calculate the distance attenuation based on a reference noise level (SPL₁):

$$SPL_2 = SPL_1 - 20log(D_2/D_1)$$

Where SPL_2 is the resulting noise level after attenuation, SPL_1 is the source noise level, D_2 is the distance to the reference sound pressure level (SPL_1), and D_1 is the distance to the receiver location.

Table 9-2 indicates that the noise levels associated with the roof-top air conditioning units, idling trucks, delivery truck activities, backup alarms, as well as loading and unloading of dry goods, and parking lot vehicle movements are expected to range from 20.5 to 24.1 dBA L₅₀ at the noise-sensitive off-site receiver locations. Open space receiver locations are shown to experience Project operational noise levels ranging from 35.5 to 35.6 dBA L₅₀. Receiver locations R15 to R22 represent open space receiver locations that are identified for informational purposes only. The Project's Biology report will analyze the significance of any potential noise impacts to sensitive wildlife species. In addition, only open space receiver locations R15 and R16 are analyzed in this section since receiver locations R17 to R22 are located further from the on-site Project operational activities, and as such, would experience operational noise levels less than those identified at R15 and R16. The operational noise level calculation worksheets are included in Appendix 9.1.



TABLE 9-2: UNMITIGATED PROJECT OPERATIONAL NOISE LEVELS

	Noise Noise		ject Operat	tional Noise	e Levels (dB	A) ³
Receiver Location ¹	Noise Source ²	L ₅₀ (30 mins)	L ₂₅ (15 mins)	L ₈ (5 mins)	L ₂ (1 min)	L _{max} (<1 min)
	Roof-Top Air Conditioning Units	14.9	16.6	17.9	18.2	18.7
R1	Truck Unloading/Docking Activity	21.7	24.7	29.3	33.1	37.5
KI	Parking Lot Vehicle Movements	0.0	0.0	3.7	9.7	20.6
	Combined Noise Level:	22.5	25.3	29.6	33.3	37.6
	Roof-Top Air Conditioning Units	16.6	18.3	19.6	19.9	20.4
R2	Truck Unloading/Docking Activity	23.2	26.2	30.8	34.6	39.0
RZ	Parking Lot Vehicle Movements	0.0	0.5	5.5	11.5	22.4
	Combined Noise Level:	24.1	26.9	31.1	34.8	39.2
	Roof-Top Air Conditioning Units	12.6	14.3	15.6	15.9	16.4
R3	Truck Unloading/Docking Activity	19.7	22.7	27.3	31.1	35.5
, Ko	Parking Lot Vehicle Movements	0.0	0.0	0.0	5.0	15.9
	Combined Noise Level:	20.5	23.3	27.6	31.2	35.6
	Roof-Top Air Conditioning Units	27.8	29.5	30.8	31.1	31.6
R15	Truck Unloading/Docking Activity	34.8	37.8	42.4	46.2	50.6
K12	Parking Lot Vehicle Movements	11.9	12.9	17.9	23.9	34.8
	Combined Noise Level:	35.6	38.4	42.7	46.4	50.8
	Roof-Top Air Conditioning Units	27.7	29.4	30.7	31.0	31.5
R16	Truck Unloading/Docking Activity	34.7	37.7	42.3	46.1	50.5
KID	Parking Lot Vehicle Movements	2.1	3.1	8.1	14.1	25.0
	Combined Noise Level:	35.5	38.3	42.6	46.2	50.6

¹ See Exhibit 9-A for the receiver and noise source locations.

Note: Receiver locations R4 to R14 are not included in this analysis since they are located further from the on-site Project operational activities, and as such, would experience operational noise levels less than those identified at R3.

9.3 Unmitigated Operational Noise Level Compliance

To demonstrate compliance with local noise regulations, the Project-only operational noise levels are evaluated against exterior noise level threshold based on the City of Chino and City of Chino Hills exterior noise level standards. Table 9-3 shows the operational noise levels associated with Majestic Chino Heritage Project will not exceed the City of Chino and City of Chino Hills Municipal Code daytime and nighttime exterior noise level standards at nearby receiver locations in each jurisdiction, respectively.



² Reference noise sources as shown on Table 9-1.

³ Operational noise level calculations are provided in Appendix 9.1.

TABLE 9-3: UNMITIGATED OPERATIONAL NOISE LEVEL COMPLIANCE

			Noise Level at Receiver Locations (dBA) ²					
Receiver Location ¹	City	Land Use	L ₅₀ (30 mins)	L ₂₅ (15 mins)	L ₈ (5 mins)	L ₂ (1 min)	L _{max} (<1 min)	Threshold Exceeded? ³
Daytime	China		55	60	65	70	75	-
Nighttime	Chino	Residential Standards	50	55	60	65	70	-
Any Time	Chino Hills	otaniaa as	65	70	75	80	85	-
R1	Chino Hills	Residential	22.5	25.3	29.6	33.3	37.6	No
R2	Chino Hills	Park	24.1	26.9	31.1	34.8	39.2	No
R3	Chino	Residential	20.5	23.3	27.6	31.2	35.6	No
R15	Open Spa	ce Receiver ⁴	35.6	38.4	42.7	46.4	50.8	-
R16	Open Spa	ce Receiver ⁴	35.5	38.3	42.6	46.2	50.6	-

¹ See Exhibit 9-A for the receiver and noise source locations.



² Estimated unmitigated Project operational noise levels as shown on Table 9-2.

³ Do the estimated Project operational noise levels meet the operational noise level standards (Table 3-1)?

⁴ Open space receiver locations are identified for informational purposes only. The Project's Biology report will analyze the significance of any potential noise impacts to sensitive wildlife species. Receiver locations R17 to R22 are located further from the on-site Project operational activities, and as such, would experience operational noise levels less than those identified at R15 and R16 for open space receiver locations.

10 CONSTRUCTION IMPACTS

This section analyzes potential impacts resulting from the short-term construction activities associated with the development of the Project. Exhibit 10-A shows the construction activity boundaries at the Project site, and Exhibit 10-B shows the Excess Dirt Fill Sites in relation to the nearby sensitive receiver locations.

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 combined can reach high levels. The number and mix of construction equipment is expected to occur in the following stages:

- Soil Import/Export Process
- Grading
- Building Construction
- Paving
- Architectural Coating

This construction noise analysis was prepared using reference noise level measurements taken by Urban Crossroads, Inc. to describe the typical construction activity noise levels for each stage of Project construction. The construction reference noise level measurements represent a list of typical construction activity noise levels. Noise levels generated by heavy construction equipment can range from approximately 68 dBA to in excess of 80 dBA when measured at 50 feet. Hard site conditions are used in the construction noise analysis which result in noise levels that attenuate (or decrease) at a rate of 6 dBA for each doubling of distance from a point source (i.e. construction equipment). For example, a noise level of 80 dBA measured at 50 feet from the noise source to the receiver would be reduced to 74 dBA at 100 feet from the source to the receiver and would be further reduced to 68 dBA at 200 feet from the source to the receiver. The construction stages used in this analysis are consistent with the data used to support the construction emissions in the *Majestic Chino Heritage Air Quality Impact Analysis* prepared by Urban Crossroads, Inc. (28)

10.2 Construction Reference Noise Levels

To describe the Project construction noise levels, measurements were collected for similar activities at several construction sites. Table 10-1 provides a summary of the construction reference noise level measurements. Since the reference noise levels were collected at varying distances, all construction noise level measurements presented on Table 10-1 have been adjusted to describe a common reference distance of 50 feet.



TABLE 10-1: CONSTRUCTION REFERENCE NOISE LEVELS

ID	Noise Source	Duration (h:mm:ss)	Reference Distance From Source (Feet)	Reference Noise Levels @ Reference Distance (dBA L _{eq})	Reference Noise Levels @ 50 Feet (dBA L _{eq}) ⁶
1	Truck Pass-Bys & Dozer Activity ¹	0:01:15	30'	63.6	59.2
2	Dozer Activity ¹	0:01:00	30'	68.6	64.2
3	Construction Vehicle Maintenance Activities ²	0:01:00	30'	71.9	67.5
4	Foundation Trenching ²	0:01:01	30'	72.6	68.2
5	Rough Grading Activities ²	0:05:00	30'	77.9	73.5
6	Framing ³	0:02:00	30'	66.7	62.3
7	Scraper, Water Truck, & Dozer Activity ⁴	0:30:00	30'	79.7	75.3
8	Concrete Mixer Truck Movements ⁵	0:01:00	50'	71.2	71.2
9	Concrete Paver Activities ⁵	0:01:00	30'	70.0	65.6
10	Concrete Mixer Pour & Paving Activities ⁵	0:01:00	30'	70.3	65.9
11	Concrete Mixer Backup Alarms & Air Brakes ⁵	0:00:20	50'	71.6	71.6
12	Concrete Mixer Pour Activities ⁵	1:00:00	50'	67.7	67.7

¹ As measured by Urban Crossroads, Inc. on 10/14/15 at a business park construction site located at the northwest corner of Barranca Parkway and Alton Parkway in the City of Irvine.



² As measured by Urban Crossroads, Inc. on 10/20/15 at a construction site located in Rancho Mission Viejo.

³ As measured by Urban Crossroads, Inc. on 10/20/15 at a residential construction site located in Rancho Mission Viejo.

⁴ As measured by Urban Crossroads, Inc. on 10/30/15 during grading operations at an industrial construction site in the City of Ontario.

⁵ Reference noise level measurements were collected from a nighttime concrete pour at an industrial construction site, located at 27334 San Bernardino Avenue in the City of Redlands, between 1:00 a.m. to 2:00 a.m. on 7/1/15.

⁶ Reference noise levels are calculated at 50 feet using a drop off rate of 6 dBA per doubling of distance (point source).



EXHIBIT 10-A: PROJECT SITE CONSTRUCTION ACTIVITY AND RECEIVER LOCATIONS



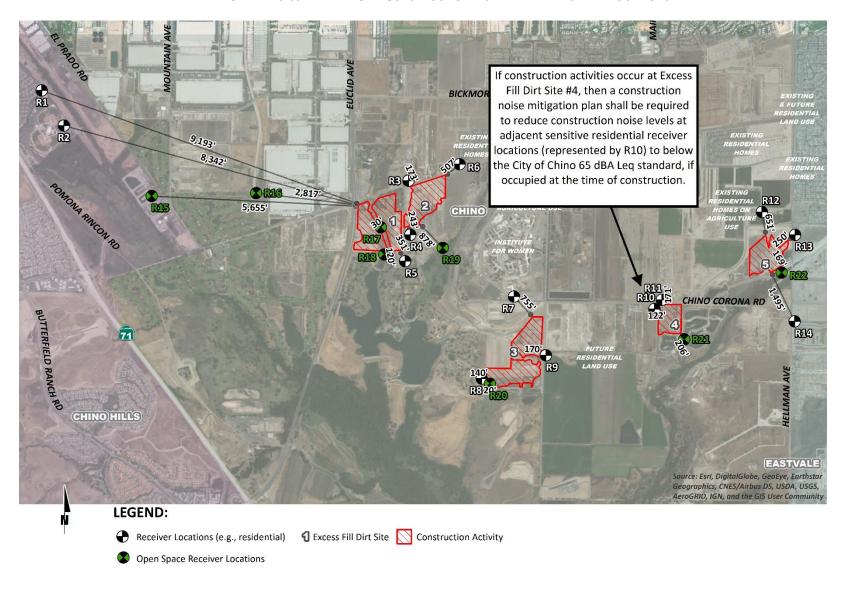


EXHIBIT 10-B: EXCESS DIRT FILL SITE CONSTRUCTION ACTIVITY AND RECEIVER LOCATIONS



10.3 CONSTRUCTION NOISE ANALYSIS

Tables 10-2 to 10-6 show the Project construction stages and the reference construction noise levels used for each stage. Table 10-7 provides a summary of the noise levels from each stage of construction at each of the sensitive receiver locations. Based on the reference construction noise levels, the Project-related construction noise levels when the highest reference noise level is operating at the edge of primary construction activity nearest each sensitive receiver location will range from 28.9 to 67.5 dBA L_{eq} at the noise-sensitive receiver locations, as shown on Table 10-7. Open space receiver locations, which are identified for information purposes only, are shown to experience construction noise levels ranging from 34.2 to 83.2 dBA L_{eq}. The Project's Biology report will analyze the significance of any potential noise impacts to sensitive wildlife species.



TABLE 10-2: SOIL IMPORT/EXPORT ACTIVITY NOISE LEVELS (DAYTIME & NIGHTTIME)

Reference Construction Activity ¹	Reference Noise Level @ 50 Feet (dBA L _{eq})
Truck Pass-Bys & Dozer Activity	59.2
Dozer Activity	64.2
Rough Grading Activities	73.5
Scraper, Water Truck, & Dozer Activity	75.3
Highest Reference Noise Level at 50 Feet (dBA Leq):	75.3

Receiver Location	Distance to Closest Fill Site Activity (Feet) ²	Distance Attenuation (dBA L _{eq}) ³	Estimated Noise Barrier Attenuation (dBA L _{eq}) ⁴	Construction Noise Level (dBA L _{eq})
R1	9,193'	-45.3	0.0	30.0
R2	8,342'	-44.4	0.0	30.8
R3	173'	-10.8	0.0	64.5
R4	243'	-13.7	0.0	61.5
R5	351'	-16.9	0.0	58.3
R6	507'	-20.1	0.0	55.1
R7	755'	-23.6	0.0	51.7
R8	140'	-8.9	0.0	66.3
R9	170'	-10.6	0.0	64.6
R10	122'	-7.7	0.0	67.5
R11	171'	-10.7	0.0	64.6
R12	651'	-22.3	0.0	53.0
R13	250'	-14.0	0.0	61.3
R14	1,495'	-29.5	0.0	45.7
R15	5,655'	-41.1	0.0	34.2
R16	2,817'	-35.0	0.0	40.2
R17	30'	4.4	0.0	79.7
R18	120'	-7.6	0.0	67.7
R19	878'	-24.9	0.0	50.4
R20	20'	8.0	0.0	83.2
R21	206'	-12.3	0.0	63.0
R22	169'	-10.6	0.0	64.7

¹ Reference construction noise level measurements taken by Urban Crossroads, Inc.



 $^{^{\}rm 2}$ Distance from the nearest point of construction activity to the nearest receiver.

 $^{^{\}rm 3}$ Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.

⁴ Estimated barrier attenuation from existing barriers in the Project study area, if any.

TABLE 10-3: GRADING ACTIVITY NOISE LEVELS

Reference Construction Activity ¹	Reference Noise Level @ 50 Feet (dBA L _{eq})
Truck Pass-Bys & Dozer Activity	59.2
Dozer Activity	64.2
Rough Grading Activities	73.5
Highest Reference Noise Level at 50 Feet (dBA Leq):	73.5

Receiver Location	Distance to Project Site Construction Activity (Feet) ²	Distance Attenuation (dBA L _{eq}) ³	Estimated Noise Barrier Attenuation (dBA L _{eq}) ⁴	Construction Noise Level (dBA L _{eq})
R1	3,614'	-37.2	0.0	36.3
R2	2,958'	-35.4	0.0	38.0
R3	4,260'	-38.6	0.0	34.9
R15	635'	-22.1	0.0	51.4
R16	744'	-23.5	0.0	50.0

¹ Reference construction noise level measurements taken by Urban Crossroads, Inc.



² Distance from the nearest point of construction activity to the nearest receiver.

³ Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.

⁴ Estimated barrier attenuation from existing barriers in the Project study area, if any.

TABLE 10-4: BUILDING CONSTRUCTION ACTIVITY NOISE LEVELS

Reference Construction Activity ¹	Reference Noise Level @ 50 Feet (dBA L _{eq})
Construction Vehicle Maintenance Activities	67.5
Foundation Trenching	68.2
Framing	62.3
Highest Reference Noise Level at 50 Feet (dBA Leq):	68.2

Receiver Location	Distance to Project Site Construction Activity (Feet) ²	Distance Attenuation (dBA L _{eq}) ³	Estimated Noise Barrier Attenuation (dBA L _{eq}) ⁴	Construction Noise Level (dBA L _{eq})
R1	3,614'	-37.2	0.0	31.0
R2	2,958'	-35.4	0.0	32.7
R3	4,260'	-38.6	0.0	29.6
R15	635'	-22.1	0.0	46.1
R16	744'	-23.5	0.0	44.7

¹ Reference construction noise level measurements taken by Urban Crossroads, Inc.



² Distance from the nearest point of construction activity to the nearest receiver.

³ Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.

⁴ Estimated barrier attenuation from existing barriers in the Project study area, if any.

TABLE 10-5: PAVING ACTIVITY NOISE LEVELS

Reference Construction Activity ¹	Reference Noise Level @ 50 Feet (dBA L _{eq})
Concrete Mixer Truck Movements	71.2
Concrete Paver Activities	65.6
Concrete Mixer Pour & Paving Activities	65.9
Concrete Mixer Backup Alarms & Air Brakes	71.6
Concrete Mixer Pour Activities	67.7
Highest Reference Noise Level at 50 Feet (dBA Leq):	71.6

Receiver Location	Distance to Project Site Construction Activity (Feet) ²	Distance Attenuation (dBA L _{eq}) ³	Estimated Noise Barrier Attenuation (dBA L _{eq}) ⁴	Construction Noise Level (dBA L _{eq})
R1	3,614'	-37.2	0.0	34.4
R2	2,958'	-35.4	0.0	36.2
R3	4,260'	-38.6	0.0	33.0
R15	635'	-22.1	0.0	49.5
R16	744'	-23.5	0.0	48.1

¹ Reference construction noise level measurements taken by Urban Crossroads, Inc.



² Distance from the nearest point of construction activity to the nearest receiver.

³ Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.

⁴ Estimated barrier attenuation from existing barriers in the Project study area, if any.

TABLE 10-6: ARCHITECTURAL COATING ACTIVITY NOISE LEVELS

Reference Construction Activity ¹	Reference Noise Level @ 50 Feet (dBA L _{eq})			
Construction Vehicle Maintenance Activities	67.5			
Framing	62.3			
Highest Reference Noise Level at 50 Feet (dBA L _{eq}):	67.5			

Receiver Location	Distance to Project Site Construction Activity (Feet) ²	Distance Attenuation (dBA L _{eq}) ³	Estimated Noise Barrier Attenuation (dBA L _{eq}) ⁴	Construction Noise Level (dBA L _{eq})	
R1	3,614'	-37.2	0.0	30.3	
R2	2,958'	-35.4	0.0	32.0	
R3	4,260'	-38.6	0.0	28.9	
R15	635'	-22.1	0.0	45.4	
R16	744'	-23.5	0.0	44.0	

¹ Reference construction noise level measurements taken by Urban Crossroads, Inc.



 $^{^{\}rm 2}$ Distance from the nearest point of construction activity to the nearest receiver.

³ Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.

⁴ Estimated barrier attenuation from existing barriers in the Project study area, if any.

TABLE 10-7: UNMITIGATED CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY

	Construction Noise Levels by Stage (dBA Leq)							
Receiver Location ¹	Soil Import/Export Process	Grading	Building Construction	Paving	Architectural Coating	Highest Construction Noise Level ²		
R1	30.0	36.3	31.0	34.4	30.3	36.3		
R2	30.8	38.0	32.7	36.2	32.0	38.0		
R3	64.5	34.9	29.6	33.0	28.9	64.5		
R4	61.5	_3	_3	_3	_3	61.5		
R5	58.3	_3	_3	_3	_3	58.3		
R6	55.1	_3	_3	_3	_3	55.1		
R7	51.7	_3	_3	_3	_3	51.7		
R8	66.3	_3	_3	_3	_3	66.3		
R9	64.6	_3	_3	_3	_3	64.6		
R10	67.5	_3	_3	_3	_3	67.5		
R11	64.6	_3	_3	_3	_3	64.6		
R12	53.0	_3	_3	_3	_3	53.0		
R13	61.3	_3	_3	_3	_3	61.3		
R14	45.7	_3	_3	_3	_3	45.7		
R15	34.2	51.4	46.1	49.5	45.4	51.4		
R16	40.2	50.0	44.7	48.1	44.0	50.0		
R17	79.7	_4	_4	_4	_4	79.7		
R18	67.7	_4	_4	_4	_4	67.7		
R19	50.4	_4	_4	_4	_4	50.4		
R20	83.2	_4	_4	_4	_4	83.2		
R21	63.0	_4	_4	_4	_4	63.0		
R22	64.7	_4	_4	_4	_4	64.7		

¹ Noise receiver locations are shown on Exhibit 10-A.



 $^{^{2}}$ Estimated construction noise levels based on the highest reference construction activity for each stage.

³ Receiver locations R4 to R14 are located further from the on-site Project construction activities (non-soil import activities), and as such, would experience construction noise levels less than those identified at R3.

⁴ Open space receiver locations are identified for informational purposes only. The Project's Biology report will analyze the significance of any potential noise impacts to sensitive wildlife species. Receiver locations R17 to R22 are located further from the on-site Project construction activities (non-soil import activities), and as such, would experience construction noise levels less than those identified at R15 and R16 for open space receiver locations.

10.4 CONSTRUCTION NOISE THRESHOLDS OF SIGNIFICANCE

To evaluate whether the Project will generate potentially significant short-term noise levels at off-site noise-sensitive receiver locations the City of Chino noise level threshold of 65 dBA L_{eq} is used.

10.4.1 Project Site Construction Noise Analysis

The Project-related short-term construction noise levels are expected to range approach 38.0 dBA L_{eq} and will not exceed the 65 dBA L_{eq} City of Chino construction noise level threshold at the nearby sensitive receiver locations. Therefore, based on the results of this analysis, all nearby sensitive receiver locations (R1 to R3) will experience *less than significant* impacts due to Project site construction noise levels, as shown on Table 10-8.

10.4.2 Project Nighttime Concrete Pour Activity Analysis

It is our understanding that nighttime concrete pouring activities may occur as a part of Project construction activities. The paving stage construction noise levels, previously presented on Table 10-5, are based on nighttime concrete pouring activity reference noise level measurements, which are shown to result in Project construction noise levels ranging from 33.0 to 36.2 dBA L_{eq} at the nearby sensitive receiver locations. Therefore, nighttime concrete pouring activity would result in Project construction noise levels that will not exceed the City of Chino 65 dBA L_{eq} exterior noise level standard at nearby sensitive receiver locations.

10.4.3 SOIL IMPORT/EXPORT CONSTRUCTION NOISE ANALYSIS

The short-term construction noise levels associated with soil import/export activity, which could occur during daytime or nighttime hours, are expected to range from 30.0 to 67.5 dBA L_{eq} and will potentially exceed the 65 dBA L_{eq} City of Chino construction noise level threshold at one of the sensitive receiver locations, R10, near Excess Fill Dirt Site #4. Therefore, based on the results of this analysis, sensitive receiver location R10, if R10 represent built and occupied residential use, will experience potentially significant impacts due to construction noise levels generated by activities at Excess Fill Dirt Site #4. As such, a construction noise mitigation plan shall be required, as outlined in the Executive Summary, if Excess Fill Dirt Site #4 is used for soil import/export activities, and if R10 represents built and occupied residential use at the time of the soil import/export activities. All other receiver locations will experience less than significant noise impacts due to construction activities at the Excess Fill Dirt Sites.

10.4.4 CONSTRUCTION NOISE LEVELS AT OPEN SPACE RECEIVER LOCATIONS

As previously stated, open space receiver locations R15 to R22 are identified for information purposes only. The Project's Biology report will analyze the significance of any potential noise impacts to sensitive wildlife species.

On-site Project construction noise levels are anticipated to range from 44.0 to 51.4 dBA L_{eq} at open space receiver locations R15 to R16, which represent the closest open space receiver locations to the Project site. R17 to R22, located at greater distances, would experience lower



on-site Project construction noise levels. Similarly, on-site Project nighttime concrete pour noise levels would range from 48.1 to 49.5 dBA L_{eq} at receiver locations R15 to R16.

The short-term construction noise levels associated with soil import/export activity, which could occur during daytime or nighttime hours, are expected to range from 34.2 to 83.2 dBA L_{eq} at the off-site open space receiver locations.

TABLE 10-8: CONSTRUCTION EQUIPMENT NOISE LEVEL COMPLIANCE (DBA LEQ)

Receiver Location ¹	Land Use	Highest Unmitigated Construction Noise Levels (dBA Leq) ²	Construction Activity	Threshold (dBA L _{eq}) ³	Threshold Exceeded? ⁴	
R1	Residential	36.3	Project Grading	65	No	
R2	Park	38.0	Project Grading	n/a	No	
R3	Residential	64.5	Dirt Import/Export	65	No	
R4	Equestrian Center	61.5	Dirt Import/Export	65	No	
R5	Park	58.3	Dirt Import/Export	n/a	No	
R6	Residential	55.1	Dirt Import/Export	65	No	
R7	Institutional	51.7	Dirt Import/Export	n/a	No	
R8	Park	66.3	Dirt Import/Export	n/a	No	
R9	Residential (Future)	64.6	Dirt Import/Export	65	No	
R10	Residential	67.5	Dirt Import/Export	65	Yes	
R11	Residential	64.6	Dirt Import/Export	65	No	
R12	Residential	53.0	Dirt Import/Export	65	No	
R13	Residential	61.3	Dirt Import/Export	65	No	
R14	Residential	45.7	Dirt Import/Export	65	No	
R15	Open Space Receiver ⁵	51.4	Dirt Import/Export	-	-	
R16	Open Space Receiver ⁵	50.0	Dirt Import/Export	-	-	
R17	Open Space Receiver ⁵	79.7	Dirt Import/Export	-	-	
R18	Open Space Receiver ⁵	67.7	Dirt Import/Export	-	-	
R19	Open Space Receiver ⁵	50.4	Dirt Import/Export	-	-	
R20	Open Space Receiver ⁵	83.2	Dirt Import/Export	-	-	
R21	Open Space Receiver ⁵	63.0	Dirt Import/Export	-	-	
R22	Open Space Receiver ⁵	64.7	Dirt Import/Export	-	-	

¹ Noise receiver locations are shown on Exhibits 10-A and 10-B



 $^{^{\}rm 2}$ Estimated highest construction noise levels, as shown on Table 10-7.

³ Construction noise standard as shown on Table 4-2.

⁴ Do the estimated Project construction noise levels satisfy the construction noise level threshold?

⁵ Open space receiver locations are identified for informational purposes only. The Project's Biology report will analyze the significance of any potential noise impacts to sensitive wildlife species.

[&]quot;n/a" = No construction noise level threshold is identified for the given use; however, construction noise levels are presented for informational purposes.

10.5 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 (FTA). Construction activities that would have the potential to generate low levels of ground-borne vibration within the Project site include mobile equipment activities and pile driving, among others. Using the vibration source level of construction equipment provided on Table 6-9 and the construction vibration assessment methodology published by the FTA, it is possible to estimate the Project vibration impacts.

The construction vibration analysis is based on the shortest distance to either Project site construction or Excess Fill Dirt Site soil import/export activities. Based on the analysis, construction vibration velocity levels are expected to approach 0.012 in/sec PPV, and 0.009 in/sec RMS, as shown on Table 10-9. Based on the results of the analysis, the Project construction vibration levels will remain below the City of Chino 0.05 in/sec RMS vibration level standard, the City of Chino Hills 0.2 in/sec PPV standard, and the City of Eastvale 0.0787 in/sec PPV standard at the nearby sensitive receiver locations.

Further, the Project-related construction vibration levels do not represent levels capable of causing building damage to nearby residential homes. The FTA identifies construction vibration levels capable of building damage ranging from 0.12 to 0.5 in/sec PPV. (3) The peak Project-construction vibration levels approaching 0.012 in/sec PPV will remain below the FTA vibration levels for building damage at the residential homes near the Project site. Moreover, the impacts at the site of the closest sensitive receivers are unlikely to be sustained during the entire construction period, but will occur rather only during the times that heavy construction equipment is operating adjacent to the Project site perimeter.



TABLE 10-9: UNMITIGATED CONSTRUCTION EQUIPMENT VIBRATION LEVELS

Receiver Location ¹ City		Shortest Distance to	Receiver PPV Levels (in/sec) ²					RMS	Threshold (in/sec)		
	City	Const. Activity (Feet)	Small Bulldozer	Jack- hammer	Loaded Trucks	Large Bulldozer	Peak Vibration	Velocity Levels (in/sec) ³	PPV	RMS	Threshold Exceeded? ⁴
R1	Chino Hills	3,614'	0.0000	0.0000	0.0000	0.0001	0.0001	-	0.20	-	No
R2	Chino Hills	2,958'	0.0000	0.0000	0.0001	0.0001	0.0001	-	0.20	-	No
R3	Chino	167'	0.0002	0.0020	0.0044	0.0052	0.0052	0.004	-	0.05	No
R4	Chino	155'	0.0002	0.0023	0.0049	0.0058	0.0058	0.004	-	0.05	No
R5	Chino	351'	0.0001	0.0007	0.0014	0.0017	0.0017	0.001	-	0.05	No
R6	Chino	507'	0.0000	0.0004	0.0008	0.0010	0.0010	0.001	-	0.05	No
R7	Chino	673'	0.0000	0.0003	0.0005	0.0006	0.0006	0.000	-	0.05	No
R8	Chino	95'	0.0004	0.0047	0.0103	0.0120	0.0120	0.009	-	0.05	No
R9	Chino	108'	0.0003	0.0039	0.0085	0.0099	0.0099	0.007	-	0.05	No
R10	Chino	122'	0.0003	0.0032	0.0070	0.0083	0.0083	0.006	-	0.05	No
R11	Chino	171'	0.0002	0.0020	0.0042	0.0050	0.0050	0.004	-	0.05	No
R12	Chino	772'	0.0000	0.0002	0.0004	0.0005	0.0005	0.000	-	0.05	No
R11	Eastvale	282'	0.0001	0.0009	0.0020	0.0023	0.0023	-	0.0787	-	No
R12	Eastvale	1,425'	0.0000	0.0001	0.0002	0.0002	0.0002	-	0.0787	-	No

¹Receiver locations are shown on Exhibit 10-A.



² Based on the Vibration Source Levels of Construction Equipment included on Table 6-9.

³ Vibration levels in PPV are converted to RMS velocity using a 0.71 conversion factor identified in the Caltrans Transportation and Construction Vibration Guidance Manual, September 2013.

⁴ Does the vibration exceed the maximum acceptable vibration threshold?



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- 26. 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.
- 27. **California Department of Transportation.** *Traffic Noise Attenuation as a Function of Ground and Vegetation Final Report.* June 1995. FHWA/CA/TL-95/23.
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12 CERTIFICATION

The contents of this noise study report represent an accurate depiction of the noise environment and impacts associated with the proposed Majestic Chino Heritage 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 Street, 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 CHINO MUNICIPAL CODE





Chapter 9.40 - NOISE*

Sections:

9.40.010 - Definitions.

The following words, phrases and terms as used in this chapter shall have the meanings as indicated here:

"Agricultural property" means a parcel of real property which is undeveloped for any use other than agricultural purposes.

"Ambient noise level" means the all-encompassing noise level associated with a given environment, being a composite of sounds from all sources, excluding the alleged offensive noise, at the location and approximate time at which a comparison with the alleged offensive noise is to be made.

"A-weighted sound level" means the total sound level meter with a reference pressure of twenty micro-pascals using the A-weighted network (scale) at slow response. The unit of measurement shall be defined as dBA.

"Commercial property" means a parcel of real property which is developed and used as either in or part or in whole for commercial purposes.

"Cumulative period" means an additive period of time composed of individual time segments which may be continuous or interrupted.

"Decibel (dB)" means a unit which denotes the ratio between two quantities which are proportional to power: the number of decibels corresponding to the ratio of two amounts of power is ten times the logarithm to the base ten of this ratio.

"Director of community development" means the director of community development of the city of Chino or his/her duly authorized deputy.

"Dwelling unit" means a single unit providing complete independent living facilities for one or more persons including permanent provisions for living, sleeping, eating, cooking and sanitation.

"Emergency machinery, vehicle, work or alarm" means any machinery, vehicle, work or alarm used, employed, performed or operated in an effort to protect, provide or restore safety conditions in the community or for the citizenry, or work by private or public utilities when restoring utility service.

"Fixed noise source" means a stationary device which creates sounds while fixed or motionless including but not limited to residential, agricultural, industrial and commercial machinery and equipment, pumps, fans, compressors, air conditioners and refrigeration equipment.

"Grading" means any excavating of filling of earth material or any combination thereof conducted at a site to prepare said site for construction or other improvements thereon.

"Hertz (Hz)" means the unit which describes the frequency of a function periodic in time which is the reciprocal of the period.

"Health care institution" means any hospital, convalescent home or other similar facility excluding residential.

"Impulsive noise" means a noise of short duration usually less than one second and of high intensity, with an abrupt onset and rapid decay.

"Industrial property" means a parcel of real property which is developed and used either in part or in whole for manufacturing purposes.

"Intruding noise level" means the total sound level, in decibels, created, caused, maintained or originating from an alleged offensive source at a specified location while the alleged offensive source is in operation.

"Licensed" means the issuance of a formal license or permit by the appropriate jurisdictional authority, or where no permits or licenses are issued, the sanctioning of the activity by the jurisdiction as noted in public record.

"Major roadway" means any street, avenue, boulevard or highway used for motor vehicle traffic which is owned or controlled by a public government entity.

"Mobile noise source" means any noise source other than a fixed noise source.

"Person" means a person, firm, association, co-partnership, joint venture, corporation or any entity, public or private in nature.

"Residential property" means a parcel of real property which is developed and used either in part or in whole for residential purposes, other than transient uses such as hotels and motels, and residential care facilities.

"Simple tone noise" means a noise characterized by a predominant frequency or frequencies so that other frequencies cannot be readily distinguished. If measured, simple tone noise shall exist if the one-third octave band sound pressure levels in the band with the tone exceeds the arithmetic average of the sound pressure levels of the two continuous one-third octave bands as follows: 5 dB for frequencies of 500 Hertz (Hz) and above or; by 15 dB for frequencies less than equal to 125 Hz.

"Sound level meter" means an instrument meeting American National Standard Institute's Standard S1.4-1971 or most recent revision thereof for Type 2 sound level meters or an instrument and the associated recording and analyzing equipment which will provide equivalent data.

"Sound pressure level" of a sound, in decibels, means twenty times the logarithm to the base 10 of the ratio of the pressure of the sound to a reference pressure shall be explicitly stated.

"Vibration" means any movement of the earth, ground or other similar surface created by a temporal and spacial oscillation device or equipment located upon, affixed in conjunction with that surface.

(Ord. 95-10 § 1 (part), 1995.)

9.40.020 - Decibel measurement criteria.

Any decibel measurement made pursuant to the provisions of this chapter shall be based on a reference sound pressure of twenty micro-pascals as measured with a sound level meter using the A-weighted network (scale) at slow response.

(Ord. 95-10 § 1 (part), 1995.)

9.40.030 - Designated noise zones.

The properties hereinafter described are assigned to the following noise zones:

Noise Zone I: All single-, double- and multiple-family residential properties.

Noise Zone II: All commercial properties.

Noise Zone III: All manufacturing or industrial properties.

(Ord. 95-10 § 1 (part), 1995.)

9.40.040 - Exterior noise standards.

The following noise standards, unless otherwise specifically indicated, shall apply to all residential property with a designated noise zone:

These criteria are given in terms of allowable noise levels for a given period of time at the residential property boundary. Higher noise levels are permitted during the day (seven a.m. to ten p.m.) than the night (ten p.m. to seven a.m.). The table below shows the acceptable levels at residential land uses during the daytime and nighttime.

City of Chino Exterior Noise Ordinance

Criteria for Residential Properties (Zone 1)

Maximum Time of Exposure	Noise		
Metric	Noise Level Not to Exceed	*	
		<u>7</u> am—10 pm	10 pm—7 am
30 min/hr	L50	55 dBA	50 dBA
15 min/hr	L25	60 dBA	55 dBA
5 min/hr	L8.3	65 dBA	60 dBA
1 min/hr	L1.7	70 dBA	65 dBA
Any period of time	Lmax	75 dBA	70 dBA

Each of the noise limits specified here shall be reduced by five dBA for impulse or simple tone noises, or for noises consisting of speech or music; provided, however, that if the ambient noise level exceeds the resulting standard, the ambient shall be the standard.

It is unlawful for any person at any location within the incorporated area of the city to create any noise, or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which causes the noise level when measured on any other property, to exceed:

- A. The noise standard for a cumulative period of more than thirty minutes in any hour; or
- B. The noise standard plus five dBA for a cumulative period of more than fifteen minutes in any hour; or
- C. The noise standard plus ten dBA for a cumulative period of more than five minutes in any hour; or
- D. The noise standard plus fifteen dBA for a cumulative period of more than one minute in any hour; or
- E. The noise standard plus twenty dBA for any period of time.

In the event the ambient noise level exceeds any of the first four noise limit categories above, the cumulative period applicable to said category shall be increased to reflect said ambient noise level. In the event the ambient noise level exceeds the fifth noise category, the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.

If the measurement location is on boundary between two different noise zones, the lower noise level standard applicable to the noise zone shall apply.

If the intruding noise source is continuous and cannot be reasonably discontinued or stopped for a time period whereby the ambient noise level can be determined, the measured noise level obtained while the source is in operation shall be compared directly to the allowable noise level standards as specified respective to the measurement location's designated land use and for the time of the day the noise level is measured.

A. The reasonableness of temporarily discontinuing the noise generation by an intruding noise source shall be determined by the director or his/her duly authorized deputy for the purpose of establishing the existing ambient noise level at the measurement location.

(Ord. 95-10 § 1 (part), 1995.)

9.40.050 - Interior noise standards.

The following noise standard, unless otherwise specifically indicated, shall apply to all residential property within all noise zones:

Each of the noise limits specified above shall be reduced by five dBA for impulse or simple tone noises or for noises consisting of speech or music provided, however, if the ambient noise level exceeds the resulting standard, the ambient shall be the standard.

It is unlawful for any person at any location within the incorporated area of the city to create any noise or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such a person which causes the noise level when measured within any other residential dwelling unit in any noise zone to exceed:

- A. The noise standard for cumulative period of more than five minutes in any hour; or
- B. The noise standard plus 5 dBA for a cumulative period of more than one minute in any hour; or
- C. The noise standard plus ten dBA for any period of time.

In the event the ambient noise level exceeds any of the first two noise limit categories above, the noise standard applicable to said category shall be increased to reflect the maximum ambient noise level.

If the measurement location is on a boundary between two different noise zones, the lower noise level standard applicable to the noise zone shall apply.

If the intruding noise source is continuous and cannot reasonably be discontinued or stopped for a time period whereby the ambient noise level can be determined; the same procedures specified in <u>Section 9.40.040(E)</u>, shall be deemed proper to enforce the provisions of this section.

(Ord. 95-10 § 1 (part), 1995.)

9.40.060 - Special provisions.

The following activities shall be exempted from the provisions of this chapter:

- A. Activities conducted on public parks, public playgrounds and public or private school grounds including school athletic and school entertainment events that are conducted under the sanction of the school or which a license or permit has been duly issued pursuant to any provision of the city code;
- B. Occasional outdoor gatherings, public dances, show, sporting and entertainment events, provided said events are conducted pursuant to a permit or license issued by the appropriate jurisdiction relative to the staging of

- said events. Such permits and licenses may restrict noise;
- C. Any mechanical device, apparatus or equipment used, related to or connected with emergency machinery, vehicle, work or warning alarm or bell, provided the sounding of any bell or alarm on any building or motor vehicle shall terminate its operation within thirty minutes in any hour of its being activated;
- D. Noise sources associated with or vibration created by construction, repair, remodeling or grading of any real property or during authorized seismic surveys, provided said activities do not take place outside the hours for construction as defined in <u>Section 15.44.030</u> of this code, and provided the noise standard of sixty-five dBA plus the limits specified in <u>Section 9.40.040(B)</u> as measured on residential property and any vibration created does not endanger the public health, welfare and safety;
- E. All mechanical devices, apparatus or equipment associated with agriculture operations provided:
 - 1. Operations do not take place between eight p.m. and seven a.m. on weekdays, including Saturday, or at any time Sunday or a Federal holiday, or
 - 2. Such operations and equipment are utilized for the protection of salvage of agricultural crops during periods of potential or actual frost damage or other adverse weather conditions, or
 - 3. Such operations and equipment are associated with agricultural pest control through pesticide application, provided the application is made in accordance with permits issued by or regulations enforced by the California Department of Agriculture,
 - 4. Noise sources associated with the maintenance of real property, provided said activities take place between the hours of seven a.m. to eight p.m. on any day except Sunday, or between the hours of nine a.m. and eight p.m. on Sunday,
 - 5. Any activity to the extent regulation thereof has been preempted by state or federal law.

NOTE: Preemption may include motor vehicle, aircraft in flight, and railroad noise regulations.

(Ord. 2004-23 § 59, 2004; Ord. 95-10 § 1 (part), 1995.)

9.40.070 - Schools, churches, libraries, health care institutions—Special provisions.

It shall be deemed unlawful for any person to create any noise which causes the noise level at any school, hospital or similar health care institution, church or library while the same is in use, to exceed the noise standards specified in <u>Section 9.40.040</u> prescribed for the assigned noise zone level, unreasonably interferes with the use of such institutions, or which unreasonably disturbs or annoys patients in a hospital, convalescent home or other similar health care institutions, provided conspicuous signs are displayed in three separate locations within one-tenth-mile of the institution or facility indicating a quiet zone.

(Ord. 95-10 § 1 (part), 1995.)

9.40.080 - Air conditioning and refrigeration—Special provisions.

Until January 1, 1996, the noise standards enumerated in <u>Section 9.40.040</u> and <u>9.40.050</u> shall be increased five dBA where the alleged intruding noise source is an air conditioning or refrigeration system or associated equipment which was installed prior to the effective date of the ordinance codified in this chapter.

(Ord. 95-10 § 1 (part), 1995.)

9.40.090 - Noise sources generated on publicly owned property.

Notwithstanding any other provision of this code and in addition thereto, it is unlawful for any person to permit or cause any noise, sound, music or program to be emitted from any radio, tape player, tape recorder, record player, television outdoors, or any other mode on or in any publicly owned property, park or place when such noise, sound, music or program is audible to a person

of normal hearing sensitivity one hundred feet from said radio, tape player, tape recorder, record player or television.

- A. As used herein, "a person of normal hearing sensitivity" means a person who has a hearing threshold level of between zero decibels and twenty-five decibels HL averaged over the frequencies 500, 1,000 and 2,000 Hertz.
- B. Notwithstanding any other provision of this code, any person violating this section shall be guilty of an infraction and upon conviction thereof, is punishable by a fine not exceeding fifty dollars, for a first violation; a fine not exceeding one hundred dollars for a second violation of this section within one year; a fine not exceeding two hundred fifty dollars for each additional violation of this section within one year. A person who violates the provisions of this section shall be deemed to be guilty of a separate offense for each day, or portion thereof, during which the violation continues or is repeated.
- C. Notwithstanding any other provision of this code, no citation or notice to appear shall be issued or criminal complaint shall be filed for a violation of this section unless the offending party is first given a verbal or written notification of violation by any peace officer, public officer, park ranger or other person charged with enforcing this section and the offending party given an opportunity to correct said violation.
- D. This section shall not apply to broadcasting from any aircraft, vehicle or stationary sound amplifying equipment or to the use of radios, tape players, tape recorders, record players or televisions in the course of an assembly or festival for which a license has been issued or a parade for which a permit has been issued pursuant to or any other activity, assembly or function for which a permit or license has been duly issued pursuant to any provision of the city code.

(Ord. 95-10 § 1 (part), 1995.)

9.40.100 - Noise level measurement.

The location selected for measuring exterior noise levels shall be made within the affected residential unit. The measurements shall be made at a point at least four feet from the wall, ceiling or floor nearest the noise source with windows in an open position depending on the normal seasonal ventilation requirements.

(Ord. 95-10 § 1 (part), 1995.)

9.40.110 - Vibration.

Notwithstanding other sections of this chapter, it is unlawful for any person to create, maintain or cause any ground vibration which is perceptible without instruments at any point on any affected property adjoining the property on which the vibration source is located. For the purpose of this chapter, the perception threshold shall be presumed to be more than 0.05 inches per second RMS vertical velocity.

(Ord. 95-10 § 1 (part), 1995.)

9.40.120 - Proposed developments.

Each department whose duty it is to review and approve new projects or changes to existing projects that result or may result in the creation of noise shall consult with the director prior to any such approval. If at any time the director of community development has reason to believe that a standard, regulation, action, proposed standard, regulation or action of any department respecting noise does not conform to the provisions as specified in this chapter, the director may request such department to consult with them on the advisability of revising such standard or regulation to obtain uniformity.

(Ord. 95-10 § 1 (part), 1995.)

9.40.130 - Variance procedure.

The variance procedure process shall remain as specified in the city's zoning code (Title 20).

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(Ord. 95-10 § 1 (part), 1995.)
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9.40.140 - Planning commission.

The planning commission shall evaluate all applications for variance from the requirements of this chapter and may grant said variances with respect to time for compliance, subject to such terms, conditions and requirements as it may deem reasonable to achieve maximum compliance with the provisions of this chapter. Said terms, conditions and requirements may include, but shall not be limited to, limitation on noise levels and operating hours. Each such variance shall set forth in detail the approved method of achieving maximum compliance and a time schedule for its accomplishment. In its determinations, the commission shall consider the following:

- A. The magnitude of nuisance caused by the offensive noise;
- B. The uses of property within the area of impingement by the noise;
- C. The time factors related to study, design, financing and construction of remedial work;
- D. The economic factors related to age and useful life of the equipment;
- E. The general public interest, welfare and safety.

Any variance granted by the commission shall be by resolution and shall be transmitted to the director of community development for enforcement. Any violation of the terms of said variance shall be unlawful.

The planning commission may require additional acoustical studies based on the individual circumstances of each case. Such studies must be performed by a person qualified in acoustical engineering with the state of California.

Meetings of the planning commission shall be held at the call of the secretary and at such times and locations as the commission shall determine. All such meetings shall be open to the public.

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(Ord. 95-10 § 1 (part), 1995.)
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9.40.150 - Appeals.

The appeal procedure process shall remain as specified in the city's zoning code (Title 20).

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(Ord. 95-10 § 1 (part), 1995.)
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9.40.160 - Prima facie violation.

Any noise exceeding the noise level standard as specified in <u>Section 9.40.040</u> and <u>9.40.050</u> or vibration exceeding the standard as specified in <u>Section 9.40.110</u> of this chapter, shall be deemed to be prima facie evidence of a violation of the provisions of this chapter.

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(Ord. 95-10 § 1 (part), 1995.)
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9.40.170 - Violations/misdemeanors.

Any persons violating any of the provisions of this chapter shall be deemed guilty of a misdemeanor and upon conviction thereof shall be fined in an amount not to exceed an amount as specified by city council resolution, or be imprisoned in the Jail for a period not to exceed six months or by both such fine and imprisonment. Each day such violation is committed or permitted to

continue shall constitute a separate offense and shall be punishable as such.

(Ord. 95-10 § 1 (part), 1995.)

9.40.180 - Violations/additional remedies — Injunctions.

As an additional remedy, the operation or maintenance of any device, instrument, vehicle or machinery in violation of any provisions of this chapter which operation or maintenance causes or creates sound levels or vibration exceeding the allowable standards as specified in this chapter shall be deemed and is hereby declared to be a public nuisance and may be subject to abatement summarily by a restraining order or injunction issued by a court of competent jurisdiction.

Any violation of this chapter is declared to be a public nuisance and may be abated in accordance with law. The expense of this chapter is declared to be public nuisance and may be by resolution of the city council declared to be a lien against the property on which such nuisance is maintained, and such lien shall be made a personal obligation of the property owner.

(Ord. 95-10 § 1 (part), 1995.)

9.40.190 - Manner of enforcement.

The director is directed to enforce the provisions of this chapter and is authorized and may cite at his/her discretion, any person without a warrant who has reasonable cause to believe that such person has committed a misdemeanor in his/her presence.

No person shall interfere with, oppose or resist any authorized person charged with the enforcement of this chapter while such person is engaged in the performance of his/her duty.

Violations of this chapter shall be prosecuted in the same manner as other misdemeanor violations pursuant to <u>Chapter 1.12</u>; provided, however, that in the event of an initial violation of the provisions of this chapter, a written notice shall be given the alleged violator which specifies the time by which the condition shall be corrected or an application for variance shall be received by the event the cause of the violation has been removed, the condition abated or fully corrected within the time period specified in the written notice.

In the event the alleged violated cannot be located in order to serve the notice of intention to prosecute, the notice as required herein shall be deemed to be given upon mailing such notice to registered or certified mail to the alleged violator at his last known address or at the place where the violation occurred in which event the specified time period for abating the violation or applying for a variance shall commence at the date of the day following the mailing of such notice. Subsequent violations of the same offense shall result in the immediate filing of a misdemeanor complaint.

(Ord. 95-10 § 1 (part), 1995.)

9.40.200 - Delay in implementation—Fixed noise sources.

None of the provisions of this chapter shall apply to a fixed sound source during the period commencing the effective date of this chapter and terminating one-hundred eighty days thereafter.

(Ord. 95-10 § 1 (part), 1995.)

APPENDIX 5.1:

STUDY AREA PHOTOS



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L1 East 33, 57' 24.830000", 117, 40' 39.870000"



L1 North 33, 57' 24.780000", 117, 40' 39.790000"



L1 South 33, 57' 24.830000", 117, 40' 39.870000"



L1 West 33, 57' 24.820000", 117, 40' 39.840000"



33, 57' 12.770000", 117, 40' 1.120000"



L2 North 33, 57' 12.860000", 117, 40' 1.140000"



L2 South 33, 57' 12.770000", 117, 40' 1.090000"



L2 West 33, 57' 12.760000", 117, 40' 1.120000"



L3 East 33, 57' 17.730000", 117, 38' 42.430000"



L3 North 33, 57' 17.690000", 117, 38' 42.430000"



L3 South 33, 57' 17.700000", 117, 38' 42.430000"



L3 West 33, 57' 17.690000", 117, 38' 42.430000"



L4 East 33, 57' 2.870000", 117, 38' 45.450000"



L4 North 33, 57' 2.850000", 117, 38' 45.450000"



L4 South 33, 57' 2.850000", 117, 38' 45.420000"



L4 West 33, 57' 2.850000", 117, 38' 45.450000"



L5 East 33, 57' 23.610000", 117, 38' 28.530000"



L5 North 33, 57' 23.620000", 117, 38' 28.530000"



L5 South 33, 57' 23.550000", 117, 38' 28.530000"



L5 West 33, 57' 23.610000", 117, 38' 28.580000"



L6 East 33, 56' 27.620000", 117, 38' 28.420000"



33, 56' 27.650000", 117, 38' 28.420000"



L6 South 33, 56' 27.660000", 117, 38' 28.420000"



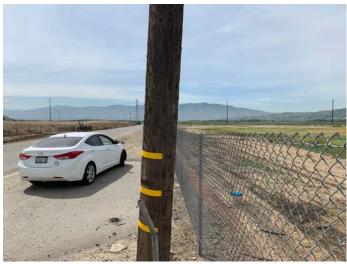
L6 West 33, 56' 27.650000", 117, 38' 28.420000"



L7 East 33, 56' 39.770000", 117, 37' 59.610000"



L7 North 33, 56' 39.770000", 117, 37' 59.640000"



L7 South 33, 56' 39.790000", 117, 37' 59.610000"



L7 West 33, 56' 39.830000", 117, 37' 59.610000"



L8 East 33, 56' 45.970000", 117, 37' 22.610000"



L8 North 33, 56' 45.950000", 117, 37' 22.640000"



L8 South 33, 56' 45.950000", 117, 37' 22.610000"



L8 West 33, 56' 45.940000", 117, 37' 22.670000"



L9 East 33, 57' 5.590000", 117, 36' 53.990000"



33, 57' 5.660000", 117, 36' 53.960000"



19 South 33, 57' 5.630000", 117, 36' 53.990000"



L9 West 33, 57' 5.630000", 117, 36' 53.960000"



L10 East 33, 57' 7.690000", 117, 36' 39.220000"



L10 North 33, 57' 7.710000", 117, 36' 39.220000"



L10 South 33, 57' 7.730000", 117, 36' 39.190000"



L10 West 33, 57' 7.710000", 117, 36' 39.220000"



L11 East 33, 56' 45.940000", 117, 36' 31.250000"



L11 North 33, 56' 45.940000", 117, 36' 31.280000"



L11 South 33, 56' 45.910000", 117, 36' 31.280000"



L11 West 33, 56' 45.910000", 117, 36' 31.250000"

APPENDIX 5.2:

NOISE LEVEL MEASUREMENT WORKSHEETS



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Date: Tuesdav Project: MCH 85.0	Tuesday, April 02, 2019 MCH	119			Location:		24-Hour Noise Level L1 - Located near a Big Leagu Park, west of the Project site HourlyLeg dBAF		I Measurement S Le Dreams and Fairfie Readings (unadjusted)	Measurement Summary e Dreams and Fairfield Ranch . Readings (unadjusted)	Ranch	Meter	Meter: Piccolo I				JN:	10351 R. Saber
0 48.3	Z*6⊅ ←	9.6p 4	8.02 w	6.12 70	6.12 o	7.52 ∞	8.42 a	2.42 04.2	11 12 Hour Beginning	1.22 53.1 13 54.7 13	7.22 41	4.22 15 16 16	E.22 7.1	2.52 ₩	2.52	20.02 21.7	7.84 22	Z3 46.Z
Hour	r L eq		L max	L min	71%	75%	72%	%87		752%	%057	%067	<i>%</i> 567	%667		L eq	Adj.	Adj. L eq
0	48.3		9:69	42.5	53.0	52.0	51.0	20.0		48.0	47.0	45.0	44.0	43.0		48.3	10.0	58.3
7	49.6		61.1 59.6	43.1	55.0	54.0	52.0	51.0		49.0	48.0	46.0	45.0	44.0		49.2	10.0	59.2
1 6	50.8		60.09	43.1	56.0	55.0	54.0	53.0		51.0	50.0	47.0	45.0	44.0		50.8	10.0	60.8
4 1	52.9		65.9	47.5	58.0	57.0	55.0	54.0		53.0	52.0	50.0	49.0	48.0		52.9	10.0	62.9
9	51.9		63.9 61.2	45.2 47.9	57.0 56.0	56.0	55.0	54.0		52.0 52.0	51.0 51.0	48.0	47.0	46.0		51.9 51.9	10.0	61.9 61.9
7	53.4		74.2	45.9	0.09	57.0	55.0	54.0		52.0	51.0	48.0	47.0	46.0		53.4	0.0	53.4
∞ (53.3		65.8	44.0	62.0	61.0	0.09	58.0		51.0	48.0	46.0	46.0	45.0		53.3	0.0	53.3
υ (54.8		71.4	46.0	63.0	61.0	59.0	58.0		55.0	52.0	48.0	47.0	46.0		54.8	0:0	54.8
11			64.8	45.0	0.09	58.0	54.0	53.0		51.0	50.0	47.0	47.0	46.0		51.4	0:0	51.4
12	53.1	ġ	64.1	46.8	58.0	57.0	55.0	55.0		53.0	52.0	20.0	49.0	48.0		53.1	0.0	53.1
13	54.7		65.7	49.8	61.0	29.0	57.0	56.0		55.0	53.0	52.0	51.0	50.0		54.7	0.0	54.7
4 7			70.1	49.2 50.8	61.0	0.60	58.0	57.0		55.0	54.0	53.0	52.0	51.0		55.4	0.0	55.4
16			68.7	50.5	62.0	0.09	57.0	56.0		55.0	54.0	52.0	52.0	51.0		55.1	0.0	55.1
17	55.3		67.4	49.5	62.0	60.0	57.0	57.0		55.0	54.0	52.0	51.0	50.0		55.3	0.0	55.3
19			63.3	48.5	58.0	57.0	55.0	55.0		53.0	52.0	50.0	50.0	49.0		53.2	5.0	58.2
20			6.07	46.4	57.0	26.0	54.0	53.0		52.0	51.0	48.0	48.0	47.0		51.7	5.0	29.7
21	+	1	60.7	44.3	54.0	53.0	52.0	52.0	+	50.0	49.0	47.0	46.0	45.0	+	50.0	5.0	55.0
22	_	_	60.3	43.3	53.0	51.0	50.0	50.0		48.0	47.0	45.0	44.0	44.0		48.1	10.0	58.1
23 Hour	ı,	ı	28.0	41.3	50.0	49.0	46.0	18%		46.0	45.0	45.0	43.0	199%	ł	40.7	10.0 I (ABA)	20.7
Min	51.4		64.1	44.0	58.0	57.0	54.0	53.0		51.0	48.0	46.0	46.0	45.0			h l ba	
Max			76.1	50.8	65.0	63.0	0.09	58.0		55.0	54.0	53.0	52.0	51.0		24-Hour	Daytime	Nighttime
Energy Average	54.3		Average	ge:	61.3	59.4	26.9	56.0		53.5	52.0	49.8	49.3	48.3		620	620	E 0 3
Min			2.09	44.3	54.0	53.0	52.0	52.0		50.0	49.0	47.0	46.0	45.0		6.5	55.5	20.0
Max	×		6.07	48.5	58.0	57.0	55.0	55.0		53.0	52.0	20.0	20.0	49.0		Z4-H0	24-HOUF CIVEL (ABA)	JA)
Avelage	31.0	ł	Avelage 58.6	gc. 41 3	50.0	73.5	48.0	03.3		31.7 46.0	30.7 45.0	49.3	49.0	47.0			1	
Max	· ×		62.9	47.9	58.0	57.0	55.0	54.0		53.0	52.0	50.0	49.0	48.0		.,	57.8	
Energy Average	50.3		Average:	ge:	54.8	53.7	52.3	51.7		49.9	48.8	46.6	45.7	44.8				



						24-Ho	24-Hour Noise Level Measurement Summary	evel Meas	urement S	ummary						
Date: Tuesc Project: MCH	Tuesday, A MCH	Date: Tuesday, April 02, 2019 oject: MCH			Location:	L2 - sout	L2 - Located on Mountain Avenue, north of El Prado Road south of the Project site boundary.	in Avenue, n boundary.	orth of El Pra	ado Road	Meter:	<i>Meter:</i> Piccolo I			JN: Analyst:	<i>JN:</i> 10351 <i>yst:</i> R. Saber
							Hourly L eq dBA		Readings (unadjusted)							
(db)																
	Ш			T.(6.	+	T.	8.6		0.88	1.1	0.0	$+$ \blacksquare	L		
uoH 4 45:00	8.74	8.02	9.64	0.42	ZS	ZS			95				·9S	·9S	6.12	0.88
	0	1 2	_ _	4 5	9	7 8	6	10 11		13 14	15 16	17	18 19	20	21 22	23
								Hour B	Hour Beginning							
Timeframe	Hour	L eq	L max	L min	71%	75%	72%	%87	752	720%	%067	%567	%667	L eq	Adj.	Adj. L eq
	0	47.8	70.2	39.0	26.0	54.0	51.0	49.0	46.0	44.0	42.0	41.0	40.0	47.8	10.0	57.8
	⊣ (50.8	74.7	40.7	57.0	53.0	51.0	50.0	48.0	46.0	43.0	43.0	42.0	50.8	10.0	60.8
Night	7 8	51.6	79.0	42.0	59.0	55.0	51.0	50.0	48.0	46.0	44.0	44.0	43.0	51.6	10.0	61.6
1118111	n 4	54.0	78.0	45.9	62.0	59.0	57.0	56.0	52.0	50.0	47.0	44.0	46.0	54.0	10.0	64.0
	Ŋ	59.1	81.5	46.8	70.0	0.99	0.09	59.0	55.0	52.0	49.0	49.0	48.0	59.1	10.0	69.1
	9	57.9	78.7	47.7	0.69	65.0	61.0	59.0	26.0	53.0	49.0	49.0	48.0	57.9	10.0	62.9
	7	57.2	78.7	43.3	67.0	65.0	61.0	59.0	55.0	52.0	48.0	46.0	45.0	57.2	0.0	57.2
	∞ c	57.1	80.6	42.0	69.0	65.0	59.0	57.0	53.0	49.0	44.0	44.0	43.0	57.1	0.0	57.1
	9 (1	58.1 58.6	81.4	42.8	71.0	66.0	63.0	58.0	54.0	49.0	45.0	44.0	43.0	58.1 58.6	0:0	58.1 58.6
	11	59.8	83.2	43.7	72.0	68.0	62.0	59.0	53.0	50.0	47.0	46.0	45.0	59.8	0:0	59.8
Day	12	56.9	9.77	46.1	0.99	64.0	61.0	0.09	26.0	53.0	49.0	48.0	47.0	56.9	0.0	56.9
<u>.</u>	13	58.7	78.7	49.5	67.0	0.99	63.0	62.0	58.0	55.0	52.0	51.0	50.0	58.7	0.0	58.7
	14	63.0	86.9	50.6	71.0	0.69	67.0	65.0	61.0	28.0	54.0	54.0	52.0	63.0	0.0	63.0
	16	62.2	84.2	50.7	71.0	0.69	66.0	64.0	0.09	58.0	54.0	52.0 53.0	52.0	62.2	0:0	62.2
	17	0.09	79.5	48.5	68.0	0.99	64.0	63.0	0.09	57.0	53.0	52.0	51.0	0.09	0.0	0.09
	18	56.4	77.2	48.0	64.0	61.0	58.0	57.0	55.0	53.0	50.0	49.0	48.0	56.4	0.0	56.4
Evening	19 20	56.7	77.9	46.2	70.0	63.0	57.0	56.0	52.0	50.0	50.0 47.0	30.0 47.0	49.0	56.7	5.0	60.7
	21	51.9	69.5	44.9	62.0	57.0	55.0	54.0	20.0	49.0	47.0	47.0	46.0	51.9	2.0	56.9
Night	77	52.1	77.3	44.3	29.0	25.0	53.0	52.0	49.0	48.0	46.0	45.0	45.0	52.1	10.0	62.1
	23	53.0	81.4	39.0	26.0	54.0	52.0	50.0	46.0	45.0	42.0	42.0	40.0	53.0	10.0	63.0
Ilmejrame	Nin	L eq	L max	L min	0.17	61.0	% C7	67.0	52.0	79.0	77.0	0 77	73.0		L eq (UDA)	
Day	Max	63.0	86.9	50.7	72.0	69.0	67.0	65.0	61.0	58.0	54.0	54.0	52.0	24-Hour	Daytime	Nighttime
Energy .	Energy Average	59.6	Ave	Average:	8.89	66.2	62.5	60.7	56.4	53.5	49.7	48.8	47.7	E7 0	E0 0	בע ע
Evening	Min 3	51.9	69.5	44.7	62.0	57.0	55.0	54.0	50.0	49.0	47.0	47.0	46.0	0.70	0.00	1:10
>	Max	56.7		48.2	70.0	60.0	58.0	57.0	54.0	52.0	50.0	50.0	49.0	77	Z4-HOUF CIVEL (ABA)	(abA)
8	Avelage	25.7	69 2	Avelage.	76.7	53.0	50.7	7.60	32.0	50.3	48.0	48.0	47.0			
Night	Max	47.8 59.1	81.5	47.7	70.0	66.0	51.0	59.0	56.0	53.0	42.0	41.0	48.0		62.1	
Energy	Energy Average	54.4	Ave	Average:	9.09	57.4	54.3	53.0	49.9	47.9	45.1	44.9	43.8			

U:\Uclobs_10100-10500_10300\10351\Fieldwork\10351_L2_Summary



						24-H	24-Hour Noise Level		Measurement Summary	ummary						
Date: Tuesc Project: MCH	Tuesday, A MCH	Date: Tuesday, April 02, 2019 oject: MCH			Location:		L3 - Located on Pine Avenue, southeast of the Project site.		near Lizze Custom Processing,	rocessing,	Meter:	<i>Meter:</i> Piccolo I			JN: Analyst:	10351 R. Saber
							Hourly L eq dBA R	dBA Reading	Readings (unadjusted)							
85.0 ∀)																
(dB) (48) (48) (48) (48) (48) (48) (48) (48																
lourly L	0.95	7.E 8.22	1.82	2.29	T'S9	0.£9	9.19	6.0a 2.2a	0.29	1.29	4.E9	6.59	9. <u>1</u> 9	6.23	9·ZS	1.72
40.0 35.0	П	\blacksquare	+					H	\blacksquare	\blacksquare	\blacksquare	\blacksquare	\blacksquare		\blacksquare	
	o	7 1	Y)	4 د	٥	×	ח	II OI Hour l	II IZ I Hour Beginning	13 14	15 16	1/	18 I9	70	77 17	73
Timeframe	Hour	7	7 7 7	Lmin	11%	77	727	%87	%57.1	%057	%067	%561	%667	L 20	Adi.	Adj. L
	C	56.0	78.5	42.5	0'29	64.0	60.0	59.0	53.0	47.0	45.0	44.0	43.0	56.0	10.0	66.0
	Э Н	53.7	76.3	43.2	63.0	60.0	58.0	57.0	51.0	48.0	46.0	45.0	44.0	53.7	10.0	63.7
	2	55.8	79.2	44.4	0.99	63.0	0.09	29.0	52.0	48.0	46.0	46.0	45.0	55.8	10.0	65.8
Night	m ·	58.1	75.9	42.5	0.69	0.99	64.0	62.0	57.0	50.0	45.0	44.0	43.0	58.1	10.0	68.1
	4 п	63.2	81.7	46.2	73.0	71.0	68.0	66.0	63.0	60.0	50.0	48.0	47.0	63.2	10.0	73.2
	o 9	65.1	91.1 84.2	51.1	74.0	72.0	70.0	68.0	64.0	62.0	58.0	56.0	53.0	65.1	10.0	75.1
	7	64.4	86.4	46.5	73.0	72.0	0.69	67.0	63.0	61.0	26.0	55.0	51.0	64.4	0:0	64.4
	∞	63.0	82.8	43.1	72.0	71.0	0.89	0.99	61.0	58.0	51.0	49.0	45.0	63.0	0.0	63.0
	6	61.6	81.1	42.0	71.0	0.69	67.0	65.0	0.09	57.0	49.0	47.0	44.0	61.6	0:0	61.6
	10	60.9	80.1	42.5	70.0	69.0	0.99	65.0	60.0	57.0	50.0	47.0	45.0	60.9	0.0	60.9
	11	62.0	80.0	41.8	71.0	0.17	0.89	65.0	61.0	57.0	49.0	48.0	45.0	62.0	0.0	62.0
Day	13	62.1	78.8	47.1	72.0	70.0	67.0	0.99	61.0	58.0	52.0	50.0	48.0	62.1	0.0	62.1
	14	67.9	79.1	47.9	72.0	70.0	0.89	0.99	62.0	29.0	54.0	53.0	49.0	67.9	0.0	62.9
	15	63.4	80.7	52.6	71.0	70.0	67.0	66.0	63.0	61.0	58.0	57.0	54.0	63.4	0.0	63.4
	17	63.9	92.1 83.9	31.2 49.3	74.0	70.0	67.0	66.0	62.0	0.09	55.0	54.0	52.0	63.9 63.9	0:0	63.9
	18	62.7	81.2	48.0	73.0	70.0	67.0	65.0	62.0	59.0	55.0	53.0	51.0	62.7	0:0	62.7
	19	61.6	80.8	46.6	70.0	68.0	65.0	64.0	61.0	59.0	54.0	51.0	48.0	61.6	5.0	9.99
guilla	20 21	62.3 59.9	82.9 79.0	44.3 5. £4.3	70.0	0.07	64.0	64.0	59.0	58.0 57.0	51.0	49.0	46.0	62.3 59.9	5.0	67.3 64.9
+42:IV	22	57.6	73.1	43.2	0.89	0.99	62.0	61.0	57.0	53.0	45.0	44.0	43.0	57.6	10.0	9'29
เทยู่แเ	23	57.1	78.0	41.5	68.0	65.0	61.0	0.09	56.0	50.0	44.0	44.0	43.0	57.1	10.0	67.1
Timeframe	Hour	L eq	L max	L min	70.0	75%	72%	%87	752%	%057 22.0%	%067	%567	%667		L _{eq} (dBA)	
Day	Max	64.4	92.1	4T.0 52.6	74.0	72.0	0.69	67.0	63.0	57.0 61.0	58.0	57.0	54.0	24-Hour	Daytime	Nighttime
Energy Average	lverage	62.9	Ave	Average:	71.8	70.0	67.2	65.7	61.5	58.6	52.9	51.4	48.8	1 62	כט כ	61.0
Evening	Min	59.9	79.0	44.3	70.0	67.0	64.0	62.0	59.0	57.0	48.0	47.0	45.0	1.20		O.1.0
Energy	Average	61.4		Average:	70.7	68.3	65.0	63.3	60.3	58.0	51.0	49.0	46.3		model Civil	
6	Min	53.7	73.1	41.5	63.0	0.09	58.0	57.0	51.0	47.0	44.0	44.0	43.0		0 1 0	
ואואוור	Max	65.1	91.1	51.1	74.0	72.0	70.0	68.0	64.0	62.0	58.0	56.0	53.0		07.7	
Energy Average	Average	61.0	AV	Average:	0.69	66.4	63.4	62.1	57.3	53.2	48.3	47.1	45.6			



						24-Ho	24-Hour Noise Level		Measurement Summary	Summary						
Date: Tuesc Project: MCH	Date: Tuesday, April 02, 2019 oject: MCH	oril 02, 2019			Location:		d on Johnsol utheast of th	L4 - Located on Johnson Avenue, nea Center, southeast of the Project site.	L4 - Located on Johnson Avenue, near Prado Park Equestrian Center, southeast of the Project site.	k Equestrian	Meter:	<i>Meter:</i> Piccolo I			JN: Analyst:	10351 R. Saber
							Hourly L eq	dBA Reading	Hourly L _{eq} dBA Readings (unadjusted)	o C						
40urly 55:0 45:0	SS	6.8	1 .8	0.2	0.8	£.2 E.9	4.0	T.2	0.8	Z.82	8.25	9.45	8.48	7. p.	0.8	Z. 9
	П	\blacksquare	b	S	S	\blacksquare	S	\mathbb{H}	\prod		\blacksquare	\blacksquare	\blacksquare	i	\blacksquare	b
	0	1 2	က	4 5	9	7 8	6	10 11 Hour B	11 12 Hour Beginning	13 14	15 16	17	18 19	20	21 22	23
Timeframe	Hour	Γ οα	L max	L min	71%	75%	72%	%87	125%	720%	%067	<i>7</i> 67	%667	Γ 60	Adj.	Adj. L ea
	0	45.5	57.9	41.0	51.0	50.0	48.0	47.0	46.0	44.0	42.0	42.0	41.0	45.5	10.0	55.5
	T (48.6	65.6	42.9	53.0	52.0	51.0	50.0	49.0	48.0	45.0	44.0	44.0	48.6	10.0	58.6
	2	48.9	61.6	44.2	55.0	53.0	51.0	20.0	49.0	48.0	46.0	45.0	45.0	48.9	10.0	58.9
Night	m <	48.4	60.1	41.4	55.0	53.0	51.0	51.0	49.0	47.0	44.0	43.0	42.0	48.4	10.0	58.4
	4 0	52.0 56.1	79.5	44.1	54.0	52.0	50.0	50.0	48.0	47.0	45.0	45.0	44.0	52.0 56.1	10.0	62.0 66.1
	9	53.0	67.4	47.7	61.0	60.09	56.0	55.0	52.0	51.0	49.0	49.0	48.0	53.0	10.0	63.0
	7	52.3	2.69	44.2	61.0	29.0	26.0	54.0	51.0	20.0	48.0	47.0	45.0	52.3	0:0	52.3
	∞ •	49.3	67.0	41.7	0.09	26.0	52.0	51.0	48.0	45.0	43.0	43.0	42.0	49.3	0.0	49.3
	o (50.4	68.0	41.5	62.0	29.0	55.0	52.0	48.0	46.0	43.0	42.0	42.0	50.4	0.0	50.4
	11	52.1	71.4	41.3	64.0	0.09	56.0	54.0	49.0	47.0	44.0	43.0	42.0	52.1	0:0	52.1
Day	12	53.0	71.3	43.0	62.0	28.0	26.0	55.0	52.0	20.0	46.0	45.0	44.0	53.0	0:0	53.0
Ŝ	13	54.5	73.1	44.9	62.0	60.0	58.0	57.0	54.0	51.0	48.0	47.0	46.0	54.5	0.0	54.5
	14 15	58.7 55.8	86.5 71.8	46.7	63.0	62.0	59.0	56.0	54.0	52.0	49.0	49.0	48.0	58.7	0.0	58.7 55.8
	16	54.8	75.2	45.2	62.0	0.09	58.0	57.0	54.0	52.0	49.0	48.0	47.0	54.8	0.0	54.8
	17	54.6	70.9	46.9	64.0	62.0	58.0	57.0	53.0	51.0	49.0	48.0	48.0	54.6	0.0	54.6
	19	54.8	71.9	45.6	58.0	57.0	54.0	53.0	51.0	49.0	447.0	47.0	46.0	54.8	0.0	52.5
Evening	20	54.7	78.6	44.8	62.0	61.0	57.0	54.0	20.0	49.0	47.0	46.0	45.0	54.7	5.0	59.7
	21	48.0	58.4	44.0	54.0	53.0	51.0	50.0	48.0	47.0	45.0	45.0	44.0	48.0	5.0	53.0
Night	77 73	46.b 16.2	60.0	42.3	51.0	50.0	49.0	48.0	47.0	45.0	44.0	43.0	43.0	46.6	10.0	56.6
Timeframe	Hour	40.2 Lea	23.52 L max	L min	22:0	72.0	75.0	% 87	75%	720%	%067	% 567	%667	40.5	L ea (dBA)	20.5
VeO	Min	49.3	0.79	40.6	0.09	26.0	52.0	51.0	48.0	45.0	43.0	42.0	42.0	24-Hour	Daytimo	Nichttime
,	Max	58.7	86.5	48.0	67.0	62.0	29.0	58.0	26.0	53.0	50.0	50.0	49.0			
Energy Average	Average	54.0	Ave	Average:	62.6	59.6	56.3	54.9	51.7	49.4	46.7	46.0	45.1	53.0	53.9	50.9
Evening	Min	48.0 54.8	58.4 84.0	44.0 45.5	54.0 62.0	53.0 61.0	51.0	50.0	48.0 51.0	47.0	45.0	45.0 47.0	44.0	24-	24-Hour CNEL (dBA)	IBA)
Energy A	Energy Average	53.4	Ave	Average:	58.0	57.0	54.0	52.3	49.7	48.3	46.7	46.0	45.0			
Night	Min ye	45.5	57.9 85.6	41.0	51.0	50.0	48.0	47.0	46.0	44.0	42.0	42.0	41.0		58.3	
Energy Average	Average	50.9	Ave	Average:	54.6	53.1	51.1	50.2	48.6	47.1	44.9	44.4	43.8			

						24-Ho	24-Hour Noise Leve	evel Measu	Measurement Summary	ımmary						
Date: Tueso Project: MCH	Tuesday, A MCH	Date: Tuesday, April 02, 2019 oject: MCH			Location:		L5 - Located on Meadowhouse Avenue, ne: Apartment Homes, east of the Project site.	house Avent of the Projec	L5 - Located on Meadowhouse Avenue, near Meadow Square Apartment Homes, east of the Project site.	dow Square	Meter:	<i>Meter:</i> Piccolo I			JN: Analyst:	JN: 10351 Analyst: R. Saber
							Hourly L eq dBA		Readings (unadjusted)					ı		
A) 85.0																
(db)																
ourly L _e		8.	Z.2	Z.62	9.89	2.29 4.62	0.09	4.62 4.62	9.82 S.62	2.13	8.09 7.09	2.29	7.09 2.09	0.29	8.82	£:1
H (23	75	S													75
	0	1 2		. 4	. 9		. 6	10 11	12 13	3 14	15 16	17	18 19	20	21 22	. 23
								Hour Be	Hour Beginning							
Timeframe	Hour	L eq	L max	L min	717	75%	<i>7</i> 2%	%87	75%	%057	%067	%567	%667	L eq	Adj.	Adj. L eq
	0	53.4	70.4	42.9	62.0	61.0	59.0	57.0	52.0	49.0	45.0	44.0	43.0	53.4	10.0	63.4
	П	52.8	70.3	44.5	62.0	0.09	58.0	26.0	51.0	49.0	47.0	46.0	45.0	52.8	10.0	62.8
	7	54.0	74.0	45.5	65.0	61.0	58.0	56.0	52.0	49.0	47.0	47.0	46.0	54.0	10.0	64.0
Night	m <	55.7	75.6	43.5	67.0	64.0	60.0	58.0	54.0	50.0	46.0	45.0	44.0	55.7	10.0	65.7
	t 70	59.2	84.4	45.3	71.0	0.69	65.0	63.0	38.0 59.0	56.0	53.0	51.0	49.0	59.2 61.1	10.0	71.1
	9	63.6	81.1	51.4	73.0	71.0	69.0	68.0	62.0	59.0	55.0	54.0	52.0	9.89	10.0	73.6
	7	62.5	78.6	48.3	72.0	71.0	0'89	0.99	61.0	28.0	53.0	52.0	20.0	62.5	0.0	62.5
	∞	59.4	77.5	42.6	0.69	67.0	65.0	64.0	58.0	25.0	49.0	48.0	45.0	59.4	0.0	59.4
	6	60.09	80.0	44.3	70.0	0.89	65.0	64.0	58.0	55.0	50.0	48.0	46.0	0.09	0.0	60.0
	10	59.4	76.1	44.4	0.69	67.0	65.0	63.0	59.0	55.0	50.0	49.0	46.0	59.4	0:0	59.4
	12	58.6	72.0	45.9	68.0	66.0	63.0	62.0	58.0	55.0	51.0	50.0	47.0	58.6	0.00	58.6
Day	13	59.5	76.2	48.7	67.0	0.99	64.0	63.0	59.0	57.0	52.0	51.0	20.0	59.5	0.0	59.5
	14	61.2	79.0	49.0	70.0	0.89	65.0	64.0	0.09	58.0	54.0	53.0	51.0	61.2	0.0	61.2
	15	8.09	76.4	49.1	0.69	0.79	65.0	64.0	0.09	58.0	55.0	54.0	53.0	8.09	0.0	8.09
	16	60.7	79.4	49.4	69.0	67.0	65.0	63.0	60.0	58.0	55.0	54.0	52.0	60.7	0:0	60.7
	18	60.7	78.0	47.6	70.0	68.0	0.79	64.0	59.0	57.0	53.0	52.0	49.0	60.7	0:0	60.7
	19	60.2	74.3	48.3	0.69	67.0	65.0	63.0	29.0	57.0	53.0	52.0	20.0	60.2	2.0	65.2
Evening	20	62.0	78.7	46.2	74.0	71.0	66.0	64.0	59.0	57.0	51.0	50.0	47.0	62.0	5.0	67.0
	22	56.0	76.9	44.6	66.0	63.0	60.09	59.0	56.0	52.0	46.0	46.0	45.0	56.0	10.0	66.0
Night	23	54.3	74.6	42.7	65.0	63.0	59.0	57.0	53.0	48.0	44.0	44.0	43.0	54.3	10.0	64.3
Timeframe	Hour	L eq	L max	L min	71%	75%	72%	%87	75%	%057	%067	%567	%667		L eq (dBA)	
Day	Min	58.6	72.0	42.6	67.0	0.99	63.0	62.0	58.0	55.0	49.0	48.0	45.0	24-Hour	Daytime	Nighttime
L	Max	62.5	80.5	20.7	72.0	71.0	65.0	69.0	61.0	59.0	55.0	54.0	53.0			
Energy Average	Average	60.5	AVE	Average:	60.0	67.7	64.0	63.8	59.3	56.7	52.2	51.1	48.9	59.8	60.5	58.3
Evening	Max	38.8 62.0	78.7	45.5	74.0	71.0	64.0	62.0	59.0	57.0	53.0	46.0 52.0	50.0	2,	-16	JBA)
Energy A	Energy Average	60.5		Average:	70.7	68.3	65.0	63.0	58.7	56.3	51.0	50.0	47.7			
Night	Min	52.8	70.3	42.7	62.0	0.09	58.0	56.0	51.0	48.0	44.0	44.0	43.0		7 7 9	
Energy	Energy Average	63.6	84.4 Ave	Average:	73.0	71.0	69.0	68.0	62.0	59.0	55.0	54.0	52.0)	



							24-Hou	24-Hour Noise Level		asurem	Measurement Summary	mary							
Date: Tuesc Project: MCH	Tuesday, A	Date: Tuesday, April 02, 2019 olect: MCH			7000	Location:	- Located	L6 - Located in Prado Regional Park near campground areas.	gional Pa	rk near ca	ampgroun.	d areas.	Meter:	Meter: Piccolo I				JN: Analyst:	10351 R. Saber
								Hourly L eq dBA R	dBA Readi	Readings (unadjusted)	iusted)					I	I		
85.0						-			-	-						-	-	_	
L _{eq} (di 65:0																			
			Z.	$+ \Box$		<u>L</u> .	6.	2.73	2.7a	8.2	T'1	S.2	0.1		6.	+			8.
	tt	9t St	L t		23	TS	0S	S				S	85	TS	6 7	6 †	Z 5	97	E t
	0	1 2	8	4	2 6	_	∞	6	10 11	1 12	13	14	15 16	5 17	18	19	20 21	1 22	23
									Hon	Hour Beginning	gu								
Timeframe	Hour	L eq	L max	L min	71%	%	75%	%57	<i>%8</i> 7		752%	<i>%</i> 057	<i>%06</i> 7	<i>%</i> 567	%667		L eq	Adj.	Adj. L _{eq}
	0	44.1	54.4	39.7	49.0	0.	48.0	47.0	46.0		44.0	43.0	41.0	41.0	41.0		44.1	10.0	54.1
	₩.	45.2	55.6	41.1	51.0	0.	49.0	48.0	47.0		45.0	44.0	42.0	42.0	41.0		45.2	10.0	55.2
+q~:I4	7	46.3	57.2	41.8	51.0	0.0	50.0	49.0	48.0		46.0	45.0	43.0	42.0	42.0		46.3	10.0	56.3
Nignt	w 4	47.3	56.6	41.2	52.0	0. 0	51.0	50.0	49.0		48.0	46.0	43.0	42.0	42.0		47.3	10.0	57.2
	- 12	50.6	67.1	45.4	56.0	0.	54.0	53.0	52.0		51.0	50.0	46.0	46.0	46.0		50.6	10.0	9.09
	9	53.3	71.1	45.9	62.0	0.	0.09	58.0	55.0		52.0	51.0	48.0	47.0	46.0		53.3	10.0	63.3
	7	51.7	73.9	39.4	63.0	0.	57.0	51.0	50.0		47.0	44.0	40.0	39.0	39.0		51.7	0.0	51.7
	∞ ·	50.9	74.5	40.0	63.0	0.	61.0	55.0	51.0		45.0	42.0	41.0	41.0	41.0		50.9	0.0	50.9
	o (57.2	81.9	44.1	67.0	0. 0	62.0	58.0	57.0		52.0	49.0	46.0	45.0	45.0		57.2	0.0	57.2
	10	57.5	79.8	42.4	0.69	o c	62.0	59.0	56.0		51.0	48.0	45.0	44.0	43.0		57.5	0:0	57.5
d	12	53.5	73.9	41.8	62.0	o o	0.09	57.0	56.0		52.0	50.0	47.0	47.0	46.0		53.5	0:0	53.5
Day	13	54.1	69.3	45.8	61.0	0:	0.09	58.0	57.0		54.0	52.0	48.0	47.0	47.0		54.1	0.0	54.1
	14	55.5	77.3	46.0	0.99	0.	0.09	57.0	56.0		52.0	20.0	48.0	47.0	46.0		55.5	0.0	55.5
	15	54.0	68.7	46.0	63.0	o c	61.0	59.0	57.0		53.0	51.0	48.0	48.0	47.0		54.0	0:0	54.0
	17	51.3	68.5	45.2	61.0	. o.	59.0	55.0	53.0		50.0	48.0	46.0	46.0	46.0		51.3	0:0	51.3
	18	49.9	70.1	45.3	59.0	0.	56.0	52.0	51.0		48.0	47.0	46.0	46.0	45.0		49.9	0.0	49.9
Pyconing	19	49.6	67.4	44.9	57.0	o c	55.0	52.0	51.0		48.0	47.0	46.0	46.0	45.0		49.6	5.0	54.6
0	21	47.8	65.0	43.3	53.0	. o	51.0	50.0	49.0		47.0	47.0	45.0	45.0	45.0		47.8	5.0	52.8
Night	22	46.6	29.0	42.4	51.0	0.	20.0	49.0	48.0	-	47.0	45.0	44.0	43.0	43.0		46.6	10.0	9.99
1118111	23	43.8	50.5	39.4	47.0	0.	46.0	46.0	45.0		44.0	43.0	41.0	41.0	39.0		43.8	10.0	53.8
Timeframe	Hour	L eq	Lmax	L min	71%	%	77.	77.	%87		125%	75.0	%067	%567	%667		7	L _{eq} (dBA)	
Day	Max	49.9 57.5	81.9	39.4	0.69	. o	0.96	59.0	50.0		45.0 54.0	52.0	40.0	48.0	39.0		24-Hour	Daytime	Nighttime
Energy Average	lverage	54.4	A	Average:	63.6	9.	60.4	56.3	54.6		50.6	48.3	45.6	45.1	44.6		L 2 1	620	C 01
Evening	Min	47.8	65.0	43.1	53.0	0.	51.0	50.0	49.0		47.0	47.0	45.0	45.0	44.0		7.7	0000	40.0
- 1 ;	Max	52.3	/3.3	44.9	63.0	0 1	0.09	55.0	52.0	+	49.0	48.0	46.0	46.0	45.0		74-H0	24-HOUF CNEL (ABA)	5A)
8	Average	50.3	AV 50 5	Average:	7.70	· · ·	55.3	52.3	75.0	ł	48.0	47.3	45.7	45.3	44.7		•	(
Night	Max	53.3	71.1	45.9	62	0 0	60.0	58.0	55.0		52.0	51.0	48.0	41.0	46.0		-,	56.3	
Energy Average	verage	48.3	Av	Average:	52.4	.4	51.0	49.9	48.8		47.1	45.9	43.7	43.2	42.7				

							24-Ho	24-Hour Noise Leve	evel Meas	surement	Measurement Summary							
Date: Tuesc Project: MCH	Tuesday, A MCH	<i>Date:</i> Tuesday, April 02, 2019 <i>oject:</i> MCH	6:			Location:	L7 - Locatec southeast o	L7 - Located on Cucamonga I southeast of the Project site	nga Road, n site.	Road, near Vermontes Mulch,	ites Mulch,	Mete	<i>Meter:</i> Piccolo I				JN: Analyst:	JN: 10351 Analyst: R. Saber
								Hourly L eq dBA		Readings (unadjusted)	d)							
dab) _q (48) _q (48)																		
											+	6	8					
	6'7	018	£,2	6.6	۲.۲	6.43	2.82	£.E	9.4	9.25	79 6:85	·09	0.95	2.0	₽.0	7.8	8°t	0.4
	\Box	\blacksquare	\blacksquare	ib	S	\blacksquare	+	+	+					S	S	\blacksquare	\blacksquare	לי לי
	0	Т	2 3	4	2	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 min	71%	75%	%57	<i>%8</i> 7	752%	<i>%05</i> 7	<i>%06</i> 7	<i>%</i> 567	%667	%(L eq	Adj.	Adj. L _{eq}
	0	42.9	54.2		39.0	49.0	48.0	46.0	45.0	43.0	41.0	39.0	39.0	39.0	0.	42.9	10.0	52.9
	П	43.0	56.5		40.2	49.0	47.0	45.0	44.0	43.0	42.0	40.0	40.0		0.	43.0	10.0	53.0
:	7	42.3	53.9		39.1	48.0	47.0	44.0	43.0	42.0	42.0	40.0	40.0		0.	42.3	10.0	52.3
Night	m <	45.1	58.8	_	39.1	53.0	52.0	49.0	48.0	45.0	42.0	40.0	39.0		0. 0	45.1	10.0	55.1
	4 г.	51.7	75.6	_	43.0	0.65	54.0	51.0	70.0	46.0	45.0	44.0	43.0	43.0	o. c	49.9 51.7	10.0	59.9
	n	54.9	81.0		43.1	64.0	59.0	55.0	54.0	50.0	48.0	45.0	44.0		o o	54.9	10.0	64.9
	7	55.5	79.0		45.4	0.99	0.09	57.0	26.0	53.0	49.0	46.0	46.0		0:	55.5	0.0	55.5
	∞	29.5	83.5		39.1	0.99	63.0	54.0	52.0	47.0	45.0	41.0	40.0		0:	56.2	0.0	56.2
	б ;	53.3	7.77		39.0	65.0	61.0	26.0	53.0	47.0	44.0	41.0	40.0		0.	53.3	0.0	53.3
	10	54.6	77.6		39.1	66.0	61.0	26.0	55.0	50.0	46.0	42.0	41.0		0. 0	54.6	0.0	54.6
	11	55.6	74.1		39.1 40.8	66.0	63.0	56.0	54.0	54.0	45.0	41.0	40.0	39.0		55.6	0:0	55.6
Day	13	58.9	72.7		43.1	0.69	67.0	65.0	63.0	58.0	53.0	47.0	45.0		0.	58.9	0.0	58.9
	14	62.1	79.2		42.6	71.0	0.69	67.0	0.99	62.0	58.0	20.0	48.0		0.	62.1	0.0	62.1
	15	6.09	75.5		43.8	70.0	68.0	0.99	65.0	61.0	57.0	50.0	48.0		0. 0	60.9	0.0	6.09
	17	56.0	71.1		42.7	0.07	63.0	61.0	0.59	0.10	57.0	49.0	47.0	44.0	o. c	56.0	0.0	56.0
	18	50.2	69.7		42.0	60.09	57.0	54.0	53.0	48.0	46.0	43.0	43.0		· 0:	50.2	0.0	50.2
	19	50.4	72.1		42.1	0.09	58.0	55.0	53.0	49.0	46.0	44.0	43.0		0.	50.4	5.0	55.4
Evening	20 21	53.7	78.2		41.7	62.0	60.0	56.0	53.0	48.0	46.0	43.0	42.0	42.0	o c	53.7	5.0	58.7
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	22	44.8	63.9		40.8	51.0	20.0	47.0	46.0	44.0	43.0	42.0	42.0		0.	44.8	10.0	54.8
Nignt	23	44.0	60.7		39.1	49.0	48.0	47.0	46.0	44.0	43.0	40.0	40.0		.0	44.0	10.0	54.0
Timeframe	Hour	L eq	L max		L min	71%	75%	72%	<i>%8</i> 7	772	<i>%051</i>	<i>%06</i> 7	<i>%</i> 567	7	%(L $_{eq}$ (dBA)	
Day	Min 2	50.2	69.7		39.0	60.0	57.0	54.0	52.0	47.0	44.0	41.0	40.0			24-Hour	Daytime	Nighttime
Frank Average	Wersda	02.1	03.3	Average.	42.4	0.17	03.6	67.0	0.00	0.20	50.0	30.0	46.0	46.0				
181213	Min	43.6	51.2	_	41.3	47.0	46.0	45.0	44.0	43.0	43.0	42.0	42.0			55.4	57.0	48.9
Evening	Max	53.7	78.2		42.1	62.0	60.0	56.0	53.0	49.0	46.0	44.0	43.0		0.	24-H	24-Hour CNEL (dBA)	IBA)
Energy Average	Average	50.9		Average:		56.3	54.7	52.0	20.0	46.7	45.0	43.0	42.3	4	.3			
Night	ri M	42.3	53.9		39.0 43.1	48.0	47.0	44.0	43.0	42.0	41.0	39.0	39.0	39.0	0. 0		58.1	
Energy Average	Average	48.9		Average:		53.3	51.1	48.3	47.2	45.0	43.7	41.7	41.2	H	6:			

U:\Uclobs_10100-10500_10300\10351\Fieldwork\10351_L7_Summary

						24-Ho	24-Hour Noise Lev		el Measurement Summary	ummary						
Date: Project:	Tuesday, April 02, 2019 MCH	ıril 02, 2019			Location:		L8 - Located on Chino Corona Road, near County Road, adjacent to existing rural residential homes.	rona Road, n residential h	lear County I	Road,	Meter:	<i>Meter:</i> Piccolo I			JN: Analyst:	10351 R. Saber
							Hourly Leg dBA	BA Readings	A Readings (unadjusted)							
85.C																
A8b) 75.0																
ا ۷ ل وم 60.50 55.00				0"	p.3	0.88 7.4	T'S!	9.8	£.8	8.4	4.2 3	\coprod				
Hourl 50.0	۲.2	8.0	۲.9	9.95	9	+	+	E9 179	+	+	+	p.92	6.82 6.2	0.2	0.82 4.0	S. 7
+ 40.0	П	\blacksquare)t										\blacksquare	25	S	.t
	0	1 2	3	4 5	9	7 8	9 1	10 11		13 14	15 16	17	18 19	20	21 22	23
								Hour Beginning	ginning							
Timeframe	Hour	L eq	L max	L min	71%	75%	%57	%87	752%	<i>%057</i>	<i>%06</i> 7	<i>%</i> 567	<i>%66</i> 7	L eq	Adj.	Adj. L _{eq}
	0	45.7	68.7	39.3	54.0	52.0	49.0	48.0	45.0	42.0	40.0	39.0	39.0	45.7	10.0	55.7
	1	40.8	55.6	36.4	49.0	48.0	44.0	42.0	40.0	39.0	36.0	36.0	36.0	40.8	10.0	20.8
:	7	44.4	73.5	36.4	51.0	49.0	44.0	42.0	41.0	39.0	39.0	39.0	36.0	44.4	10.0	54.4
Night	m <	46.7	71.5	39.2	55.0	54.0	50.0	48.0	44.0	42.0	39.0	39.0	39.0	46.7	10.0	56.7
	4 rv	30.0 62.0	83.7	41.1	75.0	38.0 73.0	92.0 69.0	46.0	44.0 52.0	43.0	42.0	42.0	41.0	30.0 62.0	10.0	72.0
	9	66.4	86.0	45.6	77.0	75.0	73.0	71.0	63.0	57.0	50.0	49.0	47.0	66.4	10.0	76.4
	7	0.99	6.68	47.0	77.0	75.0	72.0	70.0	29.0	53.0	49.0	48.0	48.0	0.99	0.0	0.99
	∞ .	64.7	93.5	40.7	75.0	71.0	64.0	29.0	51.0	49.0	45.0	43.0	41.0	64.7	0.0	64.7
	o ;	65.1	90.3	41.1	78.0	73.0	66.0	61.0	51.0	48.0	44.0	43.0	42.0	65.1	0.0	65.1
	10	61.7	85.3	41.1	76.0	71.0	63.0	59.0	52.0	48.0	45.0	44.0	42.0	61.7	0.0	61.7
	11	03.0 63.3	89.4	38.8	76.0	73.0	0.09	0.19	52.0	47.0	42.0	40.0	39.0	63.3	0.0	63.3
Day	13	62.7	84.5	45.2	75.0	73.0	68.0	64.0	55.0	52.0	48.0	47.0	46.0	62.7	0.0	62.7
	14	64.8	91.2	44.8	77.0	73.0	0.69	65.0	54.0	51.0	48.0	47.0	46.0	64.8	0.0	64.8
	15	65.4	89.0	43.6	77.0	74.0	71.0	0.69	57.0	51.0	46.0	45.0	44.0	65.4	0.0	65.4
	16	62.5	87.2	42.7	74.0	72.0	67.0	62.0	52.0	49.0	45.0	44.0	43.0	62.5	0.0	62.5
	7 2 2	56.9	80.1	41.0	70.0	0.79	59.0	55.0	48.0	46.0	43.0	43.0	41.0	56.9	0.0	56.9
	19	52.9	80.6	41.4	64.0	58.0	54.0	52.0	46.0	44.0	42.0	42.0	42.0	52.9	2.0	57.9
Evening	20	52.0	76.1	40.7	63.0	0.09	55.0	53.0	46.0	43.0	41.0	41.0	41.0	52.0	2.0	57.0
	21	58.0	77.9	39.3	72.0	70.0	62.0	56.0	45.0	43.0	41.0	41.0	39.0	28.0	5.0	63.0
Night	22	50.4	79.1	39.2	0.09	54.0	50.0	47.0	42.0	41.0	39.0	39.0	39.0	50.4	10.0	60.4
Timeframe	23 Hour	47.5	/4.2	39.3	54.0	50.0	48.0	48.0	43.0	42.0	41.0 190%	40.0	39.0 1 49 %	47.5	10.0 L (dBA)	5/.5
	Min	56.4	80.1	36.4	70.0	67.0	59.0	55.0	47.0	44.0	42.0	40.0	39.0		ha	
Day	Max	0.99	93.5	47.0	78.0	75.0	72.0	70.0	59.0	53.0	49.0	48.0	48.0	24-Hour	Daytime	Nighttime
Energy Average	Average	63.5		Average:	75.1	71.9	62:9	61.8	52.4	48.8	44.9	43.9	42.7	61 G	7 62	587
Evening	Min Z	52.0	76.1	39.3	63.0	58.0	54.0	52.0	45.0	43.0	41.0	41.0	39.0	0.10		
Fnergy	Average	55.0	9.00 AV	Average.	66.3	6.07	57.0	53.7	75.7	44.0	42.0	42.0	42.0		TIOUT CIVE	(Mari
۵	Min	40.8	55.6	36.4	49.0	48.0	44.0	42.0	40.0	39.0	36.0	36.0	36.0		7	
Night	Max	66.4	86.0	45.6	77.0	75.0	73.0	71.0	63.0	57.0	50.0	49.0	47.0		66.1	
Energy	Energy Average	58.7	Av	Average:	59.8	57.0	53.2	50.9	46.0	43.7	41.2	40.9	40.0			



						24-Ho	24-Hour Noise Leve	evel Measu	Measurement Summary	ımmary						
Date: Tueso Project: MCH	Tuesday, Aṛ MCH	Date: Tuesday, April 02, 2019 oject: MCH			Location:		L9 - Located on Hereford Road, near residential construction and a vacant area, east of the Project site.	l Road, near of the Project	residential cc : site.	onstruction	Meter:	<i>Meter:</i> Piccolo I			JN: Analyst:	JN: 10351 Analyst: R. Saber
							Hourly L eq dBA		Readings (unadjusted)							
85.0 A)																
(db) (48.0																
y L _€ (L	1	T"	\mathbb{H}	T.	\coprod	8.8					
lourl 50.0	9.8	6°t	2.8	9.1	'09	T9 79	+	109 109	79 	T9	9'85	0.8	£.£	S.4.5	0.6	L't
+ 40.0 35.0	П	\blacksquare	t	\blacksquare								S	\blacksquare	S	\blacksquare	ילי
	0	1 2	3	4 5	9	7 8	9 1	10 11	12 13	3 14	15 16	17	18 19	20	21 22	23
								Hour Be	Hour Beginning							
Timeframe	Hour	L eq	L max	L min	71%	75%	%57	%87	752%	%057	%067	%567	%667	r ed	Adj.	Adj. L eq
	0	43.6	54.0	36.9	20.0	20.0	48.0	47.0	44.0	42.0	39.0	39.0	39.0	43.6	10.0	53.6
	₩ (43.1	58.1	36.2	54.0	51.0	47.0	45.0	41.0	39.0	39.0	39.0	36.0	43.1	10.0	53.1
+ <u>q</u>	۲ ر	44.9	63.0	36.2	26.0	54.0	49.0	45.0	42.0	40.0	39.0	38.0	36.0	44.9	10.0	54.9
Jugin	η N	48.5 51.6	63.4 70.4	40.3	60.0	59.0	53.0	53.0	46.0	44.0	42.0 45.0	41.0	41.0	48.5 51.6	10.0	58.5 61.6
	4 ΓΟ	55.9	71.8	42.2	64.0	59.0	53.0 61.0	59.0	55.0	53.0	43.0	44.0	43.0	55.9	10.0	0.T.0 65.9
	9	60.7	78.1	47.2	0.69	67.0	65.0	64.0	61.0	58.0	52.0	51.0	49.0	60.7	10.0	70.7
	7	62.1	84.8	46.9	71.0	70.0	0.79	0'99	61.0	27.0	51.0	49.0	48.0	62.1	0.0	62.1
	∞	61.8	82.0	46.6	72.0	70.0	67.0	0.59	0.09	57.0	50.0	49.0	47.0	61.8	0.0	61.8
	6	62.1	81.4	45.4	72.0	70.0	68.0	0.99	0.09	26.0	20.0	48.0	47.0	62.1	0.0	62.1
	10	61.0	81.5	43.0	73.0	70.0	67.0	65.0	57.0	51.0	46.0	45.0	44.0	61.0	0.0	61.0
	11	60.9	80.8 79.6	39.3 41.8	73.0	71.0	0.99	0.50	58.0 58.0	53.0	45.0	42.0	41.0	60.9	0.0	60.9
Day	13	62.2	78.6	45.1	73.0	71.0	0.89	0.99	61.0	26.0	20.0	49.0	47.0	62.2	0.0	62.2
	14	61.4	79.7	45.1	73.0	70.0	0.79	65.0	59.0	55.0	20.0	48.0	47.0	61.4	0:0	61.4
	15	63.8	89.6	43.2	75.0	71.0	67.0	64.0	59.0	55.0	48.0	47.0	45.0	63.8	0.0	63.8
	16	58.0 53.0	84.7 68.6	42.7	69.0	61.0	62.0 58.0	61.0	52.0	52.0 49.0	46.0	45.0	43.0	53.0	0.0	58.b
	18	53.3	71.8	42.1	65.0	62.0	58.0	56.0	50.0	47.0	44.0	43.0	42.0	53.3	0.0	53.3
	19	50.9	72.0	41.6	0.09	29.0	26.0	54.0	49.0	45.0	43.0	42.0	42.0	50.9	2.0	55.9
Evening	20 71	54.5	77.2	40.9	67.0	65.0	60.0	57.0	47.0	44.0	42.0	42.0	41.0	54.5	5.0	59.5
:	22	46.6	62.9	39.1	57.0	56.0	53.0	50.0	43.0	41.0	39.0	39.0	39.0	46.6	10.0	56.6
Nignt	23	44.7	64.0	39.1	55.0	53.0	47.0	46.0	42.0	41.0	39.0	39.0	39.0	44.7	10.0	54.7
Timeframe	Hour	L eq	L max	L min	71%	77%	<i>%</i> 57	%87	752%	<i>%05</i> 7	<i>%067</i>	%567	%667		L _{eq} (dBA)	
Day	Min	53.0	68.6	39.3	62.0	61.0	58.0	56.0	50.0	47.0	43.0	42.0	41.0	24-Hour	Daytime	Nighttime
Energy Average	verage	61.1		Average:	20.67	68.5	65.3	63.5	57.6	53.3	47.4	46.2	44.8	9		
	Min	49.0	64.7	39.2	0.09	59.0	55.0	52.0	46.0	44.0	42.0	41.0	40.0	58./	P0.7	53.3
Evening	Max	54.5	77.2	41.6	67.0	65.0	60.0	57.0	49.0	45.0	43.0	42.0	42.0	24	24-Hour CNEL (dBA)	IBA)
Energy Average	Average	52.1	Ave	Average:	62.3	61.0	57.0	54.3	47.3	44.3	42.3	41.7	41.0			
Night	Mir Max	43.1	54.0	36.2	50.0	50.0	47.0	45.0 64.0	41.0	39.0	39.0	38.0 51.0	36.0		61.8	
Energy Average	lverage	53.3		Average:	58.4	56.8	53.1	51.1	47.1	45.1	42.6	42.0	41.0			

U:\Uclobs_10100-10500_10300\10351\Fieldwork\10351_L9_Summary

						24-Ho	24-Hour Noise Level		Measurement Summary	ımmary						
Date: Tueso Project: MCH	Date: Tuesday, April 02, 2019 oject: MCH	ıril 02, 2019			Location:		L10 - Located near the interse Hellman Avenue, adjacent to	itersection c nt to existing	L10 - Located near the intersection of Walters Street and Hellman Avenue, adjacent to existing single-family residential	eet and residential	Meter:	<i>Meter:</i> Piccolo I			JN: Analyst:	10351 R. Saber
						nomes, eas	Hourly Leg a	ct site. IBA Readings	ol the Project site. Hourly L _{eq} dBA Readings (unadjusted)					ı	ı	
			9	2.4	1.87	7.87 6.77	1.94	5.2	₽.₽.	p.2	6.27 E.37	S.2	7.2	۲.	$+ \blacksquare$	
urly L_e	6.89	62.6 5.29)*69											TZ	.07 9.7a	S.78
	0	1 2	- ന	4 5	9	7 8	9 -	10 11	12 13	3 14	15 16	17	18 19	50	21 22	23
								Hour B	Hour Beginning							
Timeframe	Hour	L eq	L max	L min	71%	75%	<i>%</i> 57	%87	752%	<i>%</i> 057	<i>%</i> 067	<i>%</i> 567	%667	L eq	Adj.	Adj. L _{eq}
	0	63.9	86.0	38.7	78.0	75.0	0.69	63.0	49.0	44.0	40.0	39.0	38.0	63.9	10.0	73.9
	Η (62.6	86.8	38.7	77.0	73.0	63.0	57.0	46.0	42.0	39.0	38.0	38.0	62.6	10.0	72.6
Night	7 6	03.T 9.69	90.1 90.5	41.1	83.0	81.0	04.0	27.0	57.0	45.0	39.0 44.0	56.0 43.0	36.0 41.0	1.co 69.6	10.0	79.6 79.6
0	4	74.2	90.0	43.4	85.0	83.0	81.0	80.0	72.0	59.0	47.0	46.0	44.0	74.2	10.0	84.2
	D (76.5	91.0	49.2	84.0	83.0	82.0	81.0	78.0	71.0	57.0	54.0	51.0	76.5	10.0	86.5
	9	78.7	91.3	51.9	85.0	84.0	82.0	82.0	80.0	77.0	67.0	63.0	57.0	78.7	0.0	78.7
	· ∞	77.9	97.3	47.5	86.0	84.0	83.0	82.0	79.0	74.0	60.09	56.0	51.0	77.9	0:0	77.9
	6	76.1	92.1	47.6	85.0	84.0	82.0	80.0	76.0	70.0	58.0	54.0	50.0	76.1	0:0	76.1
	10	75.5	92.0	46.1	86.0	84.0	81.0	80.0	74.0	68.0	54.0	52.0	48.0	75.5	0:0	75.5
	11	74.4	92.2	47.1	84.0	82.0	80.0	79.0	74.0	68.0	55.0	53.0	50.0	74.4	0.0	74.4
Day	12	75.3	91.7	47.8	84.0	83.0	80.0	79.0	75.0	69.0	55.0	53.0	50.0	75.3	0:0	75.3
	14	75.4	90.8	50.2	85.0	83.0	81.0	79.0	75.0	71.0	58.0	55.0	52.0	75.4	0:0	75.4
	15	75.9	93.5	49.0	85.0	83.0	81.0	80.0	76.0	72.0	0.09	57.0	52.0	75.9	0:0	75.9
	16	76.3	94.8	48.7	84.0	83.0	81.0	80.0	77.0	73.0	58.0	55.0	51.0	76.3	0:0	76.3
	17	75.5	90.7	48.6	84.0	83.0	81.0	0.08	75.0	72.0	56.0	53.0	50.0	74.4	0.0	74.4
	19	72.7	94.6	44.0	82.0	81.0	79.0	77.0	73.0	63.0	48.0	47.0	45.0	72.7	5:0	77.7
Evening	20	71.7	91.8	42.7	82.0	80.0	78.0	76.0	71.0	61.0	47.0	45.0	44.0	71.7	2.0	7.97
	21	70.7	88.3	41.6	81.0	80.0	78.0	76.0	68.0	58.0	46.0	44.0	42.0	70.7	5.0	75.7
Night	22	62.9	85.9	38.8	79.0	78.0	75.0	73.0	61.0	50.0	42.0	41.0	40.0	67.9	10.0	77.9
Timeframe	23 Hour	6/.5	89.1	40.0	80.0	78.0	75.0	72.0	57.0	47.0	42.0	4T.U	40.0	6/.5	1 (dBA)	77.5
	Min	74.4	88.1	46.0	83.0	82.0	80.0	79.0	74.0	68.0	54.0	51.0	48.0		, ba -	
Day	Max	78.7	97.3	51.9	86.0	84.0	83.0	82.0	80.0	77.0	67.0	63.0	57.0	Z4-Hour	Daytime	Nighttime
Energy A	Average	76.0	Q.	verage:	84.7	83.2	81.2	79.9	75.9	70.9	57.7	54.8	50.9	9 7/	75.4	726
Evening	Min May	70.7	88.3	41.6	81.0	80.0	78.0	76.0	68.0	58.0	46.0	44.0	42.0	0.4	VED END MICH VO	7.5.0
Energy #	Average	71.8	Ave	Average:	81.7	80.3	78.3	76.3	70.7	60.7	47.0	45.3	43.7			
Night	Min	62.6	85.9		77.0	73.0	63.0	57.0	46.0	42.0	39.0	38.0	38.0		797	
Energy	Energy Average	78.1	91.3 Ave	Average:	85.0	78.8	82.0	82.0 70.8	79.0	76.0	67.0	63.0	57.0			

						24-Ho	24-Hour Noise Level		Measurement Summary	ummary						
Date: Project:	Tuesday, Ap MCH	Tuesday, April 02, 2019 MCH			Location:		L11 - Located on Chandler Street, near a vacant area and existing residential neighborhood.	er Street, ne Iborhood.	ar a vacant a	ırea and	Meter:	Meter: Piccolo I			JN: Analyst:	10351 R. Saber
							Hourly L eq a	BA Readings	Hourly L eq dBA Readings (unadjusted)							
85.C ()																
A ab)																
L _m 65.0					9		H	H	+	H	H		$oxed{\bot}$			
ourly 50:00 45:0	T't	2.1 4.85	0.98	p.e2	9.19	5.19	2 ⁻ 19	1.09 1.09	0.28	5.09	9.09	779	.E9	ε.τ9	8.62	8.85
H 40.0	\Box	\blacksquare	i													i
	0	1 2	ĸ	4 5	9	7 8	9 1	10 11		13 14	15 16	17	18 19	20	21 22	23
								Hour B	Hour Beginning							
Timeframe	Hour	L eq	L max	L min	71%	75%	72%	<i>%8</i> 7	752	<i>7</i> 20%	%067	%567	%667	L eq	Adj.	Adj. L eq
	0	54.1	79.5	38.8	0.89	63.0	55.0	51.0	46.0	42.0	38.0	38.0	38.0	54.1	10.0	64.1
	1	51.2	75.7	35.9	64.0	58.0	52.0	49.0	41.0	39.0	38.0	38.0	38.0	51.2	10.0	61.2
	2	56.4	84.1	38.8	0.99	61.0	55.0	53.0	43.0	40.0	38.0	38.0	38.0	56.4	10.0	66.4
Night	3	26.0	85.0	38.9	0.99	63.0	0.09	57.0	49.0	45.0	40.0	40.0	39.0	26.0	10.0	0.99
	4	59.4	83.8	40.6	70.0	0.99	62.0	61.0	25.0	49.0	44.0	43.0	41.0	59.4	10.0	69.4
	5 9	58.7	83.4	44.3	69.0	65.0	62.0	63.0	57.0	52.0	48.0	47.0	45.0	58.7	10.0	68.7
	7	61.8	83.9	46.5	73.0	71.0	68.0	64.0	58.0	55.0	50.0	49.0	47.0	61.8	0:0	61.8
	8	60.4	82.5	41.5	71.0	70.0	67.0	63.0	26.0	52.0	46.0	44.0	43.0	60.4	0.0	60.4
	6	61.7	85.0	41.7	73.0	71.0	67.0	64.0	57.0	52.0	46.0	45.0	43.0	61.7	0:0	61.7
	10	60.1	85.1	41.6	71.0	0.69	65.0	62.0	54.0	20.0	45.0	44.0	45.0	60.1	0:0	60.1
	11	62.8	91.1	39.8	72.0	70.0	66.0	64.0	55.0	49.0	43.0	42.0	40.0	62.8	0.0	62.8
Day	12	62.0	89.3	40.6	73.0	70.0	66.0	64.0	55.0	50.0	44.0	42.0	41.0	62.0	0.0	62.0
	14	60.6	81.3	44.0	71.0	70.0	67.0	04.0	57.0	52.0	47.0	47.0	45.0	60.6	0.0	60.6
	15	9.09	75.6	43.8	71.0	70.0	68.0	0.99	28.0	52.0	48.0	47.0	45.0	9.09	0.0	9.09
	16	63.1	83.4	44.0	73.0	72.0	0.69	0.89	0.09	54.0	48.0	46.0	45.0	63.1	0:0	63.1
	17	64.4	92.2	43.7	74.0	72.0	0.69	68.0	61.0	53.0	47.0	46.0	44.0	64.4 63.8	0:0	64.4
	19	62.0	83.6	41.6	72.0	70.0	68.0	67.0	57.0	50.0	44.0	43.0	42.0	62.0	5.0	67.0
Evening	20	61.3	82.7	40.6	72.0	70.0	0.89	0.99	26.0	49.0	43.0	42.0	41.0	61.3	2.0	66.3
	21	59.8	81.6	38.9	71.0	70.0	67.0	64.0	52.0	46.0	42.0	41.0	39.0	59.8	5.0	64.8
Night	22	56.9	75.5	38.8	70.0	68.0	63.0	60.0	51.0	46.0	40.0	39.0	38.0	56.9	10.0	6.99
	7.7	56.8	79.6	38.8	70.0	0.89	61.0	57.0	47.0	43.0	39.0	38.0	38.0	26.8	10.0	66.8
anne) i anne	Min	5 eq	► max 75.6	29 8	71.0	69.0	65.0	62.0	54.0	49.0	43.0	42.0	40.0		red (ach)	
рау	Max	64.4	92.2	46.5	74.0	72.0	0.69	68.0	61.0	55.0	50.0	49.0	47.0	24-Hour	Daytime	Nighttime
Energy	Energy Average	62.0	Ave	Average:	72.3	70.6	67.3	65.1	57.3	51.8	46.4	45.2	43.6	2 03	610	E7 7
Evening	Z Z	59.8	81.6	38.9	71.0	70.0	67.0	64.0	52.0	46.0	42.0	41.0	39.0	7.00		7.70
Energy	IVIAN	61.1	0.50		717	0.07	0.99	65.7	37.0	30.0	44.0	43.0	42.0	-4-7	nodi-Civet ((Add
Liicigy Avelage	Min	51.7	75.5	35 Q	64.0	78.0	52.0	49.0	33.0	39.0	38.0	38.0	38.0			
Night	Max	61.6	85.0	47.0	73.0	70.0	66.0	63.0	59.0	56.0	51.0	50.0	48.0		65.4	
Energy Average	Iverage	57.7		Average:	68.4	64.7	59.6	56.9	49.8	45.8	41.8	41.2	40.3			

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APPENDIX 7.1:

OFF-SITE TRAFFIC NOISE LEVEL CONTOURS



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	FHW	/A-RD-77-108	HIGH	IWAY I	NOISE PE	REDICT	ION MO	DEL			
Road Nam	io: Existing Wit ne: Central Av. nt: n/o El Prado	,					Name: lumber:				
SITE	SPECIFIC IN	PUT DATA				N	IOISE N	/IODE	L INPUTS	5	
Highway Data					Site Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	29,420 vehicle	es					Autos.	15		
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2 A	(xles	15		
Peak H	lour Volume:	2,942 vehicle	S		He	avy Tru	cks (3+ A	(xles	15		
Ve	hicle Speed:	45 mph		ŀ	Vehicle I	Miv					
Near/Far La	ne Distance:	76 feet		ŀ		cleType	,	Dav	Evening	Night	Daily
Site Data								66.3%		20.39	-
Ra	rrier Height:	0.0 feet			Me	edium T	rucks:	77.0%	5.3%	17.69	6 4.70%
Barrier Type (0-W		0.0			F	leavy T	rucks:	86.3%	1.5%	12.29	6 1.90%
Centerline Di		60.0 feet		ŀ	Naisa Ca	uraa E	lovotion	o (in t	0.041		
Centerline Dist.	to Observer:	60.0 feet			Noise So	Auto			eet)		
Barrier Distance	to Observer:	0.0 feet			A 4 E	Auto n Truck		000			
Observer Height ((Above Pad):	5.0 feet						297	Grade Adj	uctmon	# 0.0
Pa	ad Elevation:	0.0 feet			Heav	y Truck	S: 8.0	004	Grade Auj	usunen	ii. 0.0
Roa	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 46.	701			
	Left View:	-90.0 degree	es		Mediur	n Truck	s: 46.	511			
	Right View:	90.0 degree	es		Heav	y Truck	s: 46.	530			
FHWA Noise Mod	el Calculations	;									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresn	el	Barrier Atte	en Be	erm Atten
Autos:	68.46	2.55		0.3	34	-1.20		-4.69	0.0	00	0.000
Medium Trucks:	79.45	-10.43		0.3	37	-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	84.25	-14.36		0.3	37	-1.20		-5.34	0.0	00	0.000
Unmitigated Noise	e Levels (witho	out Topo and	barrie	er atter	nuation)						
VehicleType	Leq Peak Hou	r Leq Day	′	Leq E	vening	Leq	Night		Ldn	(CNEL
Autos:	70.	2	67.6		66.7		63.7		70.9		71.3
Medium Trucks:	68.	_	66.3		60.7		61.1		68.5		68.7
Heavy Trucks:	69.		67.6		56.0		60.4		68.5		68.5
Vehicle Noise:	74.	0	72.0		67.9		66.7	'	74.2		74.5
Centerline Distant	ce to Noise Co	ntour (in feet)								
					dBA		dBA		60 dBA		5 dBA
			Ldn:		14	_	46		531		,144
		CI	VEL:	1	19	2	57		553	1	,192

		WA-RD-77-10	8 HIGI	A YAWH	IOISE P						
	o: Existing W e: El Prado R nt: n/o Kimbal	d.					Name: umber:				
SITE S	SPECIFIC IN	IPUT DATA				N	IOISE	MODE	L INPUT	S	
Highway Data					Site Cor	nditions	(Hard =	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	24,718 vehic	les					Autos:	15		
Peak Hour	Percentage:	10%			Me	edium Tr	ucks (2	Axles):	15		
Peak H	our Volume:	2,472 vehicle	es		He	avy Tru	cks (3+	Axles):	15		
Ve	hicle Speed:	45 mph		-	Vehicle	Miv					
Near/Far Lai	ne Distance:	36 feet				icleType	,	Day	Evening	Night	Daily
Site Data							Autos:	66.3%	13.5%	20.3%	93.40%
Rai	rier Height:	0.0 feet			М	edium T	rucks:	77.0%	5.3%	17.6%	4.70%
Barrier Type (0-W		0.0				Heavy T	rucks:	86.3%	1.5%	12.2%	1.90%
Centerline Dis		44.0 feet			Noise S	ouraa E	lovotio	na (in fe	041		
Centerline Dist.	to Observer:	44.0 feet		H'	worse s	Auto		.000	ei)		
Barrier Distance	to Observer:	0.0 feet			Modiu	m Truck		.297			
Observer Height (.	Above Pad):	5.0 feet				vy Truck		.004	Grade Ad	iuetmant	0.0
Pa	ad Elevation:	0.0 feet			пеан	vy Truck	s. o	.004	Grade Au,	usunent	0.0
Roa	ad Elevation:	0.0 feet		1	Lane Eq	uivalen	t Distar	nce (in t	feet)		
I	Road Grade:	0.0%				Auto	s: 40	.460			
	Left View:	-90.0 degre	ees		Mediu	m Truck	s: 40	.241			
	Right View:	90.0 degre	ees		Heav	vy Truck	s: 40	.262			
FHWA Noise Mode	el Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos:	68.46	1.80	-	1.28	-	-1.20		-4.61	0.0		0.000
Medium Trucks:	79.45		-	1.3		-1.20		-4.87	0.0		0.000
Heavy Trucks:	84.25	-15.12	2	1.3	1	-1.20		-5.50	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and	d barri	er atten	uation)						
VehicleType	Leq Peak Hou			Leg E	vening	Leq	Night		Ldn		VEL
Autos:	70	1.3	67.8		66.9		63.	9	71.0)	71.5
Medium Trucks:	68		66.4		60.8		61.	-	68.7		68.9
Heavy Trucks:	69		67.8		56.2		60.	-	68.7		68.7
Vehicle Noise:	74	1.2	72.2		68.1		66.	9	74.4	ŀ	74.7
Centerline Distance	e to Noise C	ontour (in fee	et)					,		ı	
			Ĺ	70 c			dBA	6	0 dBA		dBA
			Ldn:	8	6	1	86		401	8	63
			NFI:	9	_		94		417		99

	FH	WA-RD-77-108	HIGI	HWAY	NOIS	E PREDICT	ION M	ODEL			
Road Nan	io: Existing W ne: Central Av nt: s/o El Prad						t Name Number	: MCH : 10351			
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data					Site	Conditions	(Hard	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	34,911 vehic	les					Autos:			
Peak Hour	Percentage:	10%				Medium Ti	,	,			
Peak F	lour Volume:	3,491 vehicle	es			Heavy Tru	icks (3+	· Axles):	15		
Ve	hicle Speed:	45 mph			Veh	icle Mix					
Near/Far La	ne Distance:	78 feet				VehicleTyp	е	Day	Evening	Night	Daily
Site Data							Autos:	66.3%	13.5%	20.3%	93.40%
Ra	rrier Height:	0.0 feet			1	Medium 7	rucks:	77.0%	5.3%	17.6%	4.70%
Barrier Type (0-W		0.0				Heavy 7	rucks:	86.3%	1.5%	12.2%	1.90%
Centerline Di		60.0 feet									
Centerline Dist.	to Observer:	60.0 feet			NOIS	se Source E			eet)		
Barrier Distance	to Observer:	0.0 feet			٠.,	Auto edium Truck		0.000			
Observer Height	(Above Pad):	5.0 feet				eaium Truci Heavy Truci		2.297	Grade Ad	iustmon	t: 0.0
P	ad Elevation:	0.0 feet				neavy IIuci	18. 0	3.004	Orado Adj	Justinen	1. 0.0
Ro	ad Elevation:	0.0 feet			Lan	e Equivaler	t Dista	nce (in	feet)		
	Road Grade:	0.0%				Auto	os: 4	5.869			
	Left View:	-90.0 degre	es		М	edium Truck	ks: 4	5.676			
	Right View:	90.0 degre	es			Heavy Truck	(S: 4	5.695			
FHWA Noise Mod	el Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Di	stance	F	inite Road	Fre	snel	Barrier Att	en Be	rm Atten
Autos:	68.46	3.30		0.4	46	-1.20		-4.69	0.0	000	0.000
Medium Trucks:	79.45	-9.69		0.4	49	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	84.25	-13.62		0.4	48	-1.20		-5.34	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barri	ier atte	nuati	ion)					
VehicleType	Leq Peak Ho	- 1 - 1		Leq E			Night		Ldn		NEL
Autos:		.0	68.4			67.5	64		71.7		72.2
Medium Trucks:		0.0	67.1			61.5	62		69.4		69.6
Heavy Trucks:	69).9	68.5			56.9	61	.2	69.3	3	69.4
Vehicle Noise:	74	1.8	72.8			68.8	67	.6	75.1	I	75.3
Centerline Distan	ce to Noise C	ontour (in fee	t)								

Ldn: CNEL:

Thursday, May 02, 2019

FH\	WA-RD-77-108 HIG	HWAY	NOISE PI	REDICTION	ом ис	DEL			
Scenario: Existing W Road Name: Euclid Av. Road Segment: n/o Walnut	,			Project I Job Nu					
SITE SPECIFIC IN	IPUT DATA			N	OISE N	ИODE	L INPUT	s	
Highway Data			Site Con	ditions (Hard =	10, S	oft = 15)		
Average Daily Traffic (Adt):	30,254 vehicles					Autos:	15		
Peak Hour Percentage:	10%		Me	dium Tru	cks (2 A	Axles):	15		
Peak Hour Volume:	3,025 vehicles		He	avy Truci	ks (3+ A	Axles):	15		
Vehicle Speed:	55 mph		Vehicle	Miss					
Near/Far Lane Distance:	154 feet			icleType		Dav	Evening	Night	Daily
Site Data			*011		utos:	66.3%	-	20.3%	
Download Holoshia	0.0 feet		М	edium Tri		77.0%		17.6%	4.70%
Barrier Height: Barrier Type (0-Wall, 1-Berm):	0.0 reet 0.0			Heavy Tru	ıcks:	86.3%	1.5%	12.2%	1.90%
Centerline Dist. to Barrier:	84.0 feet								
Centerline Dist. to Observer:	84.0 feet		Noise S	ource Ele			eet)		
Barrier Distance to Observer:	0.0 feet			Autos		000			
Observer Height (Above Pad):	5.0 feet			m Trucks		297	0		
Pad Elevation:	0.0 feet		Heav	y Trucks	. 8.0	004	Grade Ad	justment.	0.0
Road Elevation:	0.0 feet	l	Lane Eq	uivalent	Distan	ce (in	feet)		
Road Grade:	0.0%	ĺ		Autos	33.	941			
Left View:	-90.0 degrees		Mediu	m Trucks	33.	679			
Right View:	90.0 degrees		Heav	y Trucks	33.	705			
FHWA Noise Model Calculation	s								
VehicleType REMEL	Traffic Flow D	istance	Finite	Road	Fresr	nel	Barrier Att	en Ber	m Atten
Autos: 71.78	1.80	2.4	2	-1.20		-4.75	0.0	000	0.000
Medium Trucks: 82.40	-11.18	2.4	7	-1.20		-4.88	0.0	000	0.000
Heavy Trucks: 86.40	-15.11	2.4	7	-1.20		-5.21	0.0	000	0.000
Unmitigated Noise Levels (with	out Topo and barr	ier atte	nuation)						
VehicleType Leq Peak Hou	ır Leq Day	Leq E	vening	Leq N	light		Ldn	CI	VEL
Autos: 74			71.3		68.3	-	75.5		75.9
Medium Trucks: 72			65.0		65.4		72.8	-	73.0
Heavy Trucks: 72			59.5		63.9		72.0		72.0
Vehicle Noise: 78	1.2 76.1		72.5		71.0)	78.	5	78.8
Centerline Distance to Noise Co	ontour (in feet)								
			dBA	65 a		(60 dBA		dBA
	Ldn:	-	09	66			1,433	- ,	087
	CNEL:	3	22	69	5		1,497	3,	225

FI	IWA-RD-77-108	HIGHWA	Y NOIS	SE PREDICTION	ON MOD	EL			
Scenario: Existing V Road Name: Euclid Av Road Segment: n/o Rivers				.,	Name: M ımber: 10				
SITE SPECIFIC	NPUT DATA				OISE M				
Highway Data			Site	Conditions (Hard = 1	0, Soft =	15)		
Average Daily Traffic (Adt):	25,283 vehicl	es					5		
Peak Hour Percentage:	10%			Medium Tru			5		
Peak Hour Volume:	2,528 vehicle	s		Heavy Truc	ks (3+ Ax	des): 1	5		
Vehicle Speed:	55 mph		Veh	icle Mix					
Near/Far Lane Distance:	154 feet			VehicleType	D	ay Ev	ening N	light	Daily
Site Data				A	utos: 6	6.3% 1	3.5%	20.3%	93.40%
Barrier Height:	0.0 feet			Medium Tri	ucks: 7	7.0%	5.3%	17.6%	4.70%
Barrier Type (0-Wall, 1-Berm):	0.0			Heavy Tro	ucks: 8	6.3%	1.5%	12.2%	1.90%
Centerline Dist. to Barrier:	84.0 feet		Noi	se Source Ele	evations	(in feet)			
Centerline Dist. to Observer:	84.0 feet			Autos	: 0.00	00			
Barrier Distance to Observer:	0.0 feet		N	ledium Trucks	: 2.29	97			
Observer Height (Above Pad):	5.0 feet			Heavy Trucks	: 8.00)4 Gra	de Adjus	stment:	0.0
Pad Elevation:	0.0 feet			- F	Di-1	. (! 6			
Road Elevation:	0.0 feet		Lan	e Equivalent Autos		•	1		
Road Grade:	0.0%			Autos ledium Trucks					
Left View:	-90.0 degre								
Right View:	90.0 degre	es		Heavy Trucks	33.70	J5			
FHWA Noise Model Calculation									
VehicleType REMEL	Traffic Flow	Distanc		inite Road	Fresne		rier Atten	_	m Atten
Autos: 71.7			2.42	-1.20		4.75	0.000		0.000
Medium Trucks: 82.4			2.47	-1.20		4.88	0.000	-	0.000
Heavy Trucks: 86.4			2.47	-1.20		5.21	0.000)	0.000
Unmitigated Noise Levels (with									
VehicleType Leq Peak H			g Even			Ldr		CI	VEL
	4.0	71.4		70.6	67.6		74.7		75.2
	1.7	69.8		64.2	64.6		72.0		72.2
· · · · · · · · · · · · · · · · · · ·	7.4	70.3 75.4		58.8 71.7	63.1 70.3		71.2		71.3 78.0
Centerline Distance to Noise	***				. 0.0				70.0
	Jonatha (m. 166	,			-				dBA
Centernine Distance to Noise			70 dBA	65 c	IBA I	60 di	3A I	55	
Centerinie Distance to Noise v		Ldn:	70 dBA 274	65 d		60 dl			739

	FH\	WA-RD-77-108	HIGH	WAY N	IOISE P	REDICTI	ON MC	DDEL			
	o: Existing Wi e: Euclid Av. nt: n/o Schaef	,				Project Job N	Name: umber:				
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data					Site Cor	ditions	(Hard =	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	27,794 vehicl	es					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tru	ıcks (2	Axles):	15		
Peak H	our Volume:	2,779 vehicle	S		He	avy Truc	cks (3+	Axles):	15		
Vel	hicle Speed:	55 mph		-	Vehicle	Mix					
Near/Far Lar	ne Distance:	154 feet				icleType		Day	Evening	Night	Daily
Site Data						P	lutos:	66.3%	13.5%	20.3%	93.409
Bar	rier Heiaht:	0.0 feet			М	edium Tr	ucks:	77.0%	5.3%	17.6%	4.709
Barrier Type (0-W	all, 1-Berm):	0.0				Heavy Tr	ucks:	86.3%	1.5%	12.2%	1.909
Centerline Dis	st. to Barrier:	84.0 feet		- 17	Noise S	ource El	evation	ns (in fe	eet)		
Centerline Dist.	to Observer:	84.0 feet		F		Autos		.000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Trucks		.297			
Observer Height (5.0 feet			Hear	vy Trucks		.004	Grade Ad	justment	0.0
	ad Elevation:	0.0 feet		L							
	d Elevation:	0.0 feet		μ,	Lane Eq	uivalent			reet)		
F	Road Grade:	0.0%				Autos		.941			
	Left View:	-90.0 degre				m Trucks		.705			
	Right View:	90.0 degre	es		пеа	y Trucks	s. 33	.705			
FHWA Noise Mode											
VehicleType	REMEL	Traffic Flow		stance		Road	Fres		Barrier Att		m Atten
Autos:	71.78	1.43		2.42	_	-1.20		-4.75		000	0.00
Medium Trucks:	82.40	-11.55		2.4		-1.20		-4.88		000	0.00
Heavy Trucks:	86.40			2.47		-1.20		-5.21	0.0	000	0.00
Unmitigated Noise											
,,	Leq Peak Hou			Leq E	vening	Leq			Ldn		NEL
Autos:	74		71.9		71.0		68.	-	75.		75.
Medium Trucks:	72 72		70.2 70.7		64.6		65.	-	72.4		72.
Heavy Trucks: Vehicle Noise:	77		75.8		59.2 72.1		63. 70.	-	71.0 78.		71. 78.
Centerline Distance	e to Noise C	ontour (in foo	f)								
Contonine Distant	ie to morse of	ontour (III lee	'	70 0	dBA	65 (dBA	6	0 dBA	55	dBA
			Ldn:	29	92	62	29		1,354	2,	917
		_	NEL:	30	\r	01	57		1.414		047

0.	de Codede 197	thaut Davis :				Dest.	4.84===	MOL			
	rio: Existing Wine: Euclid Av.	tnout Project					t Name: Number:				
	ne: Euclid Av. nt: n/o Chino A					JOD I	vurnber:	10351			
Road Segme	ni. nio Chino F	۹۷.									
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data					Site Cor	nditions	(Hard:	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	25,245 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10%			Me	edium T	rucks (2	Axles):	15		
Peak F	Hour Volume:	2,525 vehicles	S		He	eavy Tru	ıcks (3+	Axles):	15		
	ehicle Speed:	55 mph		f	Vehicle	Mix					
Near/Far La	ne Distance:	154 feet		f	Ver	icleTyp	e	Day	Evening	Night	Daily
Site Data							Autos:	66.3%	13.5%	20.3%	93.40
Ra	rrier Height:	0.0 feet			М	edium 1	rucks:	77.0%	5.3%	17.6%	4.70
Barrier Type (0-V		0.0				Heavy T	rucks:	86.3%	1.5%	12.2%	1.90
Centerline Di		84.0 feet		-	M-1 0		-1	/! 6			
Centerline Dist.	to Observer:	84.0 feet		-	Noise S				eet)		
Barrier Distance	to Observer:	0.0 feet			14	Auto		.000			
Observer Height	(Above Pad):	5.0 feet				m Truci		.297	Grade Ad	iustmon	
P	ad Elevation:	0.0 feet			Hea	vy Truci	KS: 8	.004	Grade Au	jusurierii	. 0.0
Ro	ad Elevation:	0.0 feet			Lane Eq	uivaler	nt Distar	ıce (in	feet)		
	Road Grade:	0.0%				Auto	os: 33	.941			
	Left View:	-90.0 degree	es		Mediu	m Truci	ks: 33	.679			
	Right View:	90.0 degree	es		Hea	vy Truci	ks: 33	.705			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance		Road	Fres		Barrier Att	_	m Atte
Autos:		1.02		2.4	_	-1.20		-4.75		000	0.0
Medium Trucks:		-11.97		2.4		-1.20		-4.88		000	0.0
Heavy Trucks:	86.40	-15.90		2.4	7	-1.20		-5.21	0.0	000	0.0
Unmitigated Nois											
VehicleType	Leq Peak Hou			Leq E	vening		Night		Ldn		NEL
Autos:			71.4		70.5		67.	-	74.7		75
Medium Trucks:			69.8		64.2		64.	-	72.0	-	72
Heavy Trucks:			70.3		58.8		63.		71.2		71
Vehicle Noise:		• •	75.3		71.7		70.	.3	77.	/	78
Centerline Distan	ce to Noise Co	ontour (in feet)	70	dBA	e	i dBA	Τ.	60 dBA	FF	dBA
			l dn:		74		589	,	1,270		736
			LUII.		<i>i</i> • +		צטנ		1,210	2	130
		C1	VFI:	2	86	-	316		1.327	2	858

Thursday, May 02, 2019

FH\	WA-RD-77-108 HIGI	ION YAWH	SE PREDICTION	ON MODEL		
Scenario: Existing W	ithout Project			Vame: MCH		
Road Name: Euclid Av.			Job Nu	mber: 10351		
Road Segment: n/o Edison	Av.					
SITE SPECIFIC IN	IPUT DATA				L INPUTS	
Highway Data		Site	e Conditions (
Average Daily Traffic (Adt):	29,878 vehicles			Autos		
Peak Hour Percentage:	10%			cks (2 Axles)		
Peak Hour Volume:	2,988 vehicles		Heavy Truci	ks (3+ Axles)	: 15	
Vehicle Speed:	55 mph	Vei	hicle Mix			
Near/Far Lane Distance:	154 feet		VehicleType	Day	Evening I	Vight Daily
Site Data			A	utos: 66.39	6 13.5%	20.3% 93.40%
Barrier Height:	0.0 feet		Medium Tru	icks: 77.0%	6 5.3%	17.6% 4.70%
Barrier Type (0-Wall, 1-Berm):	0.0		Heavy Tru	icks: 86.39	6 1.5%	12.2% 1.90%
Centerline Dist. to Barrier:	84.0 feet	No	ise Source Ele	vations (in	feet)	
Centerline Dist. to Observer:	84.0 feet		Autos	•	,	
Barrier Distance to Observer:	0.0 feet	/	Medium Trucks			
Observer Height (Above Pad):	5.0 feet		Heavy Trucks	8.004	Grade Adjus	stment: 0.0
Pad Elevation:	0.0 feet	-			,	
Road Elevation:	0.0 feet	Lai	ne Equivalent		reet)	
Road Grade:	0.0%		Autos			
Left View:	-90.0 degrees	/	Medium Trucks			
Right View:	90.0 degrees		Heavy Trucks	33.705		
FHWA Noise Model Calculation	-					
VehicleType REMEL			Finite Road	Fresnel	Barrier Atter	
Autos: 71.78	1.75	2.42	-1.20	-4.75	0.00	
Medium Trucks: 82.40	-11.23	2.47	-1.20	-4.88	0.00	
Heavy Trucks: 86.40	-15.17	2.47	-1.20	-5.21	0.00	0.000
Unmitigated Noise Levels (with						
VehicleType Leq Peak Hou		Leq Ever	,		Ldn	CNEL
Autos: 74			71.3	68.3	75.5	75.9
Medium Trucks: 72			64.9 59.5	65.4 63.8	72.8 71.9	72.9
Heavy Trucks: 72 Vehicle Noise: 78			72.4	71.0	71.9	72.0 78.7
			12.4	71.0	78.4	78.7
Centerline Distance to Noise Co	ontour (in feet)	70 dB/	4 65 a	DΛ	60 dBA	55 dBA
	I dn:	70 ab/	66		1.421	3.061
	CNEL:	306	68	-	1,421	3,061
	GIVEL.	320	00	9	1,-10-1	3,130

	FH\	WA-RD-77-108	HIGHW	VAY NO	DISE PE	REDICTIO	N MOI	DEL			
	o: Existing W e: Euclid Av. nt: n/o Eucaly	,				Project N Job Nu					
	SPECIFIC IN	IPUT DATA							L INPUT	3	
Highway Data				S	ite Con	ditions (l	Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	27,743 vehicl	es				A	Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Truc	ks (2 A	xles):	15		
Peak H	our Volume:	2,774 vehicle	S		He	avy Truck	s (3+ A	xles):	15		
Vel	hicle Speed:	55 mph		V	ehicle l	Wix					
Near/Far Lar	ne Distance:	154 feet		Ė		icleType		Day	Evening	Night	Daily
Site Data						AL	itos:	66.3%	13.5%	20.3%	93.40%
Rar	rier Height:	0.0 feet			Me	edium Tru	cks:	77.0%	5.3%	17.6%	4.70%
Barrier Type (0-W	all, 1-Berm):	0.0			F	leavy Tru	cks:	86.3%	1.5%	12.2%	1.90%
Centerline Dis		84.0 feet		N	oise Sc	ource Ele	vations	(in fe	eet)		
Centerline Dist.		84.0 feet				Autos:	0.0	100			
Barrier Distance		0.0 feet			Mediui	n Trucks:	2.2	97			
Observer Height (,	5.0 feet			Heav	y Trucks:	8.0	104	Grade Adj	ustmen	t: 0.0
	d Elevation:	0.0 feet		-							
	d Elevation:	0.0 feet		L	ane Eq	uivalent l			reet)		
<i>F</i>	Road Grade:	0.0%				Autos:					
	Left View:	-90.0 degre				n Trucks:					
	Right View:	90.0 degre	es		Heav	y Trucks:	33.7	05			
FHWA Noise Mode											
VehicleType	REMEL	Traffic Flow	Dista		Finite	Road	Fresn		Barrier Atte		rm Atten
Autos:	71.78	1.43		2.42		-1.20		4.75	0.0		0.000
Medium Trucks:	82.40	-11.56		2.47		-1.20		4.88	0.0		0.000
Heavy Trucks:	86.40	-15.49		2.47		-1.20		-5.21	0.0	00	0.000
Unmitigated Noise			_								
	Leq Peak Hou			Leq Eve		Leq N			Ldn		NEL
Autos:	74		71.9		71.0		68.0		75.1		75.6
Medium Trucks:	72		70.2		64.6		65.0		72.4		72.6
Heavy Trucks:	72		70.7		59.2		63.5		71.6		71.7
Vehicle Noise:	77		75.8		72.1		70.7		78.1		78.4
Centerline Distance	e to Noise C	ontour (in fee)	70 di	34	65 di	D.A		O dDA		: dDA
			I dn:	70 at		65 al			0 dBA 1.352		.914
		0	Lan: NFI:	304		656	-		1,352 1.413		,914 .044
		C.	VEL:	304	•	656)		1,413	3	,044

	FHV	VA-RD-77-108	HIGH	IWAY N	OISE P	REDICT	ION MO	DEL			
	o: Existing Wi e: Euclid Av. nt: s/o Merrill A	,					Name: lumber:				
SITE S	SPECIFIC IN	IPUT DATA				ı	IOISE I	MODE	L INPUT	6	
Highway Data				,	Site Cor	ditions	(Hard =	: 10, Sc	ft = 15)		
Average Daily	Traffic (Adt):	30,618 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2)	4xles):	15		
Peak H	our Volume:	3,062 vehicle	S		He	avy Tru	cks (3+)	4xles):	15		
Vei	hicle Speed:	55 mph		,	/ehicle	Miv					
Near/Far Lar	ne Distance:	154 feet		-		icleType	9	Dav	Evening	Night	Dailv
Site Data							Autos:	66.3%	-	20.3%	93,40%
Par	rier Height:	0.0 feet			М	edium T	rucks:	77.0%	5.3%	17.6%	4.70%
Barrier Type (0-W		0.0				Heavy T	rucks:	86.3%	1.5%	12.2%	1.90%
Centerline Dis		84.0 feet			Vaisa C	nuraa E	levation	o (in fe	2041		
Centerline Dist.	to Observer:	84.0 feet		,	voise 3	Auto		000	el)		
Barrier Distance	to Observer:	0.0 feet			Modiu	Auto m Truck		000 297			
Observer Height (Above Pad):	5.0 feet				y Truck		004	Grade Ad	uetmont	0.0
Pa	ad Elevation:	0.0 feet			пеач	у писк	S. O.	004	Grade Auj	usunent	0.0
Roa	ad Elevation:	0.0 feet		L	Lane Eq	uivalen	t Distan	ce (in t	feet)		
F	Road Grade:	0.0%				Auto	s: 33.	941			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 33.	679			
	Right View:	90.0 degree	es		Heav	y Truck	s: 33.	705			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance		Road	Fresi		Barrier Att		m Atten
Autos:	71.78	1.85		2.42	_	-1.20		-4.75	0.0		0.00
Medium Trucks:	82.40	-11.13		2.47		-1.20		-4.88	0.0		0.00
Heavy Trucks:	86.40	-15.06		2.47	7	-1.20		-5.21	0.0	00	0.00
Unmitigated Noise	Levels (with	out Topo and	barri	er atten	uation)						
,,	Leq Peak Hou		_	Leq Ev		Leq	Night		Ldn		VEL
Autos:	74		72.3		71.4		68.4		75.6		76.0
Medium Trucks:	72		70.6		65.0		65.5	-	72.9		73.
Heavy Trucks:	72		71.2		59.6		63.9		72.0		72.
Vehicle Noise:	78	.2	76.2		72.5		71.1	1	78.5		78.
Centerline Distanc	e to Noise Co	ontour (in feet)	70		-	10.4				10.4
			, L	70 d			dBA		0 dBA		dBA
			Ldn: NFI:	31 32		_	70 00		1,444 1.509	- /	112 250

FH	WA-RD-77-108 I	HIGHWAY	NOISE PR	EDICTION	MODEL		
Scenario: Existing W Road Name: Euclid Av. Road Segment: n/o Merrill	•				me: MCH ber: 10351	ı	
SITE SPECIFIC I	NPUT DATA					EL INPUT	s
Highway Data			Site Cond	ditions (H	ard = 10, S	oft = 15)	
Average Daily Traffic (Adt):	31,921 vehicle	S			Autos	: 15	
Peak Hour Percentage:	10%				s (2 Axles)		
Peak Hour Volume:	3,192 vehicles		Hea	avy Trucks	(3+ Axles)	: 15	
Vehicle Speed:	55 mph		Vehicle N	<i>Mix</i>			
Near/Far Lane Distance:	154 feet		Vehic	cleType	Day	Evening	Night Daily
Site Data				Aut	os: 66.39	6 13.5%	20.3% 93.40
Barrier Height:	0.0 feet		Me	dium Truc	ks: 77.09	6 5.3%	17.6% 4.70
Barrier Type (0-Wall, 1-Berm):	0.0		Н	leavy Truc	ks: 86.39	6 1.5%	12.2% 1.90
Centerline Dist. to Barrier:	84.0 feet		Noise Co	uras Elau	ations (in	faa4)	
Centerline Dist. to Observer:	84.0 feet		Noise 30	Autos:	0.000	eet)	
Barrier Distance to Observer:	0.0 feet		Modium	n Trucks:	2.297		
Observer Height (Above Pad):	5.0 feet			y Trucks:	8.004	Grade Ad	iustment: 0,0
Pad Elevation:	0.0 feet						
Road Elevation:	0.0 feet		Lane Equ		istance (in	feet)	
Road Grade:	0.0%			Autos:	33.941		
Left View:	-90.0 degree			n Trucks:	33.679		
Right View:	90.0 degree	S	Heav	y Trucks:	33.705		
FHWA Noise Model Calculation	ns						
VehicleType REMEL	Traffic Flow	Distance	Finite I		Fresnel	Barrier Att	
Autos: 71.78		2.4		-1.20	-4.75		0.00
Medium Trucks: 82.40		2.4		-1.20	-4.88		0.00
Heavy Trucks: 86.40		2.4		-1.20	-5.21	0.0	0.00
Unmitigated Noise Levels (with							OVE.
VehicleType Leq Peak Ho		2.5	vening 71.6	Leq Nig	68.6	Ldn 75.7	CNEL 76
		2.5 0.8	65.2		65.6	73.7	
		1.3	59.8		64.1	72.2	
		6.4	72.7		71.3	78.7	
Centerline Distance to Noise C	Contour (in feet)						
•	, ,	70	dBA	65 dB	4	60 dBA	55 dBA
	,	dn: 3	320	689		1.485	3.199
	L	un.	120	009		1,400	3,199

Thursday, May 02, 2019

FH\	VA-RD-77-108 HIG	HWAY	NOISE PI	REDICTION	ON MC	DDEL			
Scenario: Existing W Road Name: Euclid Av. Road Segment: n/o Kimball	•			Project I Job Nu					
SITE SPECIFIC IN	IPUT DATA			N	OISE	MODE	L INPUT	s	
Highway Data			Site Con	ditions (Hard =	= 10, S	oft = 15)		
Average Daily Traffic (Adt):	30,229 vehicles					Autos:	15		
Peak Hour Percentage:	10%		Me	dium Tru	cks (2	Axles).	15		
Peak Hour Volume:	3,023 vehicles		He	avy Truci	ks (3+	Axles).	15		
Vehicle Speed:	55 mph		Vehicle						
Near/Far Lane Distance:	154 feet			icleType		Dav	Evening	Night	Daily
Site Data			VEII		utos:	66.3%		20.3%	
			14	edium Tri		77.0%		17.6%	4.70%
Barrier Height:	0.0 feet			Heavy Tru		86.3%		12.2%	1.90%
Barrier Type (0-Wall, 1-Berm):	0.0 84.0 feet			icavy in	ions.	00.07	0 1.570	12.270	1.5070
Centerline Dist. to Barrier: Centerline Dist. to Observer:	84.0 feet		Noise So	ource Ele	evation	ns (in f	eet)		
Barrier Distance to Observer:	0.0 feet			Autos	: 0	.000			
	5.0 feet		Mediu	m Trucks	: 2	.297			
Observer Height (Above Pad): Pad Flevation:	0.0 feet		Heav	y Trucks	: 8	.004	Grade Ad	justment	0.0
Road Flevation:	0.0 feet		I ane Fo	uivalent	Distar	nce (in	feet)		
Road Grade:	0.0%		Lano Lq	Autos		.941	1001)		
Left View:	-90.0 degrees		Mediu	m Trucks		.679			
Right View:	90.0 degrees			y Trucks		.705			
FHWA Noise Model Calculation		N-1	Fig. it.	D/	F		D	D	
VehicleType REMEL Autos: 71.78	Traffic Flow D	oistance 2.4		-1.20	Fres	nei -4.75	Barrier Att	on Ber	m Atten 0.000
Medium Trucks: 82.40	-11.18	2.4	-	-1.20		-4.75		000	0.000
Heavy Trucks: 86.40	-15.12	2.4		-1.20		-5.21		000	0.000
*				-1.20		-0.21	0.0	J00	0.000
Unmitigated Noise Levels (with VehicleType Leg Peak Hou			vening	Leq N	liaht	1	Ldn		VEL
Autos: 74			71.3	Logi	68.	3	75.5		75.9
Medium Trucks: 72			65.0		65	-	72.8		73.0
Heavy Trucks: 72			59.5		63.		72.0	-	72.0
Vehicle Noise: 78			72.5		71.		78.5		78.8
Centerline Distance to Noise Co	ontour (in feet)								
		70	dBA	65 a	ΒA		60 dBA	55	dBA
	Ldn	: 3	09	66	5		1,432	3,	085
	CNEL	: 3	22	69	4		1,496	3,	223

Thursday, May 02, 2019

	FHV	WA-RD-77-108	HIGH	WAY I	NOISE PE	REDICT	ION M	ODEL			
Road Nam	io: Existing Wine: Euclid Av. nt: n/o Bickmo	,				,,	t Name: lumber:		ı		
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data					Site Con	ditions	(Hard	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	18,579 vehicle	es					Autos	: 15		
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2	Axles)	: 15		
Peak H	lour Volume:	1,858 vehicle	s		He	avy Tru	cks (3+	Axles)	: 15		
Ve	hicle Speed:	55 mph		ŀ	Vehicle I	Miv					
Near/Far La	ne Distance:	154 feet		-		cleType	9	Day	Evening	Night	Daily
Site Data							Autos:	66.39	-	20.39	-
Ra	rrier Height:	0.0 feet			Me	edium T	rucks:	77.09	6 5.3%	17.69	% 4.70%
Barrier Type (0-W	-	0.0			F	leavy T	rucks:	86.39	6 1.5%	12.29	% 1.90%
Centerline Di		84.0 feet		-	M-1 0-			/	f4\		
Centerline Dist.	to Observer:	84.0 feet		-	Noise So				eet)		
Barrier Distance	to Observer:	0.0 feet				Auto		0.000			
Observer Height ((Above Pad):	5.0 feet				n Truck		2.297	Grada Ad	iuctmo	nt: 0.0
Pa	ad Elevation:	0.0 feet			Heav	y Truck	is: E	3.004	Grade Ad	jusunei	п. 0.0
Ros	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Dista	nce (in	feet)		
	Road Grade:	0.0%				Auto	s: 33	3.941			
	Left View:	-90.0 degree	es		Mediur	n Truck	s: 33	3.679			
	Right View:	90.0 degree	es		Heav	y Truck	s: 33	3.705			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fres	snel	Barrier Att	en B	erm Atten
Autos:	71.78	-0.32		2.4	12	-1.20		-4.75	0.0	000	0.000
Medium Trucks:	82.40	-13.30		2.4	17	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	86.40	-17.23		2.4	17	-1.20		-5.21	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrie	er atte	nuation)						
VehicleType	Leq Peak Hou			Leq E	vening	Leq	Night		Ldn		CNEL
Autos:	72	.7	70.1		69.2		66	.2	73.4	4	73.8
Medium Trucks:			68.4		62.8		63		70.7	7	70.9
Heavy Trucks:	70	.4	69.0		57.4		61	.8	69.8	3	69.9
Vehicle Noise:	76	.1	74.0		70.3		68	.9	76.4	1	76.6
Centerline Distant	ce to Noise Co	ontour (in feet)							,	
			L		dBA		dBA		60 dBA		5 dBA
			Ldn:	_	23		80		1,035		2,230
		CI	VEL:	2	33	5	02		1,081		2,330

	FHW	/A-RD-77-108	HIGH	1 YAWH	NOISE P	REDICT	ION MC	DEL					
Scenario: Existing Without Project Road Name: Archibald Av. Road Segment: s/o Limonite Av.					Project Name: MCH Job Number: 10351								
SITE	SITE SPECIFIC INPUT DATA					N	IOISE	MODE	L INPUTS	S			
Highway Data					Site Cor	nditions	(Hard =	= 10, Sc	oft = 15)				
Average Daily	Traffic (Adt):	24,166 vehicle	es					Autos:	15				
Peak Hour	Percentage:	10%			Me	edium Tri	ucks (2	Axles):	15				
Peak H	lour Volume:	2,417 vehicle	s		He	avy Truc	cks (3+	Axles):	15				
Ve	hicle Speed:	45 mph		H	Vehicle	Miv							
Near/Far La	ne Distance:	78 feet		-		icleType		Dav	Evening	Night	Daily		
Site Data					*0		Autos:	66.3%		20.3%			
	unda un Education	0.0 feet			М	edium T	rucks:	77.0%		17.6%			
Barrier Type (0-W	rrier Height:	0.0 reet 0.0				Heavy Ti	rucks:	86.3%		12.2%			
Centerline Di	. ,	76.0 feet		L									
Centerline Dist. to Observer: 76.0 feet				-	Noise Source Elevations (in feet)								
Barrier Distance to Observer: 0.0 feet					Autos: 0.000								
Observer Height (Above Pad): 5.0 feet					Medium Trucks: 2.297								
Pad Elevation: 0.0 feet				Heav	vy Truck	s: 8	.004	Grade Adj	ustment	: 0.0			
Road Elevation: 0.0 feet				Lane Eq	uivalen	t Distar	ce (in	feet)					
Road Grade: 0.0%			Ī	-	Auto	s: 65	.422						
Left View: -90.0 degrees			es		Mediu	m Truck	s: 65	.286					
	Right View:	90.0 degree	es		Heav	vy Truck	s: 65	.299					
FHWA Noise Mode	el Calculations	;		1									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	-	Barrier Atte	en Bei	rm Atten		
Autos:	68.46	1.70		-1.8	5	-1.20	-4.7				0.00		
Medium Trucks:	79.45	-11.28		-1.8	84 -1.20		-4.88 0.000		000	0.000			
Heavy Trucks:	84.25	-15.22		-1.8	4	-1.20		-5.25	0.0	000	0.000		
Unmitigated Noise		 	barri	er atter	nuation)								
VehicleType	Leq Peak Hour			Leq E	vening	Leq	Night		Ldn		NEL		
Autos:	67.	7.1 64.5			63.6	60.6		-			68.2		
Medium Trucks: 65					57.6		58.0		65.4		65.6		
Heavy Trucks: 6 Vehicle Noise: 7					53.0 64.9		57.3 63.7		65.4 71.1		65.5 71.4		
					04.5		00.	•	71.1		71.5		
Centerline Distant	Le to Noise Co.	ntour (in feet		70	dBA	65	dBA	6	60 dBA	55	dBA		
			Ldn:	ç	91	19	95	-	421		906		
		CI	VEL:	9	94	2	04		438	9	945		

FI	HWA-RD-77-10	8 HIGHW	VAY N	OISE PF	REDICT	TION M	ODEL						
Scenario: Existing Without Project Road Name: Archibald Av. Road Segment: n/o Limonite Av.					Project Name: MCH Job Number: 10351								
SITE SPECIFIC INPUT DATA								L INPUT	s				
Highway Data			S	ite Con	ditions	(Hard	= 10, Sc	oft = 15)					
Average Daily Traffic (Adt):	25,446 vehic	les					Autos:	15					
Peak Hour Percentage:	10%					,	2 Axles):	15					
Peak Hour Volume:	2,545 vehicle	es		He	avy Tru	ıcks (3-	+ Axles):	15					
Vehicle Speed:	55 mph		ν	ehicle l	Wix								
Near/Far Lane Distance:	154 feet			Vehi	icleTyp	е	Day	Evening	Night	Daily			
Site Data						Autos:	66.3%	13.5%	20.3%	93.40%			
Barrier Height:	0.0 feet			Me	edium 1	rucks:	77.0%	5.3%	17.6%	4.70%			
Barrier Type (0-Wall, 1-Berm):	0.0			F	leavy T	rucks:	86.3%	1.5%	12.2%	1.90%			
Centerline Dist. to Barrier:			٨	Noise Source Elevations (in feet)									
Centerline Dist. to Observer:					Auto		0.000	,					
Barrier Distance to Observer:				Mediur	m Truci	ks:	2.297						
Observer Height (Above Pad):				Heav	y Truci	ks:	8.004	Grade Ad	ljustmeni	t: 0.0			
Pad Elevation:	0.0 1001		-		-								
Road Elevation:	0.0 1001		L	Lane Equivalent Distance (in feet) Autos: 33.941									
Road Grade:	0.070			Medium Trucks: 33.679									
Left View:	oo.o aog.												
Right View:	90.0 degre	ees		Heav	y Truci	ks: 3	3.705						
FHWA Noise Model Calculation													
VehicleType REMEL	Traffic Flow	Dista		Finite			snel	Barrier At	_	rm Atten			
Autos: 71.7			2.42		-1.20		-4.75		000	0.00			
Medium Trucks: 82.4			2.47		-1.20		-4.88		000	0.00			
Heavy Trucks: 86.4			2.47		-1.20		-5.21	0.0	000	0.00			
Unmitigated Noise Levels (wi							-		_				
VehicleType Leq Peak H			Leq Ev		Leq	Night		Ldn		NEL			
	74.1 71.5					7.6 74.8 1.7 72.1			75.: 72.:				
	71.7 69.8								71.				
Heavy Trucks: 71.8 70.4 Vehicle Noise: 77.4 75.4			58.8 63. ⁻ 71.7 70. ⁻					71					
	Contour (in fee	t)											
Centerline Distance to Noise	Contour (in fee	t)	70 di	BA	65	dBA	(0 dBA	55	dBA			
	Contour (in fee	Ldn:	70 di			6 dBA 593	_	60 dBA 1,277		751			

Thursday, May 02, 2019

	FH\	VA-RD-77-108 H	IIGHWAY	NOISE PI	REDICTION	ON MOD	EL						
Scenario: Existing Without Project Road Name: Archibald Av. Road Segment: s/o Schleisman Rd.				Project Name: MCH Job Number: 10351									
SITE	SPECIFIC IN	IPUT DATA			N	DISE M	ODE	L INPUT	s				
Highway Data				Site Conditions (Hard = 10, Soft = 15)									
Average Daily	Traffic (Adt):	21,994 vehicles				Α	utos:	15					
Peak Hour	Percentage:	10%		Me	dium Tru	cks (2 A	xles):	15					
Peak H	lour Volume:	2,199 vehicles		He	avy Truck	s (3+ A	xles):	15					
Ve	hicle Speed:	45 mph		Vehicle	Miss								
Near/Far La	ne Distance:	78 feet			icleType		Day	Evening	Night	Daily			
Site Data				*011			6.3%	13.5%	20.3%	93.40%			
	la u Haladad	0.0 feet		М	edium Tri		77.0%		17.6%	4.70%			
Barrier Type (0-W	rrier Height:	0.0 reet 0.0		· · · · ·	Heavy Tru	icks: 8	36.3%	1.5%	12.2%	1.90%			
Centerline Dis	. ,	76.0 feet											
Centerline Dist.		76.0 feet		Noise Source Elevations (in feet)									
Barrier Distance		0.0 feet			Autos.								
Observer Height (5.0 feet			m Trucks.								
	ad Elevation:	0.0 feet		Heav	y Trucks.	8.0	04	Grade Adj	justment.	0.0			
Road Elevation: 0.0 feet				Lane Eq	uivalent	Distanc	e (in f	eet)					
Road Grade: 0.0%				Autos: 65.422									
Left View: -90.0 degrees				Medium Trucks: 65.286									
	Right View:	90.0 degrees		Heav	y Trucks.	65.2	99						
FHWA Noise Mode	el Calculation	s											
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresne	el .	Barrier Att	en Ber	m Atten			
Autos:	68.46	1.29	-1.		-1.20	-	4.73	0.0	000	0.000			
Medium Trucks:	79.45	-11.69	-1.		-1.20				000	0.000			
Heavy Trucks:	84.25	-15.63	-1.		-1.20	-	5.25	0.0	000	0.000			
Unmitigated Noise													
VehicleType	Leq Peak Hou			Evening	Leq N	~		Ldn		VEL			
Autos:	66		1.1	63.2		60.2		67.4		67.8			
Medium Trucks:		.7 62.8		57.2		57.6		65.0		65.2			
Heavy Trucks:	65		1.2			56.9		65.0		65.1			
Vehicle Noise:	70	.5 68	3.5	64.5		63.3		70.7	7	71.0			
Centerline Distant	ce to Noise Co	ontour (in feet)								-			
				dBA	65 d		6	0 dBA		dBA			
				85 183 89 191		-	395			851 887			
		CNE	:L:	89	19	1		412	8	87			

	FH	WA-RD-77-108	HIGH	łWAY	NOISE P	REDICT	ION MO	DEL			
Road Nam	io: Existing W ne: Kimball Av nt: w/o Mount	. '					t Name: lumber:				
SITE	SPECIFIC IN	NPUT DATA				ı	NOISE N	/IODE	L INPUT	s	
Highway Data					Site Cor	nditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	19,433 vehicl	es					Autos:	15		
Peak Hour	Percentage:	10%			Me	edium Tr	ucks (2 A	Axles):	15		
Peak H	lour Volume:	1,943 vehicle	s		He	avy Tru	cks (3+ A	Axles):	15		
Ve	hicle Speed:	50 mph			Vehicle	Miv					
Near/Far La	ne Distance:	36 feet				icleType	9	Dav	Evening	Night	Daily
Site Data								66.3%		20.3%	
Ra	rrier Height:	0.0 feet			М	edium T	rucks:	77.0%	5.3%	17.6%	4.70%
Barrier Type (0-W	-	0.0				Heavy T	rucks:	86.3%	1.5%	12.2%	1.90%
Centerline Di		44.0 feet									
Centerline Dist.	to Observer:	44.0 feet			Noise S				eet)		
Barrier Distance	to Observer:	0.0 feet				Auto		000			
Observer Height (Above Pad):	5.0 feet				m Truck		297	Crada Ad	i rotmond	
Pa	ad Elevation:	0.0 feet			Hear	vy Truck	s: 8.0	004	Grade Ad,	usuneni	. 0.0
Roa	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Distan	ce (in i	feet)		
	Road Grade:	0.0%				Auto	s: 40.	460			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 40.	241			
	Right View:	90.0 degre	es		Hear	vy Truck	s: 40.	262			
FHWA Noise Mod	el Calculation	IS									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresn	nel .	Barrier Att	en Bei	m Atten
Autos:	70.20	0.29		1.3	28	-1.20		-4.61	0.0	000	0.000
Medium Trucks:	81.00			1.3		-1.20		-4.87	0.0		0.000
Heavy Trucks:	85.38	-16.62		1.3	31	-1.20		-5.50	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barri	er atte	nuation)						
VehicleType	Leq Peak Ho			Leq E	vening		Night		Ldn		NEL
Autos:		0.6	68.0		67.1		64.1		71.3		71.7
Medium Trucks:			66.5		60.9		61.3		68.7		68.9
Heavy Trucks:			67.4		55.9		60.2		68.3		68.3
Vehicle Noise:	-	1.2	72.1		68.3		67.0)	74.4	ŀ	74.7
Centerline Distant	ce to Noise C	ontour (in fee)					,		,	
			L		dBA		dBA	ϵ	0 dBA		dBA
			Ldn:		87		87		402	-	867
		C	NEL:		90	1	95		420	9	905

		VA-RD-77-108	HIGH	IWAY N	IOISE P							
	o: Existing Wie: Kimball Av.nt: e/o Euclid A	,				Project Job N		: MCH : 10351				
SITE S	SPECIFIC IN	IPUT DATA				ı	IOISE	MODE	L INPUT	s		
Highway Data					Site Cor	nditions	(Hard	= 10, Sc	oft = 15)			
Average Daily	Traffic (Adt):	17,975 vehicl	es					Autos:	15			
Peak Hour	Percentage:	10%			Me	edium Tr	ucks (2	Axles):	15			
Peak He	our Volume:	1,798 vehicle	s		He	avy Tru	cks (3+	Axles):	15			
Vel	hicle Speed:	50 mph		H	Vehicle	Mix						
Near/Far Lar	ne Distance:	51 feet		F		icleType	•	Day	Evening	Night	Daily	
Site Data							Autos:	66.3%	13.5%	20.3%	93.40%	
Rar	rier Height:	0.0 feet			М	edium T	rucks:	77.0%	5.3%	17.6%	4.70%	
Barrier Type (0-Wa		0.0				Heavy T	rucks:	86.3%	1.5%	12.2%	1.90%	
Centerline Dis	t. to Barrier:	49.0 feet		-	Noise S	ource F	lovatio	ne (in f	oof)			
Centerline Dist. t	to Observer:	49.0 feet		F.	110/36 0	Auto		0.000	501)			
Barrier Distance t	to Observer:	0.0 feet			Mediu	m Truck		2.297				
Observer Height (/	Observer Height (Above Pad): 5.				Heavy Trucks: 8,004 Grade Adjustment: 0.0							
Pa	d Elevation:	0.0 feet		L	Lane Equivalent Distance (in feet)							
Roa	d Elevation:	0.0 feet			Lane Eq				feet)			
F	Road Grade:	0.0%				Auto		2.140				
	Left View:	-90.0 degre				m Truck		1.929				
	Right View:	90.0 degre	es		Hear	vy Truck	s: 4	1.950				
FHWA Noise Mode	el Calculation	s										
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	snel	Barrier Att	en Ber	m Atten	
Autos:	70.20	-0.04		1.0		-1.20		-4.64		000	0.00	
Medium Trucks:	81.00	-13.03		1.0		-1.20		-4.87		000	0.00	
Heavy Trucks:	85.38	-16.96		1.0	4	-1.20		-5.44	0.0	000	0.00	
Unmitigated Noise				er atten	uation)							
	Leq Peak Hou			Leq E	vening		Night		Ldn		NEL	
Autos:	70		67.4		66.5		63		70.7		71.	
Medium Trucks:	67		65.9		60.3		60		68.1		68.3	
Heavy Trucks:	68		66.8		55.2		59		67.7		67.1 74.1	
Vehicle Noise: 73.6 71.5					67.7		66	.4	73.8)	74.	
Centerline Distance to Noise Contour (in feet)					70 dBA 65 dBA 60 dBA 55 d			dBA				
			Ldn:						408		80	
		0		88 190 408 880 92 198 426 918								
	CNEL:					92 198 426 918						

	FH'	WA-RD-77-108	B HIGH	WAY N	DISE PF	REDICT	ION MO	DEL			
	e: Kimball Av	-					Name: lumber:				
SITE S	SPECIFIC II	NPUT DATA				N	IOISE I	/ODE	L INPUT	S	
Highway Data				s	ite Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	22,184 vehic	les					Autos:	15		
Peak Hour	Percentage:	10%					ucks (2)		15		
Peak H	our Volume:	2,218 vehicle	es		He	avy Trud	cks (3+)	Axles):	15		
Vel	hicle Speed:	50 mph		ν	ehicle l	Wix					
Near/Far Lar	ne Distance:	36 feet		F		icleType	,	Dav	Evening	Night	Dailv
Site Data							Autos:	66.3%	-	20.3%	93.40%
Bar	rier Heiaht:	0.0 feet			Me	edium T	rucks:	77.0%	5.3%	17.6%	4.70%
Barrier Type (0-W	all, 1-Berm):	0.0			F	leavy T	rucks:	86.3%	1.5%	12.2%	1.90%
Centerline Dis		44.0 feet		٨	oise Sc	urce E	levation	s (in fe	eet)		
Centerline Dist. t		44.0 feet				Auto	s: 0.	000			
Barrier Distance t		0.0 feet			Mediur	n Truck	s: 2.	297			
Observer Height (,	5.0 feet			Heav	y Truck	s: 8.	004	Grade Ad	justmen	t: 0.0
	d Elevation:	0.0 feet		-				,,			
	d Elevation:	0.0 feet		L	ane Eq		t Distan	_	reet)		
F	Road Grade:	0.0%				Auto		460			
	Left View: Right View:	-90.0 degre 90.0 degre				n Truck y Truck		241 262			
FHWA Noise Mode	el Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresr	nel	Barrier Att	en Be	rm Atten
Autos:	70.20	0.87		1.28		-1.20		-4.61	0.0	000	0.000
Medium Trucks:	81.00	-12.11		1.31		-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	85.38	-16.05		1.31		-1.20		-5.50	0.0	000	0.000
Unmitigated Noise			barrie	er attenu	ation)						
	Leq Peak Ho			Leq Ev		Leq	Night		Ldn		NEL
Autos:		1.1	68.6		67.7		64.7		71.9		72.3
Medium Trucks:		9.0	67.1		61.5		61.9		69.3	-	69.5
Heavy Trucks:		9.4	68.0		56.4		60.8		68.9		68.9
Vehicle Noise:		1.7	72.7		68.9		67.5	5	75.0)	75.3
Centerline Distance	e to Noise C	ontour (in fee	t)	70 di	٥٨ - ا	65	dBA		60 dBA	56	i dBA
			Ldn:	95	<i>)</i> /1		04		440		947
		0	NFI:	99			13		459		947 988
		C	vel.	99					-133		,00

Thursday, May 02, 2019

FH	WA-RD-77-108 HIG	HWAY NOI	SE PREDICTI	ON MODEL		
Scenario: Existing W	ithout Project		Project i	Vame: MCH		
Road Name: Kimball Av			Job Nu	mber: 1035	1	
Road Segment: w/o Rincon	Meadows Av.					
SITE SPECIFIC IN	IPUT DATA				EL INPUTS	
Highway Data		Site	e Conditions (
Average Daily Traffic (Adt):	19,031 vehicles			Autos		
Peak Hour Percentage:	10%			cks (2 Axles)		
Peak Hour Volume:	1,903 vehicles		Heavy Truc	ks (3+ Axles)	: 15	
Vehicle Speed:	50 mph	Vel	hicle Mix			
Near/Far Lane Distance:	51 feet		VehicleType	Day	Evening	Night Daily
Site Data			Α	utos: 66.39	% 13.5%	20.3% 93.40%
Barrier Height:	0.0 feet		Medium Tr	ucks: 77.09	% 5.3%	17.6% 4.70%
Barrier Type (0-Wall, 1-Berm):	0.0		Heavy Tri	ucks: 86.39	% 1.5%	12.2% 1.90%
Centerline Dist. to Barrier:	49.0 feet	No	ise Source Ele	vations (in	feet)	
Centerline Dist. to Observer:	49.0 feet	-	Autos	-	,	
Barrier Distance to Observer:	0.0 feet		Medium Trucks			
Observer Height (Above Pad):	5.0 feet		Heavy Trucks		Grade Adiu	stment: 0.0
Pad Elevation:	0.0 feet		,			
Road Elevation:	0.0 feet	Lar	ne Equivalent		feet)	
Road Grade:	0.0%		Autos			
Left View:	-90.0 degrees	٨	Medium Trucks			
Right View:	90.0 degrees		Heavy Trucks	41.950		
FHWA Noise Model Calculation	-					
VehicleType REMEL			Finite Road	Fresnel	Barrier Atter	
Autos: 70.20	0.20	1.01	-1.20	-4.64		
Medium Trucks: 81.00	-12.78	1.04	-1.20	-4.87		
Heavy Trucks: 85.38	-16.71	1.04	-1.20	-5.44	0.00	0.000
Unmitigated Noise Levels (with						
VehicleType Leq Peak Ho		Leq Even	,	•	Ldn	CNEL
Autos: 70			66.7	63.8	70.9	71.4
Medium Trucks: 68			60.5	61.0	68.4	68.6
Heavy Trucks: 68			55.5	59.8	67.9	68.0
Vehicle Noise: 73			67.9	66.6	74.1	74.3
Centerline Distance to Noise C	ontour (in feet)	=0 :=			00 104	55 104
	[70 dBA			60 dBA	55 dBA
	I dn:	91	19		424	914
	CNEL:	95	20		443	954

	FH\	WA-RD-77-108	HIGH	WAY	NOISE P	REDICT	TION MC	DEL			
Road Nan	rio: Existing Wine: Kimball Av. ent: e/o Rincon						t Name: Number:				
SITE	SPECIFIC IN	IPUT DATA				ľ	NOISE	MODE	L INPUT	s	
Highway Data					Site Cor	nditions	(Hard =	: 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	18,215 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10%			Me	edium Tr	rucks (2 .	Axles):	15		
Peak F	lour Volume:	1,822 vehicle	S		He	eavy Tru	icks (3+ .	Axles):	15		
Ve	ehicle Speed:	50 mph		1	Vehicle	Miv					
Near/Far La	ane Distance:	51 feet		1		icleType	e	Dav	Evening	Night	Daily
Site Data							Autos:	66.3%	-	20.39	-
Ra	rrier Height:	0.0 feet			М	edium T	rucks:	77.0%	5.3%	17.69	6 4.70%
Barrier Type (0-W		0.0				Heavy T	rucks:	86.3%	1.5%	12.29	6 1.90%
	ist. to Barrier:	49.0 feet		-							
Centerline Dist.	to Observer:	49.0 feet			Noise S				eet)		
Barrier Distance	Barrier Distance to Observer: 0.0 feet					Auto		000			
Observer Height	Observer Height (Above Pad): 5,0 feet				Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.						4 00
P	ad Elevation:	0.0 feet			Hear	vy Truck	(S. 8.	004	Grade Ad	usunen	ii. 0.0
Ro	ad Elevation:	0.0 feet		ĺ	Lane Eq	uivalen	t Distan	ce (in	feet)		
	Road Grade:	0.0%		ĺ		Auto	s: 42.	140			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 41.	929			
	Right View:	90.0 degre	es		Hear	vy Truck	(S: 41	.950			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresi	nel	Barrier Att	en Be	erm Atten
Autos:		0.01		1.0		-1.20		-4.64		000	0.000
Medium Trucks:		-12.97		1.0		-1.20		-4.87		000	0.000
Heavy Trucks:	85.38	-16.90		1.0)4	-1.20		-5.44	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrie	er atte	nuation)						
VehicleType	Leq Peak Hou			Leq E	vening		Night		Ldn		CNEL
Autos:			67.5		66.6		63.0		70.7		71.2
Medium Trucks:			65.9		60.3		60.	-	68.2	-	68.4
Heavy Trucks: Vehicle Noise:			66.9 71.6		55.3 67.7		59.0 66.4		67.7 73.9		67.8 74.1
					67.7		00.4	4	73.	,	74.1
Centerline Distan	ce to Noise Co	ontour (in feet	1	70	dBA	65	dBA	-	SO dBA	5	5 dBA
			I dn:		89				412	-	888
					89 191 93 200				430		926
	CNEL:				93 200 430					J20	

Thursday, May 02, 2019

Road Nan	rio: Existing W ne: Kimball Av nt: e/o Main S	. ,			101021	Project	Name: lumber:	MCH				
	SPECIFIC IN	IPUT DATA							L INPUT	s		
Highway Data					Site Cor	nditions	(Hard =	= 10, S	oft = 15)			
	Traffic (Adt): Percentage: Hour Volume:	15,466 vehicle 10% 1,547 vehicle				edium Tr eavy Tru			15			
Ve	hicle Speed:	50 mph			Vehicle	Mix						
Near/Far La	ne Distance:	51 feet			Veh	icleType	•	Day	Evening	Night	Daily	
Site Data							Autos:	66.39	6 13.5%	20.3%	93.40%	
Pa	rrier Heiaht:	0.0 feet			М	edium T	rucks:	77.09	6 5.3%	17.6%	4.70%	
Barrier Type (0-V		0.0				Heavy T	rucks:	86.3%	6 1.5%	12.2%	1.90%	
Centerline Di	st. to Barrier:	49.0 feet		- 1	Noise S	ource E	levatio	ıs (in t	eet)			
Centerline Dist.		49.0 feet				Auto		.000				
Barrier Distance		0.0 feet			Mediu	m Truck	s: 2	297				
Observer Height	. ,	5.0 feet			Hear	vy Truck	s: 8	.004	Grade Ad	iustment	0.0	
-	ad Elevation:	0.0 feet			Long Equivalent Distance (in fact)							
710	ad Elevation:	0.0 feet		1	Lane Equivalent Distance (in feet)							
	Road Grade:	0.0%				Auto		.140				
	Left View:	-90.0 degre				m Truck		.929				
	Right View:	90.0 degre	es		Hea	vy Truck	s: 41	.950				
FHWA Noise Mod	el Calculation			-								
VehicleType	REMEL	Traffic Flow		istance		Road	Fres		Barrier Att		m Atten	
Autos:	70.20	-0.70		1.0		-1.20		-4.64	0.0		0.000	
Medium Trucks:				1.0		-1.20		-4.87	0.0		0.000	
Heavy Trucks:	85.38	-17.61		1.0	4	-1.20		-5.44	0.0	000	0.000	
Unmitigated Nois	e Levels (with	out Topo and	barr	ier atten	uation)							
VehicleType	Leq Peak Ho	ur Leq Day	/	Leq E	vening	Leq	Night		Ldn	C	NEL	
Autos:			66.7		65.8		62.		70.0		70.5	
Medium Trucks: 67.2 65.2					59.6 60.1 67.5				67.7			
Heavy Trucks: 67.6 66.2 Vehicle Noise: 72.9 70.9					54.6 58.9 67.0 67.0 65.7 73.2				67.1 73.4			
		antain (in f	41									
Centerline Distan	ce to Noise C	uniour (in feet	')	70 (dBA	65	dBA	Т .	60 dBA	55	dBA	
	L						70 UDA 03 UDA 00 UDA 3					

CNEL:

83

179

Observer Height (Above Pad): 5.0 feet Heavy Trucks: 8.004 Grade Adjustment: 0,0 Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Lane Equivalent Distance (in feet) Road Grade: 0.0% Autos: 42.140 Medium Trucks: 41.929 Left View: -90.0 degrees Right View: 90.0 degrees Heavy Trucks: 41.950 FHWA Noise Model Calculations
 VehicleType
 REMEL
 Traffic Flow
 Distance
 Finite Road
 Fresnel
 Barrier Atten
 Berm Atten

 Autos:
 70.20
 -0.43
 1.01
 -1.20
 -4.64
 0.000
 0.000
 Medium Trucks: 81.00 -13 41 1 04 -1.20 -4.87 -5.44 1.04 -1.20 Heavy Trucks: 85.38 -17.34 Unmitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour
Autos: 69.6 Leq Day Leq Evening 67.0 66. Leq Night Ldn Medium Trucks: 67.4 65.5 59.9 60.3 Heavy Trucks: Vehicle Noise: 73.2 71.1 67.3 66.0 Centerline Distance to Noise Contour (in feet) Ldn 179 CNEL: Thursday, May 02, 2019 FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL Scenario: Existing Without Project Road Name: Kimball Av. Project Name: MCH Job Number: 10351 Road Segment: e/o Flight Av SITE SPECIFIC INPUT DATA NOISE MODEL INPUTS Highway Data Site Conditions (Hard = 10, Soft = 15) Autos: Average Daily Traffic (Adt): 13,131 vehicles Peak Hour Percentage: Medium Trucks (2 Axles):

1,313 vehicles

50 mph

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Project Name: MCH

Job Number: 10351

NOISE MODEL INPUTS Site Conditions (Hard = 10, Soft = 15)

15

1.5% 12.2% 1.90%

0.000

0.000

70.3

67.8

73.4

15

15

Heavy Trucks (3+ Axles):

160

346

745

Vehicle Mix

0.000

0.000

70.7

67.9

67.4

73.7

CNEL

830

 /ehicleType
 Day
 Evening
 Night
 Daily

 Autos:
 66.3%
 13.5%
 20.3%
 93.40%

 Medium Trucks:
 77.0%
 5.3%
 17.6%
 4.70%

Medium Trucks (2 Axles):

Heavy Trucks (3+ Axles):

Heavy Trucks: 86.3%

0.000

2.297

Noise Source Elevations (in feet)

Vehicle Mix

VehicleType

Autos: Medium Trucks:

Scenario: Existing Without Project

SITE SPECIFIC INPUT DATA

10%

1,646 vehicles

50 mph

51 feet

0.0 feet

0.0 49.0 feet

49.0 feet

0.0 feet

Road Name: Kimball Av.

Average Daily Traffic (Adt):

Peak Hour Percentage:

Near/Far Lane Distance:

Barrier Type (0-Wall, 1-Berm): Centerline Dist. to Barrier:

Centerline Dist. to Observer:

Barrier Distance to Observer.

Peak Hour Volume:

Vehicle Speed:

Peak Hour Volume:

Vehicle Speed:

Barrier Height:

Highway Data

Site Data

Road Segment: e/o Mill Creek Av.

:*				Ve	hicle Mix					
Near/Far La	ne Distance:	51 feet			VehicleType	9	Day	Evening	Night	Daily
Site Data						Autos:	66.3%	13.5%	20.3%	93.40%
Ba	rrier Heiaht:	0.0 feet			Medium 7	rucks:	77.0%	5.3%	17.6%	4.70%
Barrier Type (0-W		0.0			Heavy T	rucks:	86.3%	1.5%	12.2%	1.90%
Roi	to Observer: to Observer: (Above Pad): ad Elevation: ad Elevation: Road Grade: Left View: Right View:	49.0 feet 49.0 feet 0.0 feet 5.0 feet 0.0 feet 0.0 feet 0.0% -90.0 degre		La	ise Source E Auto Auto Medium Truck Heavy Truck ne Equivalen Auto Medium Truck Heavy Truck	s: 0 (s: 2 (s: 8 (t Distar (s: 42 (s: 41	.000 .297 .004	Grade Ad	ijustment.	: 0.0
VehicleType	REMEL	Traffic Flow	Distant	ce	Finite Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos:	70.20	-1.41		1.01	-1.20		-4.64	0.0	000	0.000
Medium Trucks:	81.00	-14.39		1.04	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	85.38	-18.32		1.04	-1.20		-5.44	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	ttenua	tion)					
VehicleType	Leq Peak Hou	ır Leq Day	/ Le	q Eve	ning Leq	Night		Ldn	CI	NEL
Autos:	68	.6	66.0		65.1	62.	1	69.3	3	69.7
Medium Trucks:	66	.5	64.5		58.9	59.	4	66.8	3	67.0
Heavy Trucks:	66	.9	65.5		53.9	58.	2	66.3	3	66.4
Vehicle Noise:	72	1.2	70.2		66.3	65.	0	72.	5	72.
Centerline Distan	ce to Noise C	ontour (in feet								
				70 dB.		dBA	6	0 dBA		dBA
			I dn:	71	1	54		331	7	11/1

CNEL:

Thursday, May 02, 2019

386

831

	FH\	WA-RD-77-108	HIGH	WAY I	NOISE P	REDICT	ION MO	DEL			
Road Nam	io: Existing Wine: Limonite Annt: w/o Archiba	<i>'</i> .					Name: lumber:				
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data					Site Cor	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	1 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2 /	Axles):	15		
Peak H	lour Volume:	0 vehicle	S		He	avy Tru	cks (3+ /	Axles):	15		
Ve	hicle Speed:	50 mph		ŀ	Vehicle	Miv					
Near/Far La	ne Distance:	78 feet		ŀ		icleType	9	Dav	Evening	Night	Daily
Site Data								66.3%		20.3%	
Ra	rrier Height:	0.0 feet			М	edium T	rucks:	77.0%	5.3%	17.6%	4.70%
Barrier Type (0-W	-	0.0				Heavy T	rucks:	86.3%	1.5%	12.2%	1.90%
Centerline Di		76.0 feet		-	M-1 0			- /! #	41		
Centerline Dist.	to Observer:	76.0 feet		ŀ	Noise S				eet)		
Barrier Distance	to Observer:	0.0 feet				Auto		000			
Observer Height (Above Pad):	5.0 feet				m Truck		297	Grade Ad	i rotmont	
Pa	ad Elevation:	0.0 feet			Heav	y Truck	s: 8.	004	Grade Adj	usuneni	0.0
Ros	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Distan	ce (in i	feet)		
	Road Grade:	0.0%		ſ		Auto	s: 65.	422			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 65.	286			
	Right View:	90.0 degree	es		Heav	y Truck	s: 65.	299			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	ance		Road	Fresr	_	Barrier Att		m Atten
Autos:	70.20	-42.59		-1.8		-1.20		-4.73	0.0		0.000
Medium Trucks:	81.00	-55.57		-1.8		-1.20		-4.88	0.0		0.000
Heavy Trucks:	85.38	-59.51		-1.8	34	-1.20		-5.25	0.0	100	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrie	r attei	nuation)						
VehicleType	Leq Peak Hou			Leq E	vening	Leq	Night		Ldn		NEL
Autos:	24		22.0		21.1		18.1		25.3		25.7
Medium Trucks:	22		20.5		14.9		15.3		22.7		22.9
Heavy Trucks:	22		21.4		9.8		14.1		22.2		22.3
Vehicle Noise:	28	.1	26.1		22.3		20.9)	28.4	ŀ	28.7
Centerline Distant	ce to Noise Co	ontour (in feet)								
					dBA		dBA	ϵ	0 dBA	55	dBA
			Ldn:		0		0		1		1
		CI	VEL:		0		0		1		1

Thursday, May 02, 2019

F	HWA-I	RD-77-108	HIGH	WAY N	IOISE PI	REDICTI	ON MO	DEL				
Scenario: Existing Road Name: Pine Av. Road Segment: w/o El P		,					Name: I umber:					
SITE SPECIFIC	INPU	T DATA				N	OISE N	/IODE	L INPUTS	S		
Highway Data					Site Con	ditions	(Hard =	10, Sc	ft = 15)			
Average Daily Traffic (Adt)		25 vehicle	s				,	Autos:	15			
Peak Hour Percentage		10%			Me	dium Tru	icks (2 A	(xles	15			
Peak Hour Volume		3 vehicles			He	avy Truc	ks (3+ A	(xles	15			
Vehicle Speed		45 mph		F	Vehicle	Miss						
Near/Far Lane Distance		76 feet		H		icleType		Dav	Evening	Night	Daily	
Site Data					*0			66.3%	-	20.3%		
Barrier Height		0.0 feet			М	edium Tı		77.0%		17.6%	4.70%	
Barrier Type (0-Wall, 1-Berm)		0.0			F	leavy Tr	ucks:	86.3%	1.5%	12.2%	1.90%	
Centerline Dist. to Barrier		0.0 60.0 feet		L								
Centerline Dist. to Observer	-	0.0 feet			Noise So				eet)			
Barrier Distance to Observer	-	0.0 feet			Autos: 0.000 Medium Trucks: 2.297							
Observer Height (Above Pad)		5.0 feet										
Pad Elevation		0.0 feet			Heav	y Trucks	8: 8.0	004	Grade Adj	ustment	0.0	
Road Elevation		0.0 feet	0.0 feet			uivalent	Distanc	ce (in t	feet)			
Road Grade		0.0%				Autos	3: 46.7	701				
Left View	-9	0.0 degree	s		Mediu	n Truck	3: 46.5	511				
Right View	9	0.0 degree	s		Heavy Trucks: 46.530							
FHWA Noise Model Calculati	ons											
VehicleType REMEL	Tre	affic Flow	Dist	tance	Finite		Fresn		Barrier Atte	en Ber	m Atten	
Autos: 68.4	-			0.3		-1.20		-4.69	0.0		0.00	
					0.37 -1.20 -4.88 0.000					0.00		
				0.3		-1.20 -1.20		-5.34	0.0			
Heavy Trucks: 84.: Unmitigated Noise Levels (w.	thout	-45.07	barrie	0.3	7	-1.20			0.0	100	0.000	
Heavy Trucks: 84.: Unmitigated Noise Levels (w. VehicleType Leq Peak F	thout lour	-45.07 Topo and I Leq Day		0.3	7 nuation) vening	-1.20	Night	-5.34	0.0	000 Ci	0.000 NEL	
Heavy Trucks: 84.: Unmitigated Noise Levels (w. VehicleType Leq Peak F Autos:	thout lour 39.4	-45.07 Topo and I Leq Day	36.9	0.3 r atten	7 nuation) vening 36.0	-1.20	Night 33.0	-5.34	0.0 Ldn 40.2	Ci	0.000 NEL 40.6	
Heavy Trucks: 84.: Unmitigated Noise Levels (w. VehicleType Leq Peak F Autos: Medium Trucks:	thout lour 39.4 37.5	-45.07 Topo and I Leq Day	36.9 35.6	0.3 r atten	vening 36.0	-1.20	Night 33.0 30.4	-5.34	0.0 Ldn 40.2 37.8	Ci	0.000 NEL 40.6 38.0	
Heavy Trucks: 84.: Unmitigated Noise Levels (w. VehicleType Leq Peak F. Autos: Medium Trucks: Heavy Trucks:	thout lour 39.4 37.5 38.3	-45.07 Topo and I Leq Day	36.9 35.6 36.9	0.3 r atten	7 vening 36.0 30.0 25.3	-1.20	Night 33.0 30.4 29.7	-5.34	0.0 Ldn 40.2 37.8 37.8	Ci	0.000 NEL 40.6 38.0 37.8	
Heavy Trucks: 84.: Unmitigated Noise Levels (w VehicleType Leq Peak F Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	thout lour 39.4 37.5 38.3 43.3	-45.07 Topo and I Leq Day	36.9 35.6 36.9	0.3 r atten	vening 36.0	-1.20	Night 33.0 30.4	-5.34	0.0 Ldn 40.2 37.8	Ci	0.000 NEL 40.6 38.0 37.8	
Heavy Trucks: 84.: Unmitigated Noise Levels (w. VehicleType Leq Peak F. Autos: Medium Trucks: Heavy Trucks:	thout lour 39.4 37.5 38.3 43.3	-45.07 Topo and I Leq Day	36.9 35.6 36.9	0.3 er atten Leq E	7 vening 36.0 30.0 25.3	-1.20	Night 33.0 30.4 29.7	-5.34	0.0 Ldn 40.2 37.8 37.8	Ci	0.000	
Heavy Trucks: 84.: Unmitigated Noise Levels (w VehicleType Leq Peak F Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	thout lour 39.4 37.5 38.3 43.3	-45.07 Topo and I Leq Day 3 3 3 5 our (in feet)	36.9 35.6 36.9	0.3 er atten Leq E	7 (vening 36.0 30.0 25.3 37.2	-1.20 Leg	Night 33.0 30.4 29.7 36.0	-5.34	0.0 Ldn 40.2 37.8 37.8 43.5	Ci	0.000 NEL 40.6 38.0 37.8 43.8	

	FH\	WA-RD-77-108 I	HIGHW.	AY NO	DISE PI	REDICTIO	N MOI	DEL			
Scenar	io: Existing Wi	ithout Project				Project N	lame: I	исн			
	ne: Limonite Av					Job Nui	mber: '	10351			
Road Segme	nt: e/o Archiba	ald Av.									
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data				S	ite Con	ditions (F	lard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	18,317 vehicle	S					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Truc	ks (2 A	(xles	15		
Peak F	Hour Volume:	1,832 vehicles			He	avy Truck	s (3+ A	xles):	15		
Ve	ehicle Speed:	50 mph		V	ehicle	Mix					
Near/Far La	ne Distance:	78 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						AL	itos:	66.3%	13.5%	20.3%	93.40%
Ba	rrier Height:	0.0 feet			M	edium Tru	cks:	77.0%	5.3%	17.6%	4.70%
Barrier Type (0-VI	Vall, 1-Berm):	0.0			I	Heavy Tru	cks:	86.3%	1.5%	12.2%	1.90%
Centerline Di	ist. to Barrier:	76.0 feet		M	oico S	ource Ele	vation	c (in fo	not)		
Centerline Dist.	to Observer:	76.0 feet		/*	0136 30	Autos:		000	, (()		
Barrier Distance	to Observer:	0.0 feet			Madiu	m Trucks:		97			
Observer Height	(Above Pad):	5.0 feet				vy Trucks:		004	Grade Ad	ustment	0.0
P	ad Elevation:	0.0 feet									0.0
Ro	ad Elevation:	0.0 feet		Li	ane Eq	uivalent L			feet)		
	Road Grade:	0.0%				Autos:					
	Left View:	-90.0 degree	S			m Trucks:		286			
	Right View:	90.0 degree	S		Heav	y Trucks:	65.2	299			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar	ice	Finite	Road	Fresn	el	Barrier Att	en Ber	m Atten
Autos:	70.20	0.04		-1.85		-1.20		-4.73	0.0	00	0.000
Medium Trucks:	81.00	-12.95		-1.84		-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	85.38	-16.88		-1.84		-1.20		-5.25	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and L	arrier a	ttenu	ation)						
VehicleType	Leq Peak Hou	ır Leq Day	Le	eq Eve	ening	Leq N	ight		Ldn	CI	VEL
Autos:	67	.2 6	4.6		63.7		60.7		67.9	1	68.3
Medium Trucks:	65	.0 6	3.1		57.5		57.9		65.3		65.5
Heavy Trucks:	65	.5 6	4.0		52.4		56.8		64.9)	64.9
Vehicle Noise:	70	1.8 6	8.7		64.9		63.6		71.0	_	71.3
Centerline Distan	ce to Noise Co	ontour (in feet)									
	-			70 dE	BA	65 dl	BA	6	60 dBA	55	dBA

Thursday, May 02, 2019

	FH\	WA-RD-77-108	HIGH	WAY I	NOISE P	REDICTION	ON M	ODEL				
Road Nan	rio: Existing Wine: Pine Av. ent: w/o Euclid	,				Project I Job Nu		: MCH : 10351				
	SPECIFIC IN	IPUT DATA							L INPUT	S		
Highway Data					Site Con	ditions (Hard	= 10, S	oft = 15)			
Average Daily	Traffic (Adt):	7,306 vehicle	es					Autos:	15			
Peak Hour	Percentage:	10%			Me	dium Tru	cks (2	Axles):	15			
Peak I	lour Volume:	731 vehicles	S		He	avy Truc	ks (3+	- Axles):	15			
Ve	ehicle Speed:	45 mph		-	Vehicle I	Miv						
Near/Far La	ane Distance:	76 feet				icleType	П	Dav	Evening	Night	Daily	
Site Data							utos:	66.3%	-	20.3%		
D.	rrier Height:	0.0 feet			Me	edium Tr	ucks:	77.0%	5.3%	17.6%	4.70%	
Barrier Type (0-V		0.0			F	leavy Tri	ucks:	86.3%	1.5%	12.2%	1.90%	
	ist. to Barrier:	60.0 feet		-								
Centerline Dist.	to Observer:	60.0 feet			Noise So			_ •	eet)			
Barrier Distance	Barrier Distance to Observer: 0.0 feet					Autos		0.000				
Observer Height	Observer Height (Above Pad): 5.0 fee					n Trucks		2.297	0			
	ad Elevation:	0.0 feet			Heav	y Trucks	: 1	3.004	Grade Ad	yustment	0.0	
Ro	ad Elevation:	0.0 feet		ı	Lane Equivalent Distance (in feet)							
	Road Grade:	0.0%		ĺ	Autos: 46.701							
	Left View:	-90.0 degree	es		Medium Trucks: 46.511							
	Right View:	90.0 degree	es		Heav	y Trucks	: 4	6.530				
FHWA Noise Mod	lel Calculation	s										
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fre	snel	Barrier At	ten Ber	m Atten	
Autos:		-3.50		0.3		-1.20		-4.69		000	0.000	
Medium Trucks:		-16.48		0.3		-1.20		-4.88		000	0.000	
Heavy Trucks:		-20.41		0.3		-1.20		-5.34	0.0	000	0.000	
Unmitigated Nois												
VehicleType	Leq Peak Hou	, ,		Leq E	vening	Leq I	Night		Ldn		VEL	
Autos:			61.5		60.6			'.6	64.	-	65.2	
Medium Trucks:			60.2		54.6	55			62.	-	62.6	
Heavy Trucks: 63.0 61.6					50.0 54.3 62.4				•	62.5		
Vehicle Noise: 67.9 65.9					61.9		60).7	68.	2	68.4	
Centerline Distan	ce to Noise C	ontour (in feet)									
			L				65 dBA		60 dBA		dBA	
			Ldn:		45	97			210		52	
		CI	VEL:	4	47	10	1		219	4	71	

	FH	WA-RD-77-108	HIGH	HWAY	NOISE P	REDICT	TON MO	DEL			
	io: Existing W e: Pine Av. nt: e/o Euclid	,					t Name: Number:				
SITE	SPECIFIC II	NPUT DATA				-	NOISE I	/IODE	L INPUT	s	
Highway Data					Site Cor	nditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	25,747 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10%			Me	edium Ti	rucks (2)	Axles):	15		
Peak H	lour Volume:	2,575 vehicle	s		He	avy Tru	icks (3+ /	Axles):	15		
Ve	hicle Speed:	45 mph			Vehicle	Miv					
Near/Far La	ne Distance:	76 feet				iviix nicleTyp	Δ .	Dav	Evening	Night	Daily
Site Data					•01		Autos:	66.3%		20.3%	
Rai	rier Height:	0.0 feet			М	edium 7	rucks:	77.0%	5.3%	17.6%	4.70%
Barrier Type (0-W		0.0				Heavy 7	rucks:	86.3%	1.5%	12.2%	1.90%
Centerline Dis		60.0 feet									
Centerline Dist.	to Observer:	60.0 feet			Noise S				eet)		
Barrier Distance	to Observer:	0.0 feet				Auto		000			
Observer Height (Above Pad):	5.0 feet				m Truck		297	0		4. 0.0
	ad Elevation:	0.0 feet			Hear	vy Truck	(s: 8.	004	Grade Ad	justmen	t: 0.0
Roa	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Distan	ce (in i	feet)		
1	Road Grade:	0.0%				Auto	s: 46.	701			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 46.	511			
	Right View:	90.0 degre	es		Hear	vy Truck	s: 46.	530			
FHWA Noise Mode	el Calculation	IS									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresr	iel	Barrier Att	en Be	rm Atten
Autos:	68.46			0.3		-1.20		-4.69		000	0.000
Medium Trucks:	79.45			0.3		-1.20		-4.88		000	0.000
Heavy Trucks:	84.25	-14.94		0.3	37	-1.20		-5.34	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barri	er atte	nuation)						
VehicleType	Leq Peak Ho			Leq I	Evening		Night		Ldn		NEL
Autos:			67.0		66.1		63.1		70.3	-	70.7
Medium Trucks:			65.7		60.1		60.5		67.9	-	68.1
Heavy Trucks:	68	3.5	67.0		55.5		59.8	3	67.9	9	68.0
Vehicle Noise:	73	3.4	71.4		67.4		66.2	2	73.6	6	73.9
Centerline Distant	ce to Noise C	ontour (in feet)								
			I		dBA		dBA	6	60 dBA	55	5 dBA
			Ldn:		105		226		486		,047
	Lan: CNEL:				109	2	235		506	1	,091

	FHW	A-RD-77-108	HIGHWA'	Y NOISE P	REDICT	ION MO	DEL					
Road Nam	io: Existing With ne: Pine Av. nt: w/o W. Prese	•				Name: umber:						
SITE	SPECIFIC INF	UT DATA		NOISE MODEL INPUTS								
Highway Data				Site Conditions (Hard = 10, Soft = 15)								
Average Daily	Traffic (Adt): 1	6,445 vehicle	es				Autos:	15				
Peak Hour	Percentage:	10%		Me	edium Tru	ucks (2 /	Axles):	15				
Peak H	lour Volume: 1	,645 vehicles	S	He	eavy Truc	cks (3+ /	Axles):	15				
Ve	hicle Speed:	45 mph		Vehicle	Miv							
Near/Far La	ne Distance:	76 feet			icleType		Day	Evening	Night	Daily		
Site Data					- /	Autos:	66.3%		20.3%	93.40%		
Rai	rrier Height:	0.0 feet		Medium Trucks: 77.0% 5.3% 17.6%								
Barrier Type (0-W		0.0		Heavy Trucks: 86.3% 1.5% 12.2% 1.90								
Centerline Dis	. ,	,										
Centerline Dist.	Noise Source Elevations (in feet) Autos: 0.000											
Barrier Distance	to Observer:	14	Auto: m Truck:		000 297							
Observer Height (Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet						297 004	Grade Ad	iustmont	. 0.0		
Pa	ad Elevation:	0.0 feet		пеа	vy Trucks	s. o.	004	Grade Auj	usunent	0.0		
Ros	ad Elevation:	0.0 feet		Lane Eq	uivalent	t Distan	ce (in t	eet)				
1	Road Grade:	0.0%			Autos	s: 46.	701					
	Left View:	-90.0 degree	es	Mediu	m Truck	s: 46.	511					
	Right View:	90.0 degree	es	Hea	vy Truck	s: 46.	530					
FHWA Noise Mode	el Calculations											
VehicleType		Traffic Flow	Distanc						m Atten			
Autos:	68.46	0.03		0.34 -1.20 -4.69 0.000					0.000			
Medium Trucks:	79.45	-12.96).37	-1.20		-4.88	0.0		0.000		
Heavy Trucks:	84.25	-16.89	().37	-1.20		-5.34	0.0	000	0.000		
Unmitigated Noise	•		barrier at	tenuation)								
VehicleType	Leq Peak Hour			Evening	,	Night		Ldn		NEL		
Autos:	67.6		65.1	64.2		61.2	-	68.3		68.8		
Medium Trucks:	65.7		63.7	58.1 53.5		58.6	-	66.0		66.2		
Heavy Trucks: Vehicle Noise:						57.8 64.2		65.9 71.7		66.0 71.9		
	renterline Distance to Noise Contour (in feet)					0-1.2		, 1.7		7 1.3		
Centernine Distant	LE IO NOISE COI	nour (iii ieet		0 dBA	65	dBA	6	0 dBA	55	dBA		
			Ldn:	78	16	67		360	7	76		
		CI	VEL:	81 174 376 809					09			

FH\	WA-RD-77-108	HIGHWAY	NOISE PI	REDICTIO	ON MODE	L			
Scenario: Existing W Road Name: Pine Av. Road Segment: w/o Chino	,				lame: MC mber: 103				
SITE SPECIFIC IN	IPUT DATA				DISE MO			5	
Highway Data			Site Con	ditions (i	Hard = 10), Soft =	: 15)		
Average Daily Traffic (Adt):	29,771 vehicle	s			Au	tos:	15		
Peak Hour Percentage:	10%		Me	dium Trud	cks (2 Axle	es): 1	15		
Peak Hour Volume:	2,977 vehicles		He	avy Truck	is (3+ Axle	es): 1	15		
Vehicle Speed:	45 mph		Vehicle	Mix					
Near/Far Lane Distance:	76 feet			icleType	Da	y Ev	ening	Night	Daily
Site Data				A	ıtos: 66	.3% 1	3.5%	20.3%	93.40%
Barrier Height:	0.0 feet		M	edium Tru	icks: 77	.0%	5.3%	17.6%	4.70%
Barrier Type (0-Wall, 1-Berm):	0.0		1	Heavy Tru	icks: 86	.3%	1.5%	12.2%	1.90%
Centerline Dist. to Barrier:	60.0 feet		Maine C	uraa Ela	vations (in foot)			
Centerline Dist. to Observer:	60.0 feet		Noise 30	Autos:					
Barrier Distance to Observer:	0.0 feet		Modiu	m Trucks:					
Observer Height (Above Pad):	5.0 feet			n Trucks. v Trucks:			nde Adi	ustment.	. 0.0
Pad Elevation:	0.0 feet		i icas	y Trucks.	0.00-	, 0,,	ido / idj	dournorn.	0.0
Road Elevation:	0.0 feet		Lane Eq	uivalent i	Distance	(in feet)		
Road Grade:	0.0%			Autos:	46.701	1			
Left View:	-90.0 degree	s S	Mediu	m Trucks:	46.511	1			
Right View:	90.0 degree	s	Heav	y Trucks:	46.530)			
FHWA Noise Model Calculation	ıs								
VehicleType REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Bar	rier Atte	en Ber	m Atten
Autos: 68.46	2.60	0.	34	-1.20	-4.	69	0.0	00	0.000
Medium Trucks: 79.45	-10.38	0.	37	-1.20	-4.	88	0.0	00	0.000
Heavy Trucks: 84.25	-14.31	0.	37	-1.20	-5.	34	0.0	00	0.000
Unmitigated Noise Levels (with	out Topo and I	barrier atte	nuation)						
VehicleType Leq Peak Ho	ur Leq Day	Leq	Evening	Leq N	light	Ldi	n	CI	VEL
		67.6	66.7		63.7		70.9		71.3
Medium Trucks: 68		6.3	60.7		61.2		68.6		68.7
Heavy Trucks: 69).1 6	37.7	56.1		60.4		68.5		68.6
Vehicle Noise: 74	1.0 7	72.0	68.0		66.8		74.3		74.5
Centerline Distance to Noise C									

Ldn: CNEL:

Thursday, May 02, 2019

	FHWA-F	RD-77-108 HIG	HWAY	NOISE P	REDICTIO	ON MODE	L				
Scenario: Existin	Withou	t Project			Project N	lame: MC	:н				
Road Name: Pine A					Job Nu	mber: 103	351				
Road Segment: w/o E.	Preserve	Loop									
SITE SPECIFIC	INPU	Γ DATA					DEL INP				
Highway Data				Site Conditions (Hard = 10, Soft = 15)							
Average Daily Traffic (Ad	t): 26,6	64 vehicles				Aut	os: 15				
Peak Hour Percentag	e: 1	0%		Me	dium Trud	cks (2 Axle	es): 15				
Peak Hour Volum	e: 2,66	66 vehicles		He	avy Truck	is (3+ Axle	es): 15				
Vehicle Spee	d: 4	l5 mph		Vehicle I	Miv						
Near/Far Lane Distant	e: 7	'6 feet			icleType	Da	y Eveni	ng Nie	ght Daily		
Site Data					A	ıtos: 66	.3% 13.5	5% 20	.3% 93.40%		
Barrier Heigi	rt- (0.0 feet		Me	edium Tru	icks: 77	.0% 5.3	3% 17	.6% 4.70%		
Barrier Type (0-Wall, 1-Berr		0.0		F	leavy Tru	icks: 86	.3% 1.5	5% 12	1.90%		
Centerline Dist. to Barri	er: 60	0.0 feet		Noise Sc	ource Fle	vations (n feet)				
Centerline Dist. to Observ	er: 60	0.0 feet		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Autos:						
Barrier Distance to Observ	er: (0.0 feet		Mediu	n Trucks:						
Observer Height (Above Pa	f): !	5.0 feet			v Trucks:			Adiustr	nent: 0.0		
Pad Elevation	n: (0.0 feet			,			, idjaou			
Road Elevation	n: (0.0 feet		Lane Eq	uivalent l	Distance	(in feet)				
Road Grad	e: (0.0%			Autos:	46.701					
Left Vie	w: -90	0.0 degrees		Mediui	m Trucks:	46.511					
Right Vie	w: 90	0.0 degrees		Heav	y Trucks:	46.530)				
FHWA Noise Model Calcula	tions										
VehicleType REMEL	Tra	ffic Flow D	istance	Finite	Road	Fresnel	Barrie	Atten	Berm Atten		
Autos: 68	.46	2.13	0.3	34	-1.20	-4.	69	0.000	0.000		
Medium Trucks: 79	.45	-10.86	0.3	37	-1.20	-4.	88	0.000	0.000		
Heavy Trucks: 84	.25	-14.79	0.3	37	-1.20	-5.	34	0.000	0.000		
Unmitigated Noise Levels (vithout	Topo and barr	rier atte	nuation)							
VehicleType Leq Peak		Leq Day		vening	Leq N	•	Ldn		CNEL		
Autos:	69.7	67.2		66.3		63.3		70.4	70.9		
Medium Trucks:	67.8	65.8		60.2		60.7		68.1	68.3		
Heavy Trucks:	68.6	67.2		55.6		59.9		68.0	68.1		
Vehicle Noise:	73.6	71.5	,	67.5		66.3		73.8	74.0		
Centerline Distance to Nois	e Conto	ur (in feet)	,								
				dBA	65 d		60 dBA		55 dBA		
		Ldn:		07 12	23		497		1,071 1,117		
		CNFI			24		518				

	FH\	WA-RD-77-108	HIGH	IWAY	NOISE P	REDICT	ION M	DDEL					
Road Nan	rio: Existing Wine: Pine Av. ent: w/o Hellma	,					t Name: lumber:						
SITE	SPECIFIC IN	IPUT DATA			NOISE MODEL INPUTS								
Highway Data					Site Conditions (Hard = 10, Soft = 15)								
Average Daily	Traffic (Adt):	26,513 vehicle	es					Autos:	15				
Peak Hour	Percentage:	10%			Me	edium Tr	ucks (2	Axles):	15				
Peak F	lour Volume:	2,651 vehicle	S		He	eavy Tru	cks (3+	Axles):	15				
Ve	ehicle Speed:	45 mph		-	Vehicle	Miv							
Near/Far La	ane Distance:	76 feet		ł	VehicleType Day Evening Night						Daily		
Site Data							Autos:	66.3%	-	20.3%	,		
Ra	rrier Height:	0.0 feet			М	edium T	rucks:	77.0%	5.3%	17.6%	4.70%		
Barrier Type (0-V		0.0				Heavy T	rucks:	86.3%	1.5%	12.2%	1.90%		
	ist. to Barrier:	60.0 feet											
Centerline Dist.	Centerline Dist. to Observer: 60.0 feet					ource E			eet)				
Barrier Distance	to Observer:	0.0 feet				Auto		.000					
Observer Height	Observer Height (Above Pad): 5.0 feet					m Truck		.297	0				
	ad Elevation:	0.0 feet			Hear	vy Truck	s: 8	.004	Grade Ad	justment	0.0		
Ro	ad Elevation:	0.0 feet		İ	Lane Eq	uivalen	t Distai	nce (in	feet)				
	Road Grade:	0.0%		İ		Auto	s: 46	.701					
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 46	.511					
	Right View:	90.0 degre	es		Hear	vy Truck	s: 46	.530					
FHWA Noise Mod	lel Calculation	s											
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fres	nel	Barrier Att	en Bei	m Atten		
Autos:	68.46	2.10		0.3	0.34 -1.20 -4.69 0.000					0.000			
Medium Trucks:	79.45	-10.88		0.3	37	-1.20		-4.88	0.0	000	0.000		
Heavy Trucks:	84.25	-14.82		0.3	37	-1.20		-5.34	0.0	000	0.000		
Unmitigated Nois	e Levels (with	out Topo and	barrie	er atte	nuation)								
VehicleType	Leq Peak Hou	ır Leq Day	′	Leq E	vening	Leq	Night		Ldn	C	NEL		
Autos:	69	.7	67.1		66.2		63	2	70.4	4	70.8		
Medium Trucks:	67	.7	65.8		60.2		60	6	68.	1	68.2		
Heavy Trucks:	Heavy Trucks: 68.6 67.2				55.6		59	9	68.0)	68.1		
Vehicle Noise:	Vehicle Noise: 73.5 71.5				67.5		66	3	73.8	3	74.0		
Centerline Distan	ce to Noise Co	ontour (in feet)										
					dBA		dBA	(60 dBA	55	dBA		
			Ldn:		07	_	30		495		067		
	CNEL:					111 240 516 1,112							

	FH	WA-RD-77-10	8 HIGH	HWAY N	OISE P	REDICTI	ON MO	DEL					
	o: Existing W e: Central Av nt: n/o El Prac					Project Job N	Name: umber:						
	SPECIFIC II	NPUT DATA			NOISE MODEL INPUTS Site Conditions (Hard = 10, Soft = 15)								
Highway Data					Site Cor	ditions	(Hard =	10, Sc	oft = 15)				
Average Daily	Traffic (Adt):	29,772 vehic	les					Autos:	15				
Peak Hour	Percentage:	10%				dium Tru			15				
Peak H	our Volume:	2,977 vehicle	es		He	avy Truc	ks (3+ /	Axles):	15				
Ve	hicle Speed:	45 mph		1	/ehicle	Mix							
Near/Far Lai	ne Distance:	76 feet				icleType		Day	Evening	Night	Daily		
Site Data						A	lutos:	66.2%	13.5%	20.3%	93.489		
Bar	rier Height:	0.0 feet			М	edium Tı	ucks:	77.1%	5.3%	17.6%	4.649		
Barrier Type (0-W		0.0			-	Heavy Ti	ucks:	86.3%	1.5%	12.2%	1.889		
Centerline Dis	st. to Barrier:	60.0 feet		^	Voise S	ource El	evation	s (in fe	eet)				
Centerline Dist.	to Observer:	60.0 feet				Auto		000	.,				
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck		297					
Observer Height (.	Above Pad):	5.0 feet			Heat	vy Trucks	. 8	004	Grade Ad	ustment	0.0		
Pa	ad Elevation:	0.0 feet											
Ros	ad Elevation:	0.0 feet		L	.ane Eq	uivalent			feet)				
I	Road Grade:	0.0%				Autos		701					
	Left View:	-90.0 degre				m Truck		511					
	Right View:	90.0 degre	ees		Heav	y Truck	8: 46.	530					
FHWA Noise Mode													
VehicleType	REMEL	Traffic Flow		stance		Road	Fresr		Barrier Atte		m Atten		
Autos:	68.46			0.34		-1.20		-4.69	0.0		0.00		
Medium Trucks:	79.45			0.37		-1.20		-4.88	0.0		0.00		
Heavy Trucks:	84.25			0.37		-1.20		-5.34	0.0	00	0.00		
Unmitigated Noise							h ti auto t	1	I dn		NFI		
VehicleType Autos:	Leq Peak Ho	ur Leq Da	67.6	Leq Ev	ening 66.7	Leq	Night 63.7	,	70.9		VEL 71.		
Autos: Medium Trucks:).2 3.2	66.3		60.7		63.7		70.9 68.5		71. 68.		
		3.Z 9.1	67.6		56.0		60.4		68.5		68.		
Heavy Trucks: Vehicle Noise:		1.0	72.0		68.0		66.8		74.2		74.		
Centerline Distance	e to Noise C	ontour (in fee	et)										
z z z z z z z z z z z z z z z z z z z		(111 100	-,	70 d	IBA .	65	dBA	6	0 dBA	55	dBA		
			Ldn:	11	5	24	17		533	1,	148		

	FH)	WA-RD-77-108	HIGHWA'	NOISE F	PREDICT	TION MOI	DEL					
Road Nan	rio: Existing W ne: Schleisman nt: w/o Archiba	n Rd.			.,	t Name: N Number: 1						
	SPECIFIC IN	NPUT DATA						INPUTS	;			
Highway Data				Site Co.	Site Conditions (Hard = 10, Soft = 15)							
Average Daily	Traffic (Adt):	28,660 vehicl	es			-	lutos:	15				
	Percentage:	10%				rucks (2 A	,	15				
	lour Volume:	2,866 vehicle	S	Н	eavy Tru	ıcks (3+ A	xles):	15				
	hicle Speed:	45 mph		Vehicle	Mix							
Near/Far La	ne Distance:	78 feet		Vei	hicleTyp	e	Day	Evening	Night	Daily		
Site Data						Autos:	66.3%	13.5%	20.3%	93.40%		
Ba	rrier Height:	0.0 feet		٨	∕ledium 1	Trucks:	77.0%	5.3%	17.6%	4.70%		
Barrier Type (0-V		0.0			Heavy T	Trucks:	36.3%	1.5%	12.2%	1.90%		
	ist. to Barrier:	76.0 feet		Noise S	Source F	Elevations	(in fo	of)				
Centerline Dist.	to Observer:	76.0 feet		140/36 6	Auto		•	<i>(1)</i>				
Barrier Distance	to Observer:	0.0 feet		Medii	um Truci							
	Observer Height (Above Pad): 5.0 feet					ks: 8.0		Grade Adju	ustment:	0.0		
	ad Elevation:	0.0 feet										
	ad Elevation:	0.0 feet		Lane E		nt Distanc		eet)				
	Road Grade:	0.0%		1.4	Auto							
	Left View:	-90.0 degre			um Truci avy Truci							
	Right View:	90.0 degre	es	пеа	ivy Truci	KS. 65.2	99					
FHWA Noise Mod												
VehicleType	REMEL	Traffic Flow	Distanc		e Road	Fresn		Barrier Atte	_	n Atten		
Autos:				.85	-1.20		4.73	0.0		0.000		
Medium Trucks:				.84	-1.20		4.88	0.0		0.000		
Heavy Trucks:				.84	-1.20		-5.25	0.0	JU	0.000		
Unmitigated Nois	•											
VehicleType Autos:	Leq Peak Hou		/ Leq 65.3	Evening 64.4		Night 61.4		Ldn 68.6	CI	IEL 69.0		
Medium Trucks:			63.9	58.3	•	58.8		66.2		66.4		
Heavy Trucks:			65.3	53.7		58.1		66.1		66.2		
,	Heavy Trucks: 66.7 65.3 Vehicle Noise: 71.7 69.7				6	64.4		71.9		72.2		
Centerline Distan	Centerline Distance to Noise Contour (in feet)											
				0 dBA	65	5 dBA	60) dBA	55	dBA		
			Ldn:	102 219 471 1,016)16				
		C	VEL:	106	2	228		491	1,0)58		

Thursday, May 02, 2019

FH	WA-RD-77-108 HIGI	HWAY NOISE	PREDICTION	MODEL						
Scenario: Existing W	ith Project		Project Na	me: MCH						
Road Name: Central Av			Job Num	ber: 10351						
Road Segment: s/o El Prac	lo Rd.									
SITE SPECIFIC II	IPUT DATA		NOI	SE MODE	L INPUTS	3				
Highway Data		Site Co	Site Conditions (Hard = 10, Soft = 15)							
Average Daily Traffic (Adt):	35,873 vehicles			Autos:	15					
Peak Hour Percentage:	10%	٨	ledium Truck	s (2 Axles).	15					
Peak Hour Volume:	3,587 vehicles	F	leavy Trucks	(3+ Axles).	15					
Vehicle Speed:	45 mph	Vehicle	Mix							
Near/Far Lane Distance:	78 feet		hicleType	Day	Evening	Night Daily				
Site Data			Aut	os: 66.2%	6 13.5%	20.3% 93.00%				
Barrier Height:	0.0 feet		Medium Truc	ks: 77.1%	5.3%	17.6% 4.81%				
Barrier Type (0-Wall, 1-Berm):	0.0		Heavy Truc	ks: 86.3%	1.5%	12.2% 2.18%				
Centerline Dist. to Barrier:	60.0 feet	Noise	Source Elev	ations (in f	eet)					
Centerline Dist. to Observer:	60.0 feet	110.00	Autos:	0.000	001)					
Barrier Distance to Observer:	0.0 feet	Med	um Trucks:	2.297						
Observer Height (Above Pad):	5.0 feet	He	avv Trucks:	8.004	Grade Adj	ustment: 0.0				
Pad Elevation:	0.0 feet									
Road Elevation:	0.0 feet	Lane E	quivalent Di		feet)					
Road Grade:	0.0%		Autos:	45.869						
Left View:	-90.0 degrees		um Trucks:	45.676						
Right View:	90.0 degrees	He	avy Trucks:	45.695						
FHWA Noise Model Calculation	-									
VehicleType REMEL				Fresnel	Barrier Atte					
Autos: 68.46	3.40	0.46	-1.20	-4.69	0.0					
Medium Trucks: 79.45	****	0.49	-1.20	-4.88	0.0					
Heavy Trucks: 84.25	-12.90	0.48	-1.20	-5.34	0.0	0.000				
Unmitigated Noise Levels (with			<u> </u>							
VehicleType Leq Peak Ho	, ,	Leq Evening	Leq Nig		Ldn	CNEL				
Autos: 71		67.		64.6	71.8					
	0.3 67.3	61.		62.2	69.6					
,	0.6 69.2	57.		62.0	70.1					
	5.2 73.2	69.	0	67.9	75.4	75.6				
Centerline Distance to Noise C	ontour (in feet)									
		70 dBA	65 dB	4	60 dBA	55 dBA				
	I dn:	137	295		635	1,368				
	CNEL:	142	307		661	1,424				

	FH\	WA-RD-77-108	HIGH	WAY	NOISE P	REDICT	ION MC	DEL				
Road Nar	rio: Existing W ne: El Prado R ent: n/o Kimbal	d.					t Name: lumber:					
	SPECIFIC IN	IPUT DATA							L INPUT	s		
Highway Data					Site Conditions (Hard = 10, Soft = 15)							
Average Daily	Traffic (Adt):	26,099 vehicle	es					Autos:	15			
Peak Hou	r Percentage:	10%			Me	edium Tr	ucks (2	Axles):	15			
Peak I	Hour Volume:	2,610 vehicle	S		He	eavy Tru	cks (3+	Axles):	15			
Ve	ehicle Speed:	45 mph		F	Vehicle	Miv						
Near/Far La	ane Distance:	36 feet		ŀ		icleType	9	Dav	Evening	Night	Daily	
Site Data							Autos:	66.2%	-	20.3%	,	
D-	rrier Height:	0.0 feet			М	edium T	rucks:	77.1%	5.3%	17.6%	4.71%	
Barrier Type (0-V		0.0			1	Heavy T	rucks:	86.3%	1.5%	12.2%	2.17%	
	ist. to Barrier:	44.0 feet		-								
Centerline Dist.	to Observer:	44.0 feet			Noise S				eet)			
Barrier Distance	to Observer:	0.0 feet				Auto		.000				
Observer Height	(Above Pad):	5.0 feet				m Truck		.297	0		4. 0.0	
	ad Elevation:	0.0 feet			Heav	vy Truck	s: 8	.004	Grade Ad	ustmen	t: 0.0	
	ad Elevation:	0.0 feet		Ī	Lane Eq	uivalen	t Distan	ce (in	feet)			
	Road Grade:	0.0%				Auto	s: 40	.460				
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 40	.241				
	Right View:	90.0 degre	es		Heav	vy Truck	s: 40	.262				
FHWA Noise Mod	lel Calculation	ıs										
VehicleType	REMEL	Traffic Flow	Dist	tance	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten	
Autos:	68.46	2.02		1.2	28	-1.20		-4.61	0.0	000	0.000	
Medium Trucks.	79.45	-10.94		1.3	31	-1.20		-4.87	0.0	000	0.000	
Heavy Trucks:	84.25	-14.31		1.3	31	-1.20		-5.50	0.0	000	0.000	
Unmitigated Nois	e Levels (with	out Topo and	barrie	r atte	nuation)							
VehicleType	Leq Peak Hou	ır Leq Day	/	Leq E	vening	Leq	Night		Ldn	C	NEL	
Autos:	70	1.6	68.0		67.1		64.	1	71.3	3	71.7	
Medium Trucks.	68	1.6	66.7		61.1		61.	5	68.9	9	69.1	
Heavy Trucks:	Heavy Trucks: 70.0 68.6				57.0		61.	4	69.5	5	69.5	
Vehicle Noise.	74	1.6	72.6		68.4		67.	3	74.8	3	75.0	
Centerline Distant	ce to Noise C	ontour (in feet)					,				
					dBA		dBA	(60 dBA		5 dBA	
			Ldn:		92		97		425		916	
		C	NEL:	9	95	2	:06		443		954	

	FHV	VA-RD-77-108	HIGH	HWAY I	NOISE P	REDICT	ION MC	DEL					
Road Nan	rio: Existing Wi ne: Euclid Av. ent: n/o Riversio	•					Name: umber:						
SITE	SPECIFIC IN	IPUT DATA			NOISE MODEL INPUTS								
Highway Data					Site Cor	ditions	(Hard =	= 10, Sc	oft = 15)				
Average Daily	Traffic (Adt):	25,924 vehicle	es					Autos:	15				
Peak Hour	Percentage:	10%			Me	dium Tri	ucks (2	Axles):	15				
Peak H	Hour Volume:	2,592 vehicle	s		He	avy Truc	cks (3+	Axles):	15				
Ve	ehicle Speed:	55 mph		ŀ	Vehicle	Miv							
Near/Far La	ane Distance:	154 feet		ŀ		icleType		Dav	Evening	Night	Daily		
Site Data							Autos:	66.2%		20.3%			
- Do	rrier Height:	0.0 feet			М	edium T	rucks:	77.1%	5.3%	17.6%	5.11%		
Barrier Type (0-W		0.0			Heavy Trucks: 86.3% 1.5% 12.2% 2.59								
	ist. to Barrier:	84.0 feet		ļ									
	Centerline Dist. to Observer: 84.0 feet					Noise Source Elevations (in feet)							
	Barrier Distance to Observer: 0.0 feet					Auto		.000					
Observer Height (Above Pad): 5.0 feet						m Truck		.297					
	ad Elevation:	0.0 feet			Heav	y Truck	s: 8.	.004	Grade Adj	ustment	0.0		
	ad Elevation:	0.0 feet		-	Lane Eq	uivalen	t Distan	ce (in	feet)				
	Road Grade:	0.0%			-	Auto	s: 33	.941					
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 33	.679					
	Right View:	90.0 degree			Heavy Trucks: 33.705								
FHWA Noise Mod	lel Calculation												
VehicleType	REMEL	Traffic Flow	Dis	stance		Road	Fres		Barrier Atte	en Ber	m Atten		
Autos:	71.78	1.08		2.4	2.42 -1.20 -4.75 0.000					0.000			
Medium Trucks:	82.40	-11.49		2.4	17	-1.20		-4.88	0.0	00	0.000		
Heavy Trucks:	86.40	-14.44		2.4	17	-1.20		-5.21	0.0	000	0.000		
Unmitigated Nois	e Levels (with	out Topo and	barri	er atte	nuation)								
VehicleType	Leq Peak Hou	ır Leq Day	′	Leq E	vening	Leq	Night		Ldn	C	NEL		
Autos:	74	.1	71.5		70.6		67.	6	74.8	3	75.2		
Medium Trucks:	72	.2	70.3		64.7		65.	1	72.5	,	72.7		
Heavy Trucks:			71.8		60.2		64.	-	72.6		72.7		
Vehicle Noise:	78	.0	76.0		71.9		70.	7	78.2	2	78.5		
Centerline Distan	ce to Noise Co	ontour (in feet)					,		,			
			L					dBA					
			Ldn:		96	-	39		1,376	,	965		
	CNEL:				309 665 1,434 3,088								

	FH	WA-RD-77-108	HIGH	WAY N	OISE PREI	DICTION M	ODEL			
	e: Existing W e: Euclid Av. t: n/o Walnut	•				oject Name ob Number				
	PECIFIC IN	NPUT DATA						L INPUTS	5	
Highway Data				٤	ite Condit	ons (Hard				
Average Daily 1		30,863 vehicl	es				Autos:	15		
Peak Hour F		10%				n Trucks (2	,	15		
	our Volume:	3,086 vehicle	:S		Heavy	Trucks (34	Axles):	15		
	icle Speed:	55 mph		١	ehicle Mix					
Near/Far Lan	e Distance:	154 feet			Vehicle	Туре	Day	Evening	Night	Daily
Site Data						Autos:	66.2%	13.5%	20.3%	92.479
Bari	rier Height:	0.0 feet			Mediu	ım Trucks:	77.1%		17.6%	5.05%
Barrier Type (0-Wa	all, 1-Berm):	0.0			Hea	vy Trucks:	86.3%	1.5%	12.2%	2.489
Centerline Dis	t. to Barrier:	84.0 feet		,	loise Sour	no Flovatio	ne (in fa	oot)		
Centerline Dist. to	o Observer:	84.0 feet		,			0.000	.01)		
Barrier Distance to	o Observer:	0.0 feet			Medium T		2.297			
Observer Height (A	,	5.0 feet			Heavy T			Grade Adi	ustment.	0.0
	d Elevation:	0.0 feet		L						
	d Elevation:	0.0 feet		L	ane Equiv			eet)		
R	Road Grade:	0.0%					3.941			
	Left View:	-90.0 degre			Medium T		3.679			
	Right View:	90.0 degre	es		Heavy T	rucks: 3	3.705			
FHWA Noise Mode	I Calculation									
VehicleType	REMEL	Traffic Flow		tance	Finite Ro			Barrier Atte		m Atten
Autos:	71.78			2.42		.20	-4.75	0.0		0.00
Medium Trucks:	82.40			2.47		.20	-4.88	0.0		0.00
Heavy Trucks:	86.40			2.47		.20	-5.21	0.0	00	0.00
Unmitigated Noise VehicleType	Levels (with Leg Peak Ho			Leg Ev		Leg Night	1	l dn	C	VFI
Autos:		1.8	72.3	Log Lv	71.4	68	.4	75.6		76.
Medium Trucks:		2.9	71.0		65.4	65		73.2		73.
Heavy Trucks:	73	3.8	72.4		60.8	65	.1	73.2		73.
Vehicle Noise:	78	3.7	76.7		72.6	71	.4	78.9)	79.
Centerline Distanc	e to Noise C	ontour (in fee	t)							
				70 a	BA	65 dBA	6	i0 dBA	55	dBA
			Ldn:	33	0	711		1,531	3,	299
			NFI:							

Thursday, May 02, 2019

	FH\	WA-RD-77-108	HIGH	WAY	NOISE PI	REDICT	ION M	ODEL				
Road Nan	rio: Existing Wine: Euclid Av. ent: n/o Chino A	,				Project Job N		: MCH : 10351				
SITE	SPECIFIC IN	IPUT DATA				N	IOISE	MODE	L INPUT	s		
Highway Data					Site Conditions (Hard = 10, Soft = 15)							
Average Daily	Traffic (Adt):	25,994 vehicle	es					Autos	15			
Peak Hou	Percentage:	10%			Me	dium Tr	ucks (2	Axles).	15			
Peak I	Hour Volume:	2,599 vehicle	s		He	avy Tru	cks (3+	Axles).	15			
Vé	ehicle Speed:	55 mph										
	ane Distance:	154 feet			Vehicle Mix						Daily	
Site Data					., , , ,							
						edium T	Autos:	66.2% 77.1%		20.3%		
	rrier Height:	0.0 feet						86.3%		17.6% 12.2%	5.09%	
Barrier Type (0-V	. ,	0.0			,	Heavy T	rucks:	86.3%	1.5%	12.2%	2.58%	
	ist. to Barrier:	84.0 feet			Noise S	ource E	levatio	ns (in f	eet)			
Centerline Dist.		84.0 feet				Auto.	s: (0.000				
Barrier Distance		0.0 feet			Mediu	m Truck	s: 2	2.297				
Observer Height	. ,	5.0 feet			Heav	y Truck	s: 8	3.004	Grade Ad	justment	0.0	
	ad Elevation:	0.0 feet										
Ro	ad Elevation:	0.0 feet			Lane Eq				feet)			
	Road Grade:	0.0%				Auto.		3.941				
	Left View:	-90.0 degree	es			m Truck		3.679				
	Right View:	90.0 degree	es		Heav	y Truck	s: 3:	3.705				
FHWA Noise Mod	lel Calculation	s										
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fre	snel	Barrier Att	en Ber	m Atten	
Autos:	71.78	1.09		2.4	12	-1.20		-4.75	0.0	000	0.000	
Medium Trucks:	82.40	-11.49		2.4	17	-1.20		-4.88	0.0	000	0.000	
Heavy Trucks:				2.4		-1.20		-5.21	0.0	000	0.000	
Unmitigated Nois			_									
VehicleType	Leq Peak Hou	, ,	_	Leq E	vening	Leq	Night		Ldn		NEL	
Autos:			71.5		70.6		67		74.8	-	75.2	
Medium Trucks:			70.3		64.7		65		72.	-	72.7	
Heavy Trucks:	73	.2	71.8		60.2		64	.5	72.6	6	72.7	
Vehicle Noise:	78	3.0	76.0		71.9		70	.7	78.2	2	78.5	
Centerline Distan	ce to Noise C	ontour (in feet)									
			L		dBA		dBA		60 dBA		dBA	
			Ldn:	_	97	-	39		1,377	,	966	
	CNEL:					309 666 1,434 3,090					090	

Thursday, May 02, 2019

	FHW	A-RD-77-108	HIGHWA	Y NOIS	SE PREDI	CTION M	ODEL			
Road Nan	rio: Existing Wit ne: Euclid Av. nt: n/o Schaefe	h Project			Pro	ect Name: b Number:	MCH	1		
SITE	SPECIFIC IN	PUT DATA				NOISE	MOD	EL INPUTS	5	
Highway Data				Site	Conditio	ns (Hard :	= 10, 5	oft = 15)		
Average Daily	Traffic (Adt):	28,582 vehicle	es				Autos	: 15		
Peak Hour	Percentage:	10%			Medium	Trucks (2	Axles)	: 15		
Peak F	lour Volume:	2,858 vehicles	S		Heavy	Trucks (3+	Axles)	: 15		
Ve	hicle Speed:	55 mph		Voh	icle Mix					
Near/Far La	ne Distance:	154 feet		ven	VehicleT	imo	Dav	Evening	Night	Dailv
Site Data					veriicie i	Autos:	66.29	-	20.3%	
					Mediu	n Trucks:	77.19		17.6%	
	rrier Height:	0.0 feet 0.0			Heav	y Trucks:	86.39	6 1.5%	12.2%	
Barrier Type (0-W		0.0 84.0 feet							,	
Centerline Dist.		84.0 feet		Nois	se Sourc	e Elevation	ns (in	feet)		
Barrier Distance		0.0 feet					.000			
Observer Height		5.0 feet			ledium Tr		.297			
	ad Elevation:	0.0 feet			Heavy Tr	ucks: 8	.004	Grade Adji	ustmen	t: 0.0
	ad Elevation:	0.0 feet		Lan	e Equiva	ent Distar	nce (in	feet)		
	Road Grade:	0.0%			. A	utos: 33	3.941	,		
	Left View:	-90.0 degree	es	M	ledium Tr	ıcks: 33	3.679			
	Right View:	90.0 degree			Heavy Tr	ucks: 33	3.705			
FHWA Noise Mod	el Calculations	;								
VehicleType	REMEL	Traffic Flow	Distanc	ce F	inite Roa	d Fres	nel	Barrier Atte	en Be	rm Atten
Autos:	71.78	1.51		2.42	-1.	20	-4.75	0.0	00	0.000
Medium Trucks:	82.40	-11.12		2.47	-1.	20	-4.88	0.0	00	0.000
Heavy Trucks:	86.40	-14.14		2.47	-1.	20	-5.21	0.0	00	0.000
Unmitigated Nois	e Levels (witho	ut Topo and	barrier at	tenuat	ion)					
VehicleType	Leg Peak Hou		_	q Eveni		eq Night		Ldn	С	NEL
Autos:	74.	5	71.9		71.0	68	.0	75.2		75.6
Medium Trucks:	72.	6	70.6		65.0	65	.5	72.9		73.1
Heavy Trucks:	73.	5	72.1		60.5	64	.8	72.9		73.0
Vehicle Noise:	78.	4	76.4		72.3	71	.1	78.6		78.9
Centerline Distan	ce to Noise Co	ntour (in feet)							
1				70 dBA		65 dBA		60 dBA	55	dBA
			Ldn:	314		677		1,458	3	,142
		CI	VEL:	327		705		1,520	3	,274

	FHV	VA-RD-77-108	HIGH	IWAY N	IOISE P	REDICT	ION M	DDEL					
Road Nan	rio: Existing Wi ne: Euclid Av. ent: n/o Eucalyp	,					Name: lumber:						
	SPECIFIC IN	IPUT DATA							L INPUT	S			
Highway Data					Site Cor	nditions	(Hard :						
Average Daily	. ,	28,639 vehicle	es					Autos:	15				
	r Percentage:	10%				edium Tr		,					
	Hour Volume:	2,864 vehicle	S		He	eavy Tru	cks (3+	Axles):	15				
	ehicle Speed:	55 mph			Vehicle	Mix							
Near/Far La	ane Distance:	154 feet			Veh	icleType	,	Day	Evening	Night	Daily		
Site Data							Autos:	66.2%	13.5%	20.3%	92.46%		
Ra	arrier Height:	0.0 feet			М	edium T	rucks:	77.1%	5.3%	17.6%	5.03%		
Barrier Type (0-V		0.0				Heavy T	rucks:	86.3%	1.5%	12.2%	2.519		
Centerline D	ist. to Barrier:	84.0 feet		H	Noise S	ource F	levatio	ns (in fe	oet)				
Centerline Dist.	Centerline Dist. to Observer: 84.0 feet					Autos: 0.000							
Barrier Distance to Observer: 0.0 feet					Mediu	m Truck		.297					
Observer Height	(Above Pad):	5.0 feet				vy Truck		.004	Grade Ad	iustment	. 0.0		
P	ad Elevation:	0.0 feet								douriorit	. 0.0		
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Distai	nce (in 1	feet)				
	Road Grade:	0.0%			Autos: 33.941								
	Left View:	-90.0 degre	es		Medium Trucks: 33.679								
	Right View:	90.0 degre	es		Heavy Trucks: 33.705								
FHWA Noise Mod	lel Calculation	s		-									
VehicleType	REMEL	Traffic Flow	Dis	tance		Road	Fres		Barrier Atte		m Atten		
Autos:		1.52		2.4	_	-1.20		-4.75		000	0.00		
Medium Trucks:		-11.12		2.4		-1.20		-4.88		000	0.00		
Heavy Trucks:	86.40	-14.15		2.4	7	-1.20		-5.21	0.0	000	0.00		
Unmitigated Nois								1		_			
VehicleType	Leq Peak Hou			Leq E	vening		Night		Ldn		NEL		
Autos:			71.9		71.0 65.0		68		75.2		75.		
	Medium Trucks: 72.6 70.6						65		72.9		73.		
Heavy Trucks: 73.5 72.1 Vehicle Noise: 78.4 76.4					60.5 64.8 72.9 72.3 71.1 78.6				73. 78.				
	renterline Distance to Noise Contour (in feet)												
Como mie Distan		mou (m ree	_	70 (dBA	65	dBA	6	0 dBA	55	dBA		
			Ldn:	31	14	6	77		1,459	3,	143		
		C	NEL:	32	327 705 1,520 3,2			275					

	FH\	VA-RD-77-108	HIGI	HWAY N	OISE PI	REDICTI	ON M	ODEL			
Road Nan	rio: Existing Wine: Euclid Av. ent: n/o Edison	•				Project Job N		MCH 10351			
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data				s	ite Con	ditions	(Hard		oft = 15)		
Average Daily	Traffic (Adt):	30,668 vehicle	es					Autos:			
Peak Hour	r Percentage:	10%				dium Tru		,			
Peak I	Hour Volume:	3,067 vehicles	S		He	avy Truc	ks (3+	Axles).	15		
	ehicle Speed:	55 mph		ν	ehicle	Mix					
Near/Far La	ane Distance:	154 feet		F		icleType		Day	Evening	Night	Daily
Site Data						- /	lutos:	66.2%	13.5%	20.3%	92.50%
Ra	arrier Height:	0.0 feet			M	edium Ti	ucks:	77.1%	5.3%	17.6%	5.02%
Barrier Type (0-V		0.0			I	Heavy Ti	ucks:	86.3%	1.5%	12.2%	2.47%
	ist. to Barrier:	84.0 feet		-	O			/! /	41		
Centerline Dist.	to Observer:	84.0 feet		^	ioise S	ource El			eet)		
Barrier Distance	to Observer:	0.0 feet				Auto		0.000			
Observer Height	(Above Pad):	5.0 feet				m Truck: vy Truck:		2.297	Grade Ad	iustmont	
F	ad Elevation:	0.0 feet			Heav	ry Trucks	s: e	3.004	Grade Ad	justinent	. 0.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalent	Dista	nce (in	feet)		
	Road Grade:	0.0%				Auto	s: 33	3.941			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 33	3.679			
	Right View:	90.0 degree	es		Heav	y Truck:	33	3.705			
FHWA Noise Mod	del Calculation	s									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres	snel	Barrier At	en Bei	m Atten
Autos:	71.78	1.82		2.42		-1.20		-4.75	0.0	000	0.000
Medium Trucks:	82.40	-10.83		2.47		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	86.40	-13.91		2.47		-1.20		-5.21	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barri	ier attenu	ıation)						
VehicleType	Leq Peak Hou			Leq Ev		Leq	Night		Ldn		NEL
Autos:			72.2		71.3		68		75.		76.0
Medium Trucks:			70.9		65.3		65		73.:		73.4
Heavy Trucks:	Heavy Trucks: 73.8 72.3					60.7 65.1 73.2 7				73.2	
Vehicle Noise: 78.7 76.6					72.6		71	.4	78.	9	79.1
Centerline Distant	ice to Noise C	ontour (in feet)								
			L	70 dBA			dBA	-	60 dBA		dBA
			Ldn:	32	3	70)7		1.523	3.	281

Thursday, May 02, 2019

	FH\	VA-RD-77-108	HIGHWA	AY NO	ISE P	REDICTION	OM MC	DDEL					
	o: Existing Wi e: Euclid Av. ht: n/o Merrill /	,				Project I Job Nu							
SITE S	SPECIFIC IN	IPUT DATA				N	OISE	MODE	L INPUT	s			
Highway Data				Si	te Con	ditions (Hard:	= 10, S	oft = 15)				
Average Daily	Traffic (Adt):	32,894 vehicle	s					Autos:	15				
Peak Hour I	Percentage:	10%			Me	dium Tru	cks (2	Axles).	15				
Peak Ho	our Volume:	3,289 vehicles			He	avy Truci	ks (3+	Axles).	15				
Vel	nicle Speed:	55 mph		1/4	hicle l	Miss							
Near/Far Lar	ne Distance:	154 feet		VE		icleType		Day	Evening	Night	Daily		
Site Data				_	VCII		utos:	66.2%		20.3%			
					1.4	adium Tri		77.1%		17.6%			
	rier Height:	0.0 feet				leavy Tru		86.3%		12.2%			
Barrier Type (0-Wa Centerline Dis	. ,	0.0 84.0 feet								12.270	2.42/0		
Centerline Dist. t		84.0 feet		No	oise So	ource Ele	evatio	ns (in f	eet)				
Barrier Distance t		0.0 feet			Autos: 0.000								
Observer Height ()		5.0 feet				n Trucks	_	.297					
	d Elevation:	0.0 feet			Heav	y Trucks	: 8	.004	Grade Ad	ljustmeni	: 0.0		
	d Elevation:	0.0 feet		La	Lane Equivalent Distance (in feet)								
	Road Grade:	0.0%				Autos		.941	,				
,	Left View:	-90.0 degree	s		Mediu	n Trucks		.679					
	Right View:	90.0 degree			Heav	y Trucks	: 33	.705					
FHWA Noise Mode	d Calculation	e											
VehicleType	REMEL	Traffic Flow	Distan	ce	Finite	Road	Fres	nel	Barrier At	ten Re	m Atten		
Autos:	71.78	2.13		2.42		-1.20		-4.75		000	0.000		
Medium Trucks:	82.40	-10.57		2.47		-1.20		-4.88	0.0	000	0.000		
Heavy Trucks:	86.40	-13.69		2.47		-1.20		-5.21	0.0	000	0.000		
Unmitigated Noise	Levels (with	out Topo and I	barrier a	ttenua	ation)								
VehicleType	Leq Peak Hou	ır Leq Day	Le	q Eve	ning	Leq N	light		Ldn	С	NEL		
Autos:	75	.1 7	2.5		71.7		68	.7	75.	8	76.3		
Medium Trucks:	73	.1 7	1.2		65.6		66	.0	73.	4	73.6		
Heavy Trucks:	74	.0 7	2.5		61.0		65	.3	73.	4	73.5		
Vehicle Noise:	78	.9 7	6.9		72.9		71	.7	79.	1	79.4		
Centerline Distanc	e to Noise Co	ontour (in feet)											
				70 dB	iA .	65 a			60 dBA		dBA		
		_	.dn:	342				1,588		421			
		CN	IEL:	357		76	8		1,655	3	566		

	FH\	WA-RD-77-108	HIGH	WAY	NOISE P	REDICT	ION MC	DEL				
Road Nan	nio: Existing Wine: Euclid Av.	,					t Name: lumber:					
SITE	SPECIFIC IN	IPUT DATA				1	NOISE	MODE	L INPUT	s		
Highway Data					Site Cor	ditions	(Hard =	= 10, Sc	oft = 15)			
Average Daily	Traffic (Adt):	31,662 vehicl	es					Autos:	15			
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2	Axles):	15			
Peak F	lour Volume:	3,166 vehicle	S		He	avy Tru	cks (3+	Axles):	15			
Ve	hicle Speed:	55 mph		1	Vehicle	Miv						
Near/Far La	ne Distance:	154 feet		ł		icleType	9	Day	Evening	Night	Daily	
Site Data							Autos:	66.2%		20.39	,	
Pa	rrier Height:	0.0 feet			М	edium T	rucks:	77.1%	5.3%	17.69	4.98%	
Barrier Type (0-W		0.0				Heavy T	rucks:	86.3%	1.5%	12.29	2.44%	
	st. to Barrier:	84.0 feet		-	M-1 0			/! 6	41			
Centerline Dist.	Centerline Dist. to Observer: 84.0 feet				Noise Source Elevations (in feet) Autos: 0.000							
Barrier Distance	Barrier Distance to Observer: 0.0 feet											
Observer Height	Observer Height (Above Pad): 5.0 feet				Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0							
P	ad Elevation:	0.0 feet			Hear	ry Truck	s: 8.	.004	Grade Ad	jusunen	L 0.0	
Ro	ad Elevation:	0.0 feet		ĺ	Lane Eq	uivalen	t Distan	ce (in	feet)			
	Road Grade:	0.0%		ĺ		Auto	s: 33	.941				
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 33	.679				
	Right View:	90.0 degre	es		Heavy Trucks: 33.705							
FHWA Noise Mod	el Calculation	s		,								
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fres		Barrier Att	en Be	rm Atten	
Autos:	71.78	1.96		2.4	-	-1.20		-4.75		000	0.000	
Medium Trucks:		-10.73		2.4		-1.20		-4.88		000	0.000	
Heavy Trucks:	86.40	-13.83		2.4	17	-1.20		-5.21	0.0	000	0.000	
Unmitigated Nois	e Levels (with	out Topo and	barrie	er atte	nuation)							
VehicleType	Leq Peak Hou			Leq E	vening	Leq	Night		Ldn		NEL	
Autos:	75		72.4		71.5		68.		75.7		76.1	
Medium Trucks:			71.0		65.4		65.	-	73.3	-	73.5	
Heavy Trucks:					60.8 72.7		65. 71.		73.2 79.0		73.3 79.3	
	Vehicle Noise: 78.8 76.8				12.1		/1.	5	79.0	,	79.3	
Centeriine Distan	Centerline Distance to Noise Contour (in feet)				70 dBA 65 dBA 60 dBA		5	5 dBA				
			l dn:		70 dBA 6		'19		1.550	-	.339	
			VEL:	_	134 148		50		1,615		,	
		C	¥LL.	3	0	,	50		1,615 3,480			

Thursday, May 02, 2019

	FHW	A-RD-77-108	HIGH	WAY N	IOISE PI	REDICTI	ON MO	DEL			
Road Nam	o: Existing With e: Euclid Av. nt: n/o Bickmon	•				Project Job Ni	Name: umber:				
SITE S	SPECIFIC IN	PUT DATA				N	OISE I	ИODE	L INPUT	S	
Highway Data					Site Cor	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	19,643 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tru	icks (2 /	Axles):	15		
Peak H	our Volume:	1,964 vehicles	S		He	avy Truc	ks (3+ /	Axles):	15		
Vei	hicle Speed:	55 mph		-	Vehicle	Miv					
Near/Far Lar	ne Distance:	154 feet		F		icleType		Dav	Evening	Night	Daily
Site Data							utos:	66.2%		20.3%	,
Ran	rier Height:	0.0 feet			М	edium Tr	ucks:	77.1%	5.3%	17.6%	5.06%
Barrier Type (0-W	-	0.0 1001				Heavy Tr	ucks:	86.3%	1.5%	12.2%	2.65%
Centerline Dis		84.0 feet		H	M-1 0			- /! #	41		
Centerline Dist.	to Observer:	84.0 feet		H'	Noise S	ource El			eet)		
Barrier Distance	to Observer:	0.0 feet			A 4 E	Autos m Trucks		000 297			
Observer Height (Above Pad):	5.0 feet				m Trucks vy Trucks		297 004	Grade Ad	iuctmont	. 0.0
Pa	d Elevation:	0.0 feet			пеан	ry Trucks	. 0.	004	Grade Au	usunent	0.0
Roa	d Elevation:	0.0 feet			Lane Eq	uivalent	Distan	ce (in i	feet)		
F	Road Grade:	0.0%				Autos	33.	941			
	Left View:	-90.0 degree	es			m Trucks		679			
	Right View:	90.0 degree	es		Heav	y Trucks	33.	705			
FHWA Noise Mode	el Calculations										
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresr	nel	Barrier Att	en Ber	m Atten
Autos:	71.78	-0.12		2.42	_	-1.20		-4.75	0.0		0.000
Medium Trucks:	82.40	-12.74		2.47		-1.20		-4.88		000	0.000
Heavy Trucks:	86.40	-15.55		2.47	7	-1.20		-5.21	0.0	000	0.000
Unmitigated Noise	Levels (witho	ut Topo and	barrie	er atten	uation)						
,,	Leq Peak Hour		_	Leg E	vening	Leq I			Ldn		NEL
Autos:	72.9	-	70.3		69.4		66.4		73.6		74.0
Medium Trucks:	70.9	-	69.0		63.4		63.9		71.3		71.4
Heavy Trucks:	72.		70.7		59.1		63.4		71.5		71.6
Vehicle Noise:	76.8	3	74.8		70.7		69.5	ō	77.0)	77.3
Centerline Distanc	e to Noise Co	ntour (in feet)	70	-ID 4	05	/D /		20 -ID4		-/D.4
			,L		dBA	65 0			0 dBA		dBA
			Ldn:					470			
	CNEL:				257 554 1,194 2			572			

	FH'	WA-RD-77-108	HIGH	IWAY N	IOISE PR	REDICT	ION M	ODEL			
	io: Existing W e: Euclid Av. nt: n/o Kimbal	•					t Name lumber	: MCH : 10351			
	SPECIFIC II	NPUT DATA							L INPUT	S	
Highway Data					Site Con	ditions	(Hard				
Average Daily	Traffic (Adt):	31,272 vehicl	les					Autos:	15		
	Percentage:	10%						Axles):			
	lour Volume:	3,127 vehicle	es		Hea	avy Tru	cks (3+	- Axles):	15		
	hicle Speed:	55 mph		1	Vehicle N	Иiх					
Near/Far La	ne Distance:	154 feet			Vehi	cleType	9	Day	Evening	Night	Daily
Site Data							Autos:	66.2%	13.5%	20.3%	92.579
Bai	rrier Heiaht:	0.0 feet			Me	edium T	rucks:	77.1%	5.3%	17.6%	4.989
Barrier Type (0-W	'all, 1-Berm):	0.0			Н	leavy T	rucks:	86.3%	1.5%	12.2%	2.45%
Centerline Dis		84.0 feet		1	Noise So	urce E	levatio	ns (in fe	eet)		
Centerline Dist.		84.0 feet				Auto	s: (0.000			
Barrier Distance		0.0 feet			Mediun	n Truck	s: 2	2.297			
Observer Height (,	5.0 feet			Heav	y Truck	s: 8	3.004	Grade Ad	justment	0.0
	ad Elevation:	0.0 feet		-							
	ad Elevation:	0.0 feet		P	Lane Equ				reet)		
ı	Road Grade:	0.0%			Mediun	Auto		3.941			
	Left View: Right View:	-90.0 degre 90.0 degre				n Truck y Truck		3.679 3.705			
FHWA Noise Mode	el Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fre	snel	Barrier Att	en Ber	m Atten
Autos:	71.78	1.91		2.42	2	-1.20		-4.75	0.0	000	0.00
Medium Trucks:	82.40	-10.79		2.47	7	-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	86.40			2.47		-1.20		-5.21	0.0	000	0.00
Unmitigated Noise										1	
VehicleType	Leq Peak Ho			Leq E		Leq	Night		Ldn		NEL
Autos:		1.9	72.3		71.4		68		75.6		76.
Medium Trucks:		2.9	71.0		65.4		65		73.2	_	73.
Heavy Trucks:		3.8	72.4		60.8		65		73.2		73.
Vehicle Noise:		3.7	76.7		72.7		71	.5	78.9	9	79.
Centerline Distant	ce to Noise C	ontour (in fee	t)	70 0	HRΔ	65	dBA	-	60 dBA	55	dBA
			Ldn:	33			14		1.538		313
		C	NFI:	34			44		1,603	- /	453
		O				,			.,000	٥,	.00

Thursday, May 02, 2019

FH\	WA-RD-77-108 HIGH	1 YAWH	NOISE PR	EDICTIO	MODEL			
Scenario: Existing W	ith Project			Project Na	me: MCH			
Road Name: Archibald A	Av.			Job Nun	ber: 10351	I		
Road Segment: n/o Limonit	e Av.							
SITE SPECIFIC IN	IPUT DATA					L INPUT	s	
Highway Data			Site Cond	litions (H	ard = 10, S	oft = 15)		
Average Daily Traffic (Adt):	25,613 vehicles				Autos			
Peak Hour Percentage:	10%				is (2 Axles)			
Peak Hour Volume:	2,561 vehicles		Hea	vy Trucks	(3+ Axles)	: 15		
Vehicle Speed:	55 mph	ŀ	Vehicle N	lix				
Near/Far Lane Distance:	154 feet	ŀ		cleType	Day	Evening	Night	Daily
Site Data				Aut	os: 66.29	6 13.5%	20.3%	93.45%
Barrier Height:	0.0 feet		Me	dium Truc	ks: 77.19	6 5.3%	17.6%	4.66%
Barrier Type (0-Wall, 1-Berm):	0.0		Н	eavy Truc	ks: 86.39	6 1.5%	12.2%	1.89%
Centerline Dist. to Barrier:	84.0 feet	H	Noise So.	urce Flev	ations (in	feet)		
Centerline Dist. to Observer:	84.0 feet	ŀ	710700 00	Autos:	0.000	001)		
Barrier Distance to Observer:	0.0 feet		Madium	Trucks:	2.297			
Observer Height (Above Pad):	5.0 feet			Trucks:	8.004	Grade Ad	iustment	0.0
Pad Elevation:	0.0 feet		,				dournorn.	0.0
Road Elevation:	0.0 feet	L	Lane Equ	ivalent D	istance (in	feet)		
Road Grade:	0.0%			Autos:	33.941			
Left View:	-90.0 degrees		Mediun	Trucks:	33.679			
Right View:	90.0 degrees		Heavy	Trucks:	33.705			
FHWA Noise Model Calculation	s							
VehicleType REMEL	Traffic Flow Dis	stance	Finite I		Fresnel	Barrier Att	en Ber	m Atten
Autos: 71.78	1.08	2.4	_	-1.20	-4.75		000	0.000
Medium Trucks: 82.40	-11.94	2.4		-1.20	-4.88		000	0.000
Heavy Trucks: 86.40	-15.87	2.4	7	-1.20	-5.21	0.0	000	0.000
Unmitigated Noise Levels (with	out Topo and barri	er atter	nuation)					
VehicleType Leq Peak Hou		Leq E	vening	Leq Ni		Ldn		VEL
Autos: 74	.1 71.5		70.6		67.6	74.8		75.2
			64.2		64.7	72.1	I	72.3
Medium Trucks: 71								
Medium Trucks: 71 Heavy Trucks: 71	.8 70.4		58.8		63.1	71.2		
Medium Trucks: 71	.8 70.4					71.2 77.7		
Medium Trucks: 71 Heavy Trucks: 71	.8 70.4 .5 75.4		58.8 71.7		63.1	77.7	7	78.0
Medium Trucks: 71 Heavy Trucks: 71 Vehicle Noise: 77	.8 70.4 .5 75.4 ontour (in feet)		58.8 71.7	65 dB	63.1	77.7 60 dBA	55	78.0 dBA
Medium Trucks: 71 Heavy Trucks: 71 Vehicle Noise: 77	.8 70.4 .5 75.4	2	58.8 71.7	65 dB 594 620	63.1	77.7	55	71.3 78.0 dBA 756 379

	FH	WA-RD-77-108	HIGH	IWAY	NOISE P	REDICT	ION MO	DEL			
	io: Existing W e: Archibald A nt: s/o Limonit	Av.					t Name: lumber:				
SITE S	SPECIFIC IN	NPUT DATA				r	NOISE N	/IODE	L INPUT	s	
Highway Data					Site Cor	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	24,896 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2 A	(xles	15		
Peak H	lour Volume:	2,490 vehicle	s		He	avy Tru	cks (3+ A	(xles	15		
Ve	hicle Speed:	45 mph			Vehicle	Miv					
Near/Far Lai	ne Distance:	78 feet				icleType	9	Dav	Evening	Night	Daily
Site Data								66.2%		20.3%	
Rai	rier Height:	0.0 feet			М	edium T	rucks:	77.1%	5.3%	17.6%	4.65%
Barrier Type (0-W		0.0				Heavy T	rucks:	86.3%	1.5%	12.2%	1.98%
Centerline Dis		76.0 feet							-1		
Centerline Dist.	to Observer:	76.0 feet			Noise S				eet)		
Barrier Distance	to Observer:	0.0 feet				Auto		000			
Observer Height (Above Pad):	5.0 feet				m Truck		297	Crada Ad	livotmon	4 0 0
Pa	ad Elevation:	0.0 feet			Heat	y Truck	s: 8.0	004	Grade Ad	jusunen	L 0.0
Roa	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Distan	ce (in t	eet)		
I	Road Grade:	0.0%				Auto	s: 65.	122			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 65.	286			
	Right View:	90.0 degre	es		Heav	y Truck	s: 65.	299			
FHWA Noise Mode	el Calculation	IS									
VehicleType	REMEL	Traffic Flow	Dis	tance		Road	Fresn		Barrier Att		rm Atten
Autos:	68.46			-1.8		-1.20		-4.73		000	0.000
Medium Trucks:	79.45			-1.8		-1.20		-4.88		000	0.000
Heavy Trucks:	84.25	-14.92		-1.8	34	-1.20		-5.25	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrie	er atte	nuation)						
	Leq Peak Ho			Leq E	vening		Night		Ldn	_	NEL
Autos:			64.7		63.8		60.8		67.9	-	68.4
Medium Trucks:			63.3		57.7		58.1		65.5	-	65.7
Heavy Trucks:	66	5.3	64.9		53.3		57.6	i	65.7	7	65.8
Vehicle Noise:	71	1.1	69.1		65.0		63.8		71.3	3	71.6
Centerline Distance	ce to Noise C	ontour (in feet)								
				70	dBA		dBA	6	0 dBA	55	5 dBA
			Ldn:		93	_	00		431		929
	CNEL:				97	209			449		968

	FH	WA-RD-77-108	HIGH	HWAY	NOISE P	REDICTI	ON M	ODEL			
Road Nam	io: Existing W ne: Kimball Av nt: w/o Mount					Project Job N		: MCH : 10351			
SITE	SPECIFIC II	NPUT DATA				N	OISE	MODE	L INPUT	S	
Highway Data					Site Cor	ditions	(Hard	= 10, S	oft = 15)		
Peak F	Percentage: lour Volume:	20,629 vehicle 10% 2,063 vehicles				dium Tru avy Truc		,	15		
	hicle Speed:	50 mph			Vehicle	Mix					
Near/Far La	ne Distance:	36 feet			Veh	icleType		Day	Evening	Night	Daily
	rrier Height:	0.0 feet				edium Ti Heavy Ti		66.29 77.19 86.39	6 5.3%	20.39 17.69	6 4.76%
Barrier Type (0-W		0.0			,	icavy II	ucns.	00.37	0 1.370	12.2	0 2.207
Centerline Dist. Barrier Distance	Centerline Dist. to Barrier: 44.0 feet Centerline Dist. to Observer: 44.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet					Autos Trucks Trucks	s: (ns (in t 0.000 2.297 3.004	Grade Ad	ustmer	nt: 0.0
					Lane Eq		Di-1-	/!	f4)		
	ad Elevation: Road Grade: Left View:	0.0 feet 0.0% -90.0 degree	· c			Autos m Trucks	3: 4	0.460	ieetj		
	Right View:	90.0 degree				y Truck		0.262			
FHWA Noise Mod											
VehicleType	REMEL	Traffic Flow	Dis	stance		Road	Fre		Barrier Att		erm Atten
Autos: Medium Trucks:	70.20 81.00			1.3		-1.20 -1.20		-4.61 -4.87		100	0.00
Heavy Trucks:	85.38			1.3		-1.20		-5.50	0.0	00	0.00
Unmitigated Nois			_								21/5/
VehicleType	Leq Peak Ho		68.2	Leq E	Evening	Leq	Night	2	Ldn 71.5		71.9
Autos: Medium Trucks:			66.8		67.3 61.2		64 61		69.1		69.2
Heavy Trucks:			68.4		56.9		61		69.3		69.4
Vehicle Noise:			72.7		68.6		67		74.9		75.
Centerline Distan	ce to Noise C	ontour (in feet)								
		, ,		70	dBA	65	dΒA		60 dBA	5	5 dBA
			Ldn:		93	20	00		432		930
		CI	VEL:		97	20	9		450		969

	FHWA	-RD-77-108 HI	GHWAY I	NOISE P	REDICTIO	ON MODEL			
Road Nan	rio: Existing With ne: Archibald Av. nt: s/o Schleisma	,				Name: MCH mber: 10351			
	SPECIFIC INP	UT DATA				DISE MODE		S	
Highway Data				Site Con	ditions (Hard = 10, S	oft = 15)		
Average Daily	Traffic (Adt): 22	2,146 vehicles				Autos	15		
Peak Hour	Percentage:	10%		Me	dium Tru	cks (2 Axles)	15		
Peak F	lour Volume: 2	215 vehicles		He	avy Truci	ks (3+ Axles)	15		
Ve	ehicle Speed:	45 mph	ŀ	Vehicle I	Miv				
Near/Far La	ne Distance:	78 feet	ŧ		icleType	Dav	Evening	Night	Daily
Site Data				* 077		utos: 66.29		20.3%	
	la Haladat	0.0 feet		Me	edium Tri	icks: 77.19		17.6%	4.71%
Barrier Type (0-W	rrier Height:	0.0 reet 0.0		ŀ	leavy Tru	icks: 86.39		12.2%	1.95%
Centerline Di		76.0 feet							
Centerline Dist.		76.0 feet	-	Noise So		vations (in t	eet)		
Barrier Distance		0.0 feet			Autos.				
Observer Height		5.0 feet			m Trucks.				
	ad Flevation:	0.0 feet		Heav	y Trucks.	8.004	Grade Ad	justment.	0.0
	ad Elevation:	0.0 feet	İ	Lane Ea	uivalent	Distance (in	feet)		
	Road Grade:	0.0%	İ	•	Autos.		,		
	I eft View:	-90.0 degrees		Mediui	m Trucks.	65.286			
	Right View:	90.0 degrees		Heav	y Trucks.	65.299			
FHWA Noise Mod				1					
VehicleType			Distance	_	Road	Fresnel	Barrier Att		m Atten
Autos:		1.32	-1.8	-	-1.20	-4.73		000	0.000
Medium Trucks:		-11.66	-1.8		-1.20	-4.88		000	0.000
Heavy Trucks:		-15.48	-1.8		-1.20	-5.25	0.0	000	0.000
Unmitigated Nois									
VehicleType	Leq Peak Hour	Leq Day		vening	Leq N		Ldn		VEL
Autos:	66.7	64		63.3		60.3	67.4		67.9
Medium Trucks:		62		57.2		57.7	65.1		65.3
Heavy Trucks:	65.7	64	.3	52.7		57.0	65.1		65.2
Vehicle Noise:	70.6	68	.6	64.5		63.3	70.8	3	71.1
Centerline Distan	ce to Noise Con	tour (in feet)							

Thursday, May 02, 2019

	FH\	WA-RD-77-108 HIG	HWAY	NOISE PF	REDICTION	ON M	ODEL			
Road Nan	ne: Kimball Av.				Project N Job Nu					
SITE	SPECIFIC IN	IPUT DATA						L INPUT	S	
Highway Data				Site Con	ditions (l	Hard	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	22,245 vehicles					Autos:	15		
Peak Hour	Percentage:	10%		Med	dium Trud	cks (2	Axles):	15		
Peak F	lour Volume:	2,224 vehicles		Hea	avy Truck	(S (3+	Axles):	15		
Ve	ehicle Speed:	50 mph		Vehicle I	Miv					
Near/Far La	ne Distance:	36 feet			cleType		Dav	Evening	Night	Daily
Site Data						ıtos:	66.2%	0	20.3%	93.24%
Pa	rrier Height:	0.0 feet		Me	edium Tru	icks:	77.1%	5.3%	17.6%	4.76%
Barrier Type (0-V		0.0		F	leavy Tru	icks:	86.3%	1.5%	12.2%	2.00%
Centerline Di	ist. to Barrier:	44.0 feet		Noise So	urce Ele	vatio	ns (in f	eet)		
Centerline Dist.	to Observer:	44.0 feet			Autos		0.000	,		
Barrier Distance	to Observer:	0.0 feet		Mediur	n Trucks:		2.297			
Observer Height	(Above Pad):	5.0 feet			v Trucks:		3.004	Grade Ad	liustment.	0.0
P	ad Elevation:	0.0 feet			,				,	
Ro	ad Elevation:	0.0 feet		Lane Equ				feet)		
	Road Grade:	0.0%			Autos:		0.460			
	Left View:	-90.0 degrees			n Trucks:		0.241			
	Right View:	90.0 degrees		Heav	y Trucks:	40	0.262			
FHWA Noise Mod	lel Calculation	s								
VehicleType	REMEL		istance	Finite		Fre	snel	Barrier At		m Atten
Autos:		0.87	1.2		-1.20		-4.61		000	0.000
Medium Trucks:		-12.05	1.3		-1.20		-4.87		000	0.000
Heavy Trucks:	85.38	-15.81	1.3	31	-1.20		-5.50	0.	000	0.000
		out Topo and barr								
VehicleType	Leq Peak Hou		Leq E	vening	Leq N	_		Ldn		VEL
Autos:	71			67.7		64		71.		72.3
Medium Trucks:				61.5		62		69.		69.6
Heavy Trucks:				56.7		61		69.		69.2
Vehicle Noise:				68.9		67	.6	75.	1	75.3
Centerline Distan	ce to Noise C	ontour (in feet)					-			10.4
				dBA	65 d			60 dBA		dBA
		Ldn:		96	20			445	-	59
		CNEL:	1	00	21	5		464	1,	000

Thursday, May 02, 2019

	FHW	A-RD-77-108	HIGH	1 YAW	NOISE PE	REDICT	ION MO	DEL			
Road Nam	io: Existing With ne: Kimball Av. nt: e/o Euclid A	•					Name: lumber:				
SITE	SPECIFIC IN	PUT DATA				N	IOISE N	/IODE	L INPUTS	;	
Highway Data					Site Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	8,063 vehicle	es					Autos.	15		
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2 A	(xles	15		
Peak H	lour Volume:	1,806 vehicle	S		He	avy Tru	cks (3+ A	(xles	15		
Ve	hicle Speed:	50 mph		F	Vehicle I	Miv					
Near/Far La	ne Distance:	51 feet		ŀ		cleType	,	Dav	Evening	Night	Daily
Site Data								66.29		20.3%	
Ra	rrier Height:	0.0 feet			Me	edium T	rucks:	77.19	5.3%	17.6%	4.67%
Barrier Type (0-W		0.0			F	leavy T	rucks:	86.3%	1.5%	12.2%	1.89%
Centerline Di		49.0 feet		-	M-1 0-			- /! /	41		
Centerline Dist.	to Observer:	49.0 feet		-	Noise So				eet)		
Barrier Distance	to Observer:	0.0 feet			1.4 m of 5 m	Auto n Truck		000			
Observer Height ((Above Pad):	5.0 feet						297 104	Grade Adju	ictmon	
Pa	ad Elevation:	0.0 feet			Heav	y Truck	S: 8.0	JU4	Grade Aujo	Journern	- 0.0
Roa	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 42.	140			
	Left View:	-90.0 degree	es		Mediur	n Truck	s: 41.	929			
	Right View:	90.0 degree	es		Heav	y Truck	s: 41.	950			
FHWA Noise Mod	el Calculations										
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresn	el	Barrier Atte	n Be	rm Atten
Autos:	70.20	-0.02		1.0	11	-1.20		-4.64	0.0	00	0.000
Medium Trucks:	81.00	-13.03		1.0	14	-1.20		-4.87	0.0	00	0.000
Heavy Trucks:	85.38	-16.96		1.0	14	-1.20		-5.44	0.0	00	0.000
Unmitigated Noise	e Levels (witho	ut Topo and	barrie	r atter	nuation)						
VehicleType	Leq Peak Hour	Leq Day	,	Leq E	vening	Leq	Night		Ldn	С	NEL
Autos:	70.0)	67.4		66.5		63.5		70.7		71.1
Medium Trucks:	67.8	-	65.9		60.3		60.7		68.1		68.3
Heavy Trucks:	68.3		66.8		55.2		59.6		67.7		67.7
Vehicle Noise:	73.6	3	71.5		67.7		66.4		73.8		74.1
Centerline Distant	ce to Noise Co	ntour (in feet)					_			
			L		dBA		dBA		60 dBA	-	dBA
	Ldn:				38		90		409		381
	CNEL:					92 198 427				9	920

	FH\	WA-RD-77-108	HIGI	4 YAWH	IOISE P	REDICT	ION M	ODEL				
	e: Existing Wie: Kimball Av.e/o Rincon					Project Job N		MCH 10351				
SITE S	SPECIFIC IN	IPUT DATA				N	IOISE	MODE	L INPUT	s		
Highway Data					Site Cor	ditions	(Hard	= 10, S	oft = 15)			
Average Daily	Traffic (Adt):	18,304 vehicl	les					Autos	: 15			
Peak Hour I	Percentage:	10%			Me	dium Tri	ucks (2	Axles)	: 15			
Peak He	our Volume:	1,830 vehicle	es		He	avy Truc	cks (3+	Axles)	: 15			
Vel	nicle Speed:	50 mph		-	Vehicle	Miv						
Near/Far Lar	ne Distance:	51 feet		H		icleType		Dav	Evening	Night	Dailv	
Site Data							Autos:	66.29	-	20.3%	. ,	
Par	rier Heiaht:	0.0 feet			М	edium Ti	rucks:	77.19	6 5.3%	17.6%		
Barrier Type (0-Wa		0.0				Heavy Ti	rucks:	86.39	6 1.5%	12.2%	1.89%	
Centerline Dis		49.0 feet										
Centerline Dist. t	o Observer:	49.0 feet		-	Noise S				eet)			
Barrier Distance t	o Observer:	0.0 feet			A 4 E	Auto: m Truck		2.297				
Observer Height (/	Above Pad):	5.0 feet				v Truck		3.004	Grade Ad	iuetman	t: 0.0	
Pa	d Elevation:	0.0 feet				,				usuncn	. 0.0	
Roa	d Elevation:	0.0 feet		L	Lane Equivalent Distance (in feet)							
F	Road Grade:	0.0%				Auto		2.140				
	Left View:	-90.0 degre	es			m Truck		.929				
	Right View:	90.0 degre	es		Heav	y Truck	s: 4°	1.950				
FHWA Noise Mode	l Calculation	s										
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres	snel	Barrier Att	en Be	rm Atten	
Autos:	70.20	0.04		1.0		-1.20		-4.64		000	0.00	
Medium Trucks:	81.00	-12.97		1.0		-1.20		-4.87		000	0.00	
Heavy Trucks:	85.38	-16.90		1.0	4	-1.20		-5.44	0.0	000	0.00	
Unmitigated Noise										_		
	Leq Peak Hοι			Leq E	vening	Leq	Night		Ldn		NEL	
Autos:	70		67.5		66.6		63		70.8		71.2	
Medium Trucks:	67		65.9		60.3		60		68.2	-	68.4	
Heavy Trucks: Vehicle Noise:	68 73		66.9 71.6		55.3 67.8		59 66		67.7 73.9		67.8 74.1	
Centerline Distance to Noise Contour (in feet)					00		50					
Cemeriine Distanc	e to Noise Co	ontour (in fee	')	70 0	dBA	65	dBA	T	60 dBA	55	5 dBA	
			Ldn:	8	9	19	92		413	1	889	

FH	WA-RD-77-108	HIGH	WAY NO	ISE PE	REDICT	ION MO	DEL			
Scenario: Existing W	ith Project				Project	Name:	мсн			
Road Name: Kimball Av					Job N	lumber:	10351			
Road Segment: w/o Rincor	n Meadows Av.									
SITE SPECIFIC II	NPUT DATA							L INPUT	S	
Highway Data			Si	te Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily Traffic (Adt):	19,120 vehicle	es					Autos:	15		
Peak Hour Percentage:	10%					ucks (2 i				
Peak Hour Volume:	1,912 vehicle	S		He	avy Trud	cks (3+)	Axles):	15		
Vehicle Speed:	50 mph		V	ehicle l	Wix					
Near/Far Lane Distance:	51 feet				icleType	,	Day	Evening	Night	Daily
Site Data					,	Autos:	66.2%	13.5%	20.3%	93.44%
Barrier Height:	0.0 feet			Me	edium T	rucks:	77.1%	5.3%	17.6%	4.67%
Barrier Type (0-Wall, 1-Berm):	0.0			F	leavy T	rucks:	86.3%	1.5%	12.2%	1.89%
Centerline Dist. to Barrier:	49.0 feet		N	oise Sc	urce E	levation	s (in f	eet)		
Centerline Dist. to Observer:	49.0 feet				Auto.	s: 0.	000			
Barrier Distance to Observer:	0.0 feet			Mediur	n Truck	s: 2.	297			
Observer Height (Above Pad):	5.0 feet			Heav	y Truck	s: 8.	004	Grade Ad	justmeni	f: 0.0
Pad Elevation:	0.0 feet		-							
Road Elevation:	0.0 feet		Lá	ne Eq		t Distan	_	reet)		
Road Grade:	0.0%				Auto		140			
Left View:	-90.0 degree				n Truck		929			
Right View:	90.0 degree	es		Heav	y Truck	s: 41.	950			
FHWA Noise Model Calculation										
VehicleType REMEL	Traffic Flow	Dis	tance	Finite		Fresi		Barrier Att		rm Atten
Autos: 70.20			1.01		-1.20		-4.64		000	0.000
Medium Trucks: 81.00			1.04		-1.20		-4.87		000	0.000
Heavy Trucks: 85.38			1.04		-1.20		-5.44	0.0	000	0.000
Unmitigated Noise Levels (with							1			
VehicleType Leq Peak Ho Autos: 70		67.7	Leq Eve	ening 66.8	Leq	Night 63.8		Ldn 70.9		NEL 71.4
		66.1		60.5		61.0	-	68.4	-	68.6
		67.1		55.5		59.8	-	67.9	•	68.0
· —		71.8		67.9		66.0		74.		74.3
Centerline Distance to Noise C	ontour (in feet)								
			70 dE	BA .	65	dBA	6	60 dBA	55	dBA
		Ldn:	92		1	97		425		915
	Ci	NEL:	96		2	06		443	9	955

Thursday, May 02, 2019

F	HWA-RD-77-108 I	HIGHWAY	NOISE P	REDICTION	ON MOD	EL			
Scenario: Existing N Road Name: Kimball A Road Segment: e/o Mill C	iV.			Project I Job Nu	Vame: N mber: 1				
SITE SPECIFIC	INPUT DATA			N	DISE M	ODE	L INPUT	s	
Highway Data			Site Cor	ditions (Hard = 1	10, S	oft = 15)		
Average Daily Traffic (Adt):	16,545 vehicles	S			Α	utos:	15		
Peak Hour Percentage:	10%		Me	dium Tru	cks (2 A	xles):	15		
Peak Hour Volume:	1,654 vehicles		He	avy Truci	ks (3+ A	xles):	15		
Vehicle Speed:	50 mph		Vehicle	Miv					
Near/Far Lane Distance:	51 feet			icleType	1	Dav	Evening	Night	Daily
Site Data			*01.			6.2%		20.3%	
D	0.0 feet		М	edium Tri		7.1%		17.6%	4.67%
Barrier Height: Barrier Type (0-Wall, 1-Berm):				Heavy Tru	icks: 8	86.3%	1.5%	12.2%	1.89%
Centerline Dist. to Barrier.									
Centerline Dist. to Observer.			Noise S	ource Ele		•	eet)		
Barrier Distance to Observer.				Autos					
Observer Height (Above Pad):				m Trucks					
Pad Flevation			Heav	ry Trucks	8.0	04	Grade Ad	justment	0.0
Road Elevation			Lane Eq	uivalent	Distanc	e (in	feet)		
Road Grade:	0.0%		-	Autos	42.1	40			
Left View	-90.0 degrees	S	Mediu	m Trucks	41.9	29			
Right View			Heav	y Trucks	41.9	50			
FHWA Noise Model Calculation	ons								
VehicleType REMEL	Traffic Flow	Distance	Finite	Road	Fresne	e/	Barrier Att	en Ber	m Atten
Autos: 70.2	0 -0.40	1.0)1	-1.20	-	4.64	0.0	000	0.000
Medium Trucks: 81.0	0 -13.41	1.0)4	-1.20	-	4.87	0.0	000	0.000
Heavy Trucks: 85.3	8 -17.34	1.0)4	-1.20	-	5.44	0.0	000	0.000
Unmitigated Noise Levels (wi	thout Topo and b	arrier atte	nuation)						
VehicleType Leq Peak H	our Leq Day	Leq I	vening	Leq N	light		Ldn	C	VEL
Autos:	69.6	7.0	66.1		63.1		70.3	3	70.7
		5.5	59.9		60.3		67.8	3	67.9
,		6.4	54.9		59.2		67.3	3	67.4
Vehicle Noise:	73.2 7	1.1	67.3		66.0		73.4	1	73.7
Centerline Distance to Noise	Contour (in feet)								
			dBA	65 a		- (60 dBA		dBA
			83	17	-		386		31
	CN	EL:	87	18	7		402	8	67

		FHW <i>A</i>	A-RD-77-108	HIGH	HWAY	NOISE P	REDICT	ION MO	DDEL				
Road Na	ario: Existin ame: Kimbal nent: e/o Ma	Av.	Project					t Name: lumber:					
SIT	E SPECIFI	INP	UT DATA							L INPUT	s		
Highway Data						Site Co.	nditions	(Hard:	= 10, S	oft = 15)			
Average Dai	ly Traffic (Ad	t): 1	5,552 vehicle	es					Autos:	15			
Peak Ho	ur Percentag	e:	10%			Me	edium Tr	ucks (2	Axles):	15			
Peak	Hour Volum	e: 1	,555 vehicle:	S		He	eavy Tru	cks (3+	Axles):	15			
,	/ehicle Spee	d:	50 mph			Vehicle	Miv						
Near/Far	ane Distant	e:	51 feet				nicleType	9	Dav	Evening	Nigh	t	Dailv
Site Data								Autos:	66.2%	Ü	20.3		3.44%
	Barrier Heigi	nt.	0.0 feet			N	ledium T	rucks:	77.1%	5.3%	17.6	6%	4.67%
Barrier Type (0-	-		0.0				Heavy T	rucks:	86.3%	1.5%	12.2	2%	1.89%
	Dist. to Barri		49.0 feet										
Centerline Dis			49.0 feet			Noise S				eet)			
Barrier Distance	e to Observ	er:	0.0 feet				Auto		.000				
Observer Heigh	t (Above Pa	d):	5.0 feet				m Truck		.297	0	·		
	Pad Elevation	n:	0.0 feet			Hea	vy Truck	s: 8	.004	Grade Ad	Justme	ent: U	1.0
F	oad Elevation	n:	0.0 feet			Lane Ed	uivalen	t Distar	nce (in	feet)			
	Road Grad	le:	0.0%				Auto	s: 42	.140				
	Left Vie	w:	-90.0 degree	es		Mediu	m Truck	s: 41	.929				
	Right Vie		90.0 degree			Hea	vy Truck	s: 41	.950				
FHWA Noise Mo	del Calcula	tions											
VehicleType	REME		Traffic Flow	Dis	stance		Road	Fres		Barrier Att		Berm	Atten
Auto).20	-0.67		1.0		-1.20		-4.64		000		0.000
Medium Truck		.00	-13.68		1.0		-1.20		-4.87		000		0.000
Heavy Truck	s: 8	5.38	-17.61		1.0	04	-1.20		-5.44	0.0	000		0.000
Unmitigated No	ise Levels (withou	ıt Topo and	barri	er atte	nuation)							
VehicleType	Leq Peak	Hour	Leq Day	,	Leq I	Evening	Leq	Night		Ldn		CNE	
Auto	S.	69.3		66.8		65.9		62.	9	70.	1		70.5
Medium Truck		67.2		65.2		59.6		60.		67.	-		67.7
Heavy Truck		67.6		66.2		54.6		58.	-	67.0			67.1
Vehicle Nois	9.	72.9		70.9		67.1		65.	7	73.:	2		73.4
Centerline Dista	nce to Nois	e Con	tour (in feet)					,				
						dBA		dBA	(60 dBA		55 dE	
				Ldn:		80		72		370		797	
			CI	VEL:		83	1	79		386		832	!

	HW	A-RD-77-108	HIGH	WAY I	NOISE P	REDICTI	ON MC	DEL			
Scenario: Existing Road Name: Limoniti Road Segment: w/o Arc	Av.	,					Name: umber:				
SITE SPECIFIC	INP	UT DATA							L INPUT	S	
Highway Data					Site Cor	ditions	(Hard =	: 10, Sc	oft = 15)		
Average Daily Traffic (Adt):	1 vehicle	es					Autos:	15		
Peak Hour Percentage	9.	10%			Me	dium Tru	ıcks (2 .	Axles):	15		
Peak Hour Volume	e:	0 vehicle	S		He	avy Truc	cks (3+ .	Axles):	15		
Vehicle Speed	1:	50 mph		ŀ	Vehicle	Mix					
Near/Far Lane Distance	9.1	78 feet		ŀ		icleType		Day	Evening	Night	Daily
Site Data						A	lutos:	66.2%	13.5%	20.3%	93.41%
Barrier Heigh	t:	0.0 feet			М	edium Tı	ucks:	77.1%	5.3%	17.6%	4.69%
Barrier Type (0-Wall, 1-Berm		0.0			-	Heavy Ti	ucks:	86.3%	1.5%	12.2%	1.90%
Centerline Dist. to Barrie	r:	76.0 feet		f	Noise S	ource El	evation	s (in fe	eet)		
Centerline Dist. to Observe	r:	76.0 feet		ı		Autos		000	,		
Barrier Distance to Observe	r:	0.0 feet			Mediu	m Truck		297			
Observer Height (Above Page):	5.0 feet			Heav	vy Trucks	s: 8.	004	Grade Ad	iustment	: 0.0
Pad Elevation		0.0 feet									
Road Elevation		0.0 feet		-	Lane Eq			_ •	feet)		
Road Grad		0.0%				Autos		422			
Left View		-90.0 degree				m Truck		.286			
Right View	V:	90.0 degree	es		Heav	y Trucks	s: 65	.299			
FHWA Noise Model Calculat	ions										
VehicleType REMEL		Traffic Flow	Dis	stance	Finite	Road	Fresi	nel	Barrier Att	en Bei	rm Atten
Autos: 70		-42.59		-1.8		-1.20		-4.73		000	0.00
Medium Trucks: 81		-55.58		-1.8		-1.20		-4.88		000	0.000
Heavy Trucks: 85	38	-59.51		-1.8	34	-1.20		-5.25	0.0	000	0.000
Unmitigated Noise Levels (v											
VehicleType Leq Peak				Leq E	vening	Leq	Night		Ldn		NEL
Autos:	24.6		22.0		21.1		18.		25.3		25.7
Medium Trucks:	22.4		20.5		14.9		15.3	-	22.7		22.9
Heavy Trucks: Vehicle Noise:	22.8		21.4		9.8		14. 20.		22.2		22.3
Centerline Distance to Noise					22.3		20.	,	20.4	•	20.
	Con	itour (in feet)								10.4
Centernine Distance to Noise				70	dBA	65	dBA	1 6	iO dBA	5.5	aBA
Centernie Distance to Noise			Ldn:		dBA 0	65	dBA)	6	0 dBA 1	55	dBA 1

	FHV	VA-RD-77-108	HIGI	HWAY	NOISE P	REDIC'	TION MC	DEL			
Road Nan	rio: Existing Wi ne: Kimball Av. ent: e/o Flight A	,					t Name: Number:				
	SPECIFIC IN	IPUT DATA			04- 0-				L INPUT	s	
Highway Data					Site Cor	naitions	(Hara =				
Average Daily	. ,	13,143 vehicl	es					Autos:			
	Percentage:	10%					rucks (2	,			
	lour Volume:	1,314 vehicle	:S		He	eavy Tru	icks (3+	Axles).	15		
Ve	ehicle Speed:	50 mph			Vehicle	Mix					
Near/Far La	ane Distance:	51 feet				nicleTyp	е	Day	Evening	Night	Daily
Site Data							Autos:	66.2%	13.5%	20.3%	93.41%
Ba	rrier Height:	0.0 feet			M	ledium 1	rucks:	77.1%	5.3%	17.6%	4.69%
Barrier Type (0-V		0.0				Heavy 1	rucks:	86.3%	1.5%	12.2%	1.90%
	ist. to Barrier:	49.0 feet			M-1 0		-1	/! /	4		
Centerline Dist.	to Observer:	49.0 feet			Noise S				eet)		
Barrier Distance	to Observer:	0.0 feet				Auto		.000			
Observer Height	(Above Pad):	5.0 feet				ım Truc		.297	0		
	ad Elevation:	0.0 feet			Hea	vy Truc	ks: 8	.004	Grade Adj	justmeni	: 0.0
Ro	ad Elevation:	0.0 feet			Lane Eq	juivalei	nt Distan	ice (in	feet)		
	Road Grade:	0.0%				Auto	os: 42	.140			
	Left View:	-90.0 degre	es		Mediu	ım Truc	ks: 41	.929			
	Right View:	90.0 degre			Hea	vy Truc	ks: 41	.950			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres	nel	Barrier Att	en Be	m Atten
Autos:	70.20	-1.40		1.0	01	-1.20		-4.64	0.0	000	0.000
Medium Trucks:	81.00	-14.40		1.0	04	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	85.38	-18.32		1.0	04	-1.20		-5.44	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barri	ier atte	nuation)						
VehicleType	Leq Peak Hou	ır Leq Day	<i>y</i>	Leq E	Evening	Lec	Night		Ldn	С	NEL
Autos:	68	.6	66.0		65.1		62.	1	69.3	3	69.7
Medium Trucks:		.4	64.5		58.9		59.	4	66.8	3	67.0
Heavy Trucks:	66	.9	65.5		53.9	1	58.	2	66.3	3	66.4
Vehicle Noise:	72	.2	70.2		66.3	1	65.	0	72.5	5	72.7
Centerline Distan	ce to Noise Co	ontour (in feet	t)								
				70	dBA	65	dBA	1 (60 dBA	55	dBA

Thursday, May 02, 2019

FH	WA-RD-77-108 HIGI	HWAY NOISE F	REDICTION I	MODEL		
Scenario: Existing W			Project Nam			
Road Name: Limonite A			Job Numbe	er: 10351		
Road Segment: e/o Archib	ald Av.					
SITE SPECIFIC I	NPUT DATA				L INPUTS	;
Highway Data		Site Co.	nditions (Har	d = 10, S	oft = 15)	
Average Daily Traffic (Adt):	18,897 vehicles			Autos		
Peak Hour Percentage:	10%		edium Trucks	,		
Peak Hour Volume:	1,890 vehicles	H	eavy Trucks (3	3+ Axles)	: 15	
Vehicle Speed:	50 mph	Vehicle	Mix			
Near/Far Lane Distance:	78 feet	Vei	nicleType	Day	Evening	Night Daily
Site Data			Autos	: 66.29	6 13.5%	20.3% 93.31%
Barrier Height:	0.0 feet	٨	ledium Trucks	77.19	6 5.3%	17.6% 4.68%
Barrier Type (0-Wall, 1-Berm):	0.0		Heavy Trucks	: 86.3%	6 1.5%	12.2% 2.02%
Centerline Dist. to Barrier:	76.0 feet	Noise S	ource Elevati	ions (in t	(oot)	
Centerline Dist. to Observer:	76.0 feet	140/36 6	Autos:	0.000	ccij	
Barrier Distance to Observer:	0.0 feet	Mediu	im Trucks:	2.297		
Observer Height (Above Pad):	5.0 feet		vv Trucks:	8.004	Grade Adii	ustment: 0.0
Pad Elevation:	0.0 feet					10117101711. U.U
Road Elevation:	0.0 feet	Lane E	uivalent Dist		feet)	
Road Grade:	0.0%			65.422		
Left View:	-90.0 degrees			65.286		
Right View:	90.0 degrees	Hea	vy Trucks:	65.299		
FHWA Noise Model Calculation	าร					
VehicleType REMEL	Traffic Flow Dis	stance Finite	Road Fr	esnel	Barrier Atte	n Berm Atten
Autos: 70.20	0.17	-1.85	-1.20	-4.73	0.0	0.000
Medium Trucks: 81.00		-1.84	-1.20	-4.88	0.0	
Heavy Trucks: 85.38	-16.49	-1.84	-1.20	-5.25	0.0	0.000
Unmitigated Noise Levels (with	hout Topo and barri	er attenuation)				
VehicleType Leq Peak Ho		Leq Evening	Leq Night		Ldn	CNEL
	7.3 64.7	63.8		8.03	68.0	68.5
	5.1 63.2	57.6		0.8	65.5	65.6
,	5.9 64.4	52.8		7.2	65.3	65.3
Vehicle Noise: 7	1.0 68.9	65.0) 6	3.8	71.2	71.5
Centerline Distance to Noise C	Contour (in feet)					
		70 dBA	65 dBA		60 dBA	55 dBA
	Ldn:	92	197		425	915
	CNFI:	95	206		443	955

Thursday, May 02, 2019

	FH	WA-RD-77-108	HIGH	WAY N	IOISE PI	REDICT	ION MO	DDEL			
Road Na	ario: Existing W me: Pine Av. ent: w/o El Pra	•					Name: lumber:				
SITE	SPECIFIC II	NPUT DATA							L INPUT	s	
Highway Data					Site Cor	ditions	(Hard:	= 10, S	oft = 15)		
Average Dail	y Traffic (Adt):	25 vehicle	es					Autos:	15		
Peak Hou	ır Percentage:	10%			Me	dium Tr	ucks (2	Axles):	15		
Peak	Hour Volume:	3 vehicle	s		He	avy Tru	cks (3+	Axles):	15		
V	ehicle Speed:	45 mph			Vehicle	Miv					
Near/Far L	ane Distance:	76 feet		F		icleType	9	Dav	Evening	Night	Dailv
Site Data							Autos:	66.2%	-	20.3%	93.41%
B	arrier Height:	0.0 feet			М	edium T	rucks:	77.1%	5.3%	17.6%	4.69%
Barrier Type (0-	-	0.0			- 1	Heavy T	rucks:	86.3%	1.5%	12.2%	1.90%
	Dist. to Barrier:	60.0 feet		- H							
Centerline Dis	t. to Observer:	60.0 feet		1	Noise S				eet)		
Barrier Distanc	e to Observer:	0.0 feet				Auto		.000			
Observer Heigh	t (Above Pad):	5.0 feet				m Truck		.297	0		
	Pad Elevation:	0.0 feet			Heav	y Truck	s: 8	.004	Grade Ad	justment	0.0
	oad Flevation:	0.0 feet		1	Lane Eq	uivalen	t Distai	nce (in	feet)		
	Road Grade:	0.0%				Auto	s: 46	.701			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 46	.511			
	Right View:	90.0 degre			Heav	y Truck	s: 46	.530			
FHWA Noise Mo	del Calculation	15									
VehicleType	REMEL	Traffic Flow	Dist	ance		Road	Fres		Barrier Att	en Bei	rm Atten
Autos	68.46	-28.15		0.3	4	-1.20		-4.69	0.0	000	0.000
Medium Trucks	s: 79.45	-41.14		0.37	7	-1.20		-4.88	0.0	000	0.000
Heavy Trucks	84.25	-45.07		0.37	7	-1.20		-5.34	0.0	000	0.000
Unmitigated Noi	se Levels (with	out Topo and	barrie	r atten	uation)						
VehicleType	Leq Peak Ho	ur Leq Day	′	Leq E	/ening	Leq	Night		Ldn		NEL
Autos	39	9.5	36.9		36.0		33.	0	40.2	2	40.6
Medium Trucks	37	7.5	35.6		30.0		30	4	37.8	3	38.0
Heavy Trucks			36.9		25.3		29	7	37.8		37.8
Vehicle Noise	e: 43	3.3	41.3		37.2		36	.0	43.5	5	43.8
Centerline Dista	nce to Noise C	ontour (in feet)								
				70 c			dBA	- (60 dBA		dBA
			Ldn:	1			2		5		10
		C	VEL:	1			2		5		11

	FH\	WA-RD-77-108	HIGH	1 YAWH	IOISE P	REDICT	ION M	ODEL			
Scenario Road Name Road Segmen		,					t Name: lumber.				
SITE S	SPECIFIC IN	IPUT DATA				1	NOISE	MODE	L INPUT	S	
Highway Data					Site Cor	ditions	(Hard	= 10, Sc	ft = 15)		
Average Daily	Traffic (Adt):	26,758 vehicl	es					Autos:	15		
Peak Hour I	Percentage:	10%			Me	dium Ti	ucks (2	Axles):	15		
Peak He	our Volume:	2,676 vehicle	s		He	avy Tru	cks (3+	Axles):	15		
Vel	hicle Speed:	45 mph		-	Vehicle	Miv					
Near/Far Lar	ne Distance:	76 feet		F		icleTyp	9	Dav	Evening	Night	Dailv
Site Data							Autos:	66.2%		20.3%	- /
Par	rier Height:	0.0 feet			М	edium 7	rucks:	77.1%	5.3%	17.6%	4.65%
Barrier Type (0-Wa		0.0				Heavy 7	rucks:	86.3%	1.5%	12.2%	2.01%
Centerline Dis		60.0 feet		F	Noise S	E	lovotio	no (in fe	2041		
Centerline Dist. t	to Observer:	60.0 feet			Noise S	Auto		ns (in re	et)		
Barrier Distance t	to Observer:	0.0 feet			1 4 E-	Auto m Truck		2.297			
Observer Height (/	Above Pad):	5.0 feet				v Truck		3.004	Grade Ad	iuctmont	. 0.0
Pa	ad Elevation:	0.0 feet			пеа	ry Truci	.s. c	.004	Grade Au,	usunent	0.0
Roa	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Dista	nce (in t	eet)		
F	Road Grade:	0.0%				Auto	s: 46	6.701			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 46	6.511			
	Right View:	90.0 degre	es		Hear	y Truck	s: 46	5.530			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	snel	Barrier Att	en Ber	m Atten
Autos:	68.46	2.14		0.3	4	-1.20		-4.69	0.0	000	0.00
Medium Trucks:	79.45	-10.89		0.3		-1.20		-4.88		000	0.00
Heavy Trucks:	84.25	-14.54		0.3	7	-1.20		-5.34	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barri	er atten	uation)						
	Leq Peak Hou	.,.,		Leq E	vening	Leq	Night		Ldn		NEL
Autos:	69		67.2		66.3		63		70.4		70.9
Medium Trucks:	67		65.8		60.2		60		68.1		68.2
Heavy Trucks:	68		67.4		55.9		60		68.3		68.4
Vehicle Noise:	73	5.6	71.6		67.5		66	.4	73.8	3	74.
Centerline Distanc	e to Noise C	ontour (in fee	t)	70	-ID 4	-	-10.4		0 -104		-10.4
			I atau		dBA		dBA	6	0 dBA		dBA
		_	Ldn: NFI:	10			33		502 523	,	082
		C.	IVEL:	11	13	4	43		523	1,	127

Scenar	io: Existing Wi	th Project				Project	Name:	MCH			
	Road Name: Pine Av. Road Segment: w/o Euclid Av.					Job N	lumber:	10351			
Road Segme	nt: w/o Euclid	Av.									
SITE	SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data					Site Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	7,979 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2	Axles):	15		
Peak F	lour Volume:	798 vehicle	S		He	avy Trud	cks (3+)	Axles):	15		
Ve	hicle Speed:	45 mph		-	Vehicle I	Miv					
Near/Far La	ne Distance:	76 feet		H		icleType		Day	Evening	Night	Daily
Site Data							Autos:	66.2%	-	20.3%	,
Ra	rrier Height:	0.0 feet			Me	edium T	rucks:	77.1%	5.3%	17.6%	4.95%
Barrier Type (0-W		0.0			F	leavy T	rucks:	86.3%	1.5%	12.2%	2.64%
Centerline Di		60.0 feet		L							
Centerline Dist.		60.0 feet		1	Noise Sc				eet)		
Barrier Distance	to Observer:	0.0 feet				Auto		000			
Observer Height	(Above Pad):	5.0 feet				n Truck		297	0		
	ad Elevation:	0.0 feet			Heav	y Truck	s: 8.	004	Grade Ad	ustment	0.0
Ro	ad Elevation:	0.0 feet		-	Lane Eq	uivalen	t Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 46.	701			
	Left View:	-90.0 degree	es		Mediur	n Truck	s: 46.	511			
	Right View:	90.0 degree	es		Heav	y Truck	s: 46.	530			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresi	nel	Barrier Att	en Ber	m Atten
Autos:	68.46	-3.16		0.3	4	-1.20		-4.69	0.0	000	0.000
Medium Trucks:	79.45	-15.87		0.3	7	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	84.25	-18.60		0.3	7	-1.20		-5.34	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrie	er atten	uation)						
VehicleType	Leq Peak Hou	ır Leq Day	,	Leq E	vening	Leq	Night		Ldn		NEL
Autos:	64		61.9		61.0		58.0		65.1		65.6
Medium Trucks:	62		8.06		55.2		55.7		63.1		63.3
Heavy Trucks:	64	.8	63.4		51.8		56.	l	64.2	2	64.3
Vehicle Noise:	68	.9	66.9		62.4		61.	5	69.0)	69.3
Centerline Distan	ce to Noise Co	ontour (in feet)	70	-ID4	05	-10.4		00 -ID4	-	-/D.4
			Ldn:	70 0	dBA		dBA 11		60 dBA 239		dBA i15
			ver:	5			11 15		239		i35
		Ci	VEL:	5	4	- 1	15		240	5	SS

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Thursday, May 02, 2019

FH	WA-RD-77-108	HIGHWA	Y NOISE P	REDICTION	ON MO	ODEL			
Scenario: Existing W Road Name: Pine Av. Road Segment: w/o Chino	,			Project I Job Nu					
SITE SPECIFIC II	NDI IT DATA			NI	NISE	MODE	L INPUT	s .	
Highway Data	II OI DAIA		Site Co.	nditions (
Average Daily Traffic (Adt):	30.785 vehicle	es				Autos	15		
Peak Hour Percentage:	10%		Me	edium Tru	cks (2	Axles).	15		
Peak Hour Volume:	3,079 vehicles	s	He	eavy Truci	ks (3+	Axles).	15		
Vehicle Speed:	45 mph								
Near/Far Lane Distance:	76 feet		Vehicle	nicleType		Day	Evening	Night	Daily
Site Data			Vei		utos:	66.2%		20.3%	,
				n Medium Tri		77.1%		17.6%	4.65%
Barrier Height:	0.0 feet 0.0			Heavy Tru		86.3%		12.2%	
Barrier Type (0-Wall, 1-Berm): Centerline Dist. to Barrier:	60.0 feet							12.270	1.0070
Centerline Dist. to Observer:	60.0 feet		Noise S	ource Ele			eet)		
Barrier Distance to Observer:	0.0 feet			Autos	-	.000			
Observer Height (Above Pad):	5.0 feet			ım Trucks	_	.297			
Pad Flevation:	0.0 feet		Hea	vy Trucks	. 8	.004	Grade Ad	justment	: 0.0
Road Flevation:	0.0 feet		Lane Ed	quivalent	Distai	nce (in	feet)		
Road Grade:	0.0%			Autos	: 46	6.701			
Left View:	-90.0 degree	es	Mediu	ım Trucks	: 46	5.511			
Right View:	90.0 degree		Hea	vy Trucks	46	5.530			
FHWA Noise Model Calculation	18								
VehicleType REMEL	Traffic Flow	Distanc	ce Finite	Road	Fres	inel	Barrier Att	en Bei	m Atten
Autos: 68.46			0.34	-1.20		-4.69		000	0.000
Medium Trucks: 79.45			0.37	-1.20		-4.88		000	0.000
Heavy Trucks: 84.25			0.37	-1.20		-5.34	0.0	000	0.000
Unmitigated Noise Levels (with									
VehicleType Leq Peak Ho			q Evening	Leq N	_		Ldn		NEL
		67.8	66.9		63		71.1		71.5
Medium Trucks: 68		66.4	60.8		61		68.7		68.9
	3.5	68.0	56.4		60 67		68.9		68.9
Heavy Trucks: 69 Vehicle Noise: 74	4.2	72.2	68.1				74.4	7	74.7
Vehicle Noise: 74			68.1		07	.0	74.4	4	74.7
Vehicle Noise: 74)	68.1 70 dBA	65 a			74.4 60 dBA		dBA
	ontour (in feet)			ВА			55	

		FHW	A-RD-77-108	HIGH	HWAY	NOISE P	REDICT	ION MO	DDEL				
	ario: Existii ame: Pine A nent: w/o W	۸v.	,				.,	t Name: lumber:					
SIT	E SPECIF	IC INP	UT DATA				1	VOISE	MODE	L INPUT	s		
Highway Data						Site Cor	nditions	(Hard:	= 10, S	oft = 15)			
Average Dai	ly Traffic (A	dt): 1	7,411 vehicle	es					Autos:	15			
Peak Ho	ur Percenta	ge:	10%			Me	edium Tr	ucks (2	Axles):	15			
Peak	Hour Volui	ne: 1	,741 vehicle	S		He	eavy Tru	cks (3+	Axles):	15			
1	/ehicle Spe	ed:	45 mph			Vehicle	Mix						
Near/Far	ane Distar	ce:	76 feet			Vel	nicleType	э	Day	Evening	Nigh	nt	Daily
Site Data								Autos:	66.2%	13.5%	20.3	3% 9	3.29%
F	Barrier Heig	ıht·	0.0 feet			M	ledium T	rucks:	77.1%	5.3%	17.6	6%	4.64%
Barrier Type (0-	-		0.0				Heavy T	rucks:	86.3%	1.5%	12.2	2%	2.07%
Centerline			60.0 feet			M-1 0		·	/! #	41			
Centerline Dis	t. to Obser	/er:	60.0 feet			Noise S				eet)			
Barrier Distance	e to Obser	/er:	0.0 feet			14	Auto m Truck		.000				
Observer Heigh	t (Above Pa	ad):	5.0 feet						.004	Grade Ad	ii iotm	ont (
_	Pad Elevat	ion:	0.0 feet			неа	vy Truck	is: 8	.004	Grade Au	Jusuin	on. ().0
F	oad Elevat	ion:	0.0 feet			Lane Eq	juivalen	t Distai	nce (in	feet)			
	Road Gra	de:	0.0%				Auto	s: 46	.701				
	Left Vi	ew:	-90.0 degree	es		Mediu	m Truck	s: 46	.511				
	Right Vi	ew:	90.0 degree	es		Hea	vy Truck	s: 46	.530				
FHWA Noise Mo	del Calcul	ations											
VehicleType	REME		Traffic Flow	Dis	stance		Road	Fres		Barrier Att	_	Berm	Atten
Auto	-	8.46	0.27		0.3		-1.20		-4.69		000		0.000
Medium Truck		9.45	-12.77		0.3		-1.20		-4.88		000		0.000
Heavy Truck	s: 8	4.25	-16.27		0.3	37	-1.20		-5.34	0.0	000		0.000
Unmitigated No	ise Levels	(withou	ıt Topo and	barri	er atte	nuation)							
VehicleType	Leq Pea		Leq Day		Leq I	ening	Leq	Night		Ldn		CNE	
Auto		67.9		65.3		64.4		61.		68.6			69.0
Medium Truck		65.8		63.9		58.3		58	-	66.2			66.4
Heavy Truck		67.1		65.7		54.1		58.	-	66.6			66.6
Vehicle Nois	9.	71.8		69.8		65.7	'	64	.5	72.0)		72.3
Centerline Dista	nce to Noi	se Con	tour (in feet)					,		,		
						dBA		dBA	(60 dBA		55 dl	
				Ldn:		82		76		379		817	
			CI	VEL:		85	183 395 851						

	FHW	A-RD-77-108	HIGHWA	AY NO	DISE PI	REDICT	ON M	ODEL			-		
Road Name	o: Existing With e: Pine Av. t: w/o Hellman	•				Project Job N		MCH 10351					
SITE S	PECIFIC INF	UT DATA			NOISE MODEL INPUTS								
Highway Data				S	ite Cor	ditions	(Hard	= 10, S	oft = 15)				
Average Daily T Peak Hour I Peak Ho	Percentage:	7,488 vehicle 10% 2,749 vehicles				dium Tri avy Truc							
Veh	icle Speed:	45 mph		1/	ehicle	Miss							
Near/Far Lar	e Distance:	76 feet		V		icleType	. 1	Day	Evening	Night	Daily		
Site Data				+			lutos:	66.2%	-	20.3%			
Par	rier Height:	0.0 feet			М	edium T	ucks:	77.1%	5.3%	17.6%	4.66%		
Barrier Type (0-Wa		0.0 1001			-	Heavy Ti	ucks:	86.3%	1.5%	12.2%	2.01%		
Centerline Dis		60.0 feet			laica S	ource El	ovatio	ne (in f	not)				
Centerline Dist. t	o Observer:	60.0 feet		/	orse si	Auto		0.000	<i>561)</i>				
Barrier Distance t	o Observer:	0.0 feet			Modiu	m Truck		2.297					
Observer Height (Above Pad): 5.0 feet						y Truck		3.004	Grade Ad	iietmant	0.0		
Pad Elevation: 0.0 feet					пеан	y Truck	s. c	0.004	Grade Auj	usunent	0.0		
Roa	d Elevation:	0.0 feet		L	ane Eq	uivalen	Dista	nce (in	feet)				
F	Road Grade:	0.0%				Auto	s: 46	3.701					
	Left View:	-90.0 degree	es.		Mediu	m Truck	s: 46	3.511					
	Right View:	90.0 degree	:S		Heav	y Truck	s: 46	6.530					
FHWA Noise Mode	l Calculations												
VehicleType	REMEL	Traffic Flow	Distan	ce	Finite	Road	Fres	snel	Barrier Atte	en Ber	m Atten		
Autos:	68.46	2.25		0.34		-1.20		-4.69	0.0	00	0.000		
Medium Trucks:	79.45	-10.77		0.37		-1.20		-4.88	0.0	00	0.000		
Heavy Trucks:	84.25	-14.42		0.37		-1.20		-5.34	0.0	00	0.000		
Unmitigated Noise				ttenu	ıation)								
,,	Leq Peak Hour			q Ev	ening	Leq	Night		Ldn		VEL		
Autos:	69.9		67.3		66.4		63		70.6		71.0		
Medium Trucks:	67.9		65.9		60.3		60		68.2		68.4		
Heavy Trucks:	69.0		67.6		56.0		60		68.4		68.5		
Vehicle Noise: 73.7 71.8					67.7		66	.5	74.0		74.2		
Centerline Distanc	e to Noise Cor	ntour (in feet)	1										
			L	70 di			dBA	(60 dBA		dBA		
			Ldn:	110 237 512 1,1									
	CNEL:					115 247 533 1,148							

FH	WA-RD-77-108 HIG	1 YAWH	NOISE PE	REDICTIO	N MOE	DEL			
Scenario: Existing W Road Name: Pine Av. Road Segment: w/o E. Pre	,			Project No Job Nur					
SITE SPECIFIC II	NPUT DATA						INPUT	s	
Highway Data			Site Con	ditions (H	lard = '	10, So	ft = 15)		
Average Daily Traffic (Adt):	27,639 vehicles				A	utos:	15		
Peak Hour Percentage:	10%		Me	dium Truc	ks (2 A	xles):	15		
Peak Hour Volume:	2,764 vehicles		He	avy Trucks	s (3+ A	xles):	15		
Vehicle Speed:	45 mph	T I	Vehicle I	Wix					
Near/Far Lane Distance:	76 feet	F		icleType	I	Day	Evening	Night	Daily
Site Data				Au	tos: 6	66.2%	13.5%	20.3%	93.34%
Barrier Height:	0.0 feet		Me	edium Truc	cks: 7	77.1%	5.3%	17.6%	4.66%
Barrier Type (0-Wall, 1-Berm):	0.0		F	leavy Truc	cks: 8	36.3%	1.5%	12.2%	2.01%
Centerline Dist. to Barrier:	60.0 feet		Noisa Sc	ource Elev	ztions	(in fo	ot)		
Centerline Dist. to Observer:	60.0 feet	-	140/36 00	Autos:	0.0	•	01)		
Barrier Distance to Observer:	0.0 feet		Mediur	n Trucks:	2.2				
Observer Height (Above Pad):	5.0 feet			v Trucks:	8.0		Grade Ad	iustment	0.0
Pad Elevation:	0.0 feet			-					0.0
Road Elevation:	0.0 feet	L	Lane Eq	uivalent D			eet)		
Road Grade:	0.0%			Autos:	46.7				
Left View:	-90.0 degrees			n Trucks:	46.5				
Right View:	90.0 degrees		Heav	y Trucks:	46.5	30			
FHWA Noise Model Calculation	15								
VehicleType REMEL	Traffic Flow Di	istance	Finite	Road	Fresne	el E	Barrier Att	en Ber	m Atten
Autos: 68.46		0.3		-1.20		4.69	0.0		0.000
Medium Trucks: 79.45		0.3		-1.20		4.88	0.0		0.000
Heavy Trucks: 84.25	-14.40	0.3	7	-1.20	-	5.34	0.0	000	0.000
Unmitigated Noise Levels (with	out Topo and barr	ier atter	nuation)						
VehicleType Leq Peak Ho		Leq E	vening	Leq Ni			Ldn		VEL
	9.9 67.3		66.4		63.4		70.6		71.0
	7.9 66.0		60.4		60.8		68.2		68.4
,	9.0 67.6		56.0		60.3		68.4		68.5
	3.8 71.8		67.7		66.5		74.0)	74.3
Centerline Distance to Noise C	ontour (in feet)								
			dBA	65 dE			0 dBA		dBA
	Ldn:		11	238			513		106
	CNEL:	11	15	248			535	1,	152

Thursday, May 02, 2019

FHWA-RD-77-108 HIGH	WAY NOISE PREDICTION MODEL
Scenario: Existing With Project	Project Name: MCH
Road Name: Schleisman Rd.	Job Number: 10351
Road Segment: w/o Archibald Av.	
SITE SPECIFIC INPUT DATA	NOISE MODEL INPUTS
Highway Data	Site Conditions (Hard = 10, Soft = 15)
Average Daily Traffic (Adt): 29,565 vehicles	Autos: 15
Peak Hour Percentage: 10%	Medium Trucks (2 Axles): 15
Peak Hour Volume: 2,956 vehicles	Heavy Trucks (3+ Axles): 15
Vehicle Speed: 45 mph	Vehicle Mix
Near/Far Lane Distance: 78 feet	VehicleType Day Evening Night Daily
Site Data	Autos: 66.2% 13.5% 20.3% 93.33
Barrier Height: 0.0 feet	Medium Trucks: 77.1% 5.3% 17.6% 4.67
Barrier Type (0-Wall, 1-Berm): 0.0	Heavy Trucks: 86.3% 1.5% 12.2% 2.00
Centerline Dist. to Barrier: 76.0 feet	Noise Source Elevations (in feet)
Centerline Dist. to Observer: 76.0 feet	Autos: 0.000
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	,
Road Elevation: 0.0 feet	Lane Equivalent Distance (in feet)
Road Grade: 0.0%	Autos: 65.422
Left View: -90.0 degrees	Medium Trucks: 65.286
Right View: 90.0 degrees	Heavy Trucks: 65.299
FHWA Noise Model Calculations VehicleType REMEL Traffic Flow Dis	Sinite Dead Second Desire Aven Deservation
VehicleType REMEL Traffic Flow Dis	tance Finite Road Fresnel Barrier Atten Berm Atten -1.85 -1.20 -4.73 0.000 0.00
Medium Trucks: 79.45 -10.44	-1.84 -1.20 -4.88 0.000 0.00
Heavy Trucks: 84.25 -14.11	-1.84 -1.20 -5.25 0.000 0.00 -1.84 -1.20 -5.25 0.000 0.00
Unmitigated Noise Levels (without Topo and barri	
VehicleType Leq Peak Hour Leg Day	Leg Evening Leg Night Ldn CNEL
Autos: 68.0 65.4	64.5 61.5 68.7 69
Medium Trucks: 66.0 64.0	58.4 58.9 66.3 66
Heavy Trucks: 67.1 65.7	54.1 58.4 66.5 66
Vehicle Noise: 71.9 69.9	65.8 64.6 72.1 72
Centerline Distance to Noise Contour (in feet)	
·	70 dBA 65 dBA 60 dBA 55 dBA
Ldn:	105 225 485 1,045
CNFI:	109 235 505 1.089

Thursday, May 02, 2019

	FIN	VA-RD-77-108 HIG	LDMAN	NOISE D	SEDICTIO	MODEL						
Road Nam	io: OY Without ne: Central Av. nt: n/o El Prado	Project	HWAY	Project Name: MCH Job Number: 10351								
SITE	SPECIFIC IN	PUT DATA			NO	ISE MODI	EL INPUTS	5				
Highway Data				Site Con	ditions (H	ard = 10, S	Soft = 15)					
Average Daily	Traffic (Adt):	31,600 vehicles				Autos	: 15					
Peak Hour	Percentage:	10%		Me	dium Truck	s (2 Axles)	: 15					
Peak H	lour Volume:	3,160 vehicles		He	avy Trucks	(3+ Axles)	: 15					
Ve	hicle Speed:	45 mph		Vehicle	Miv							
Near/Far La	ne Distance:	76 feet			icleTvpe	Dav	Evening	Night	Dailv			
Site Data					Aut	- /		20.3%	93.40%			
Pa	rrier Height:	0.0 feet		M	edium Truc	ks: 77.09	% 5.3%	17.6%	4.70%			
Barrier Type (0-W		0.0		F	Heavy Truc	ks: 86.39	% 1.5%	12.2%	1.90%			
Centerline Di		60.0 feet										
Centerline Dist.	to Observer:	60.0 feet		Noise So		ations (in	teet)					
Barrier Distance	to Observer:	0.0 feet			Autos:	0.000						
Observer Height	(Above Pad):	5.0 feet			m Trucks:	2.297	0					
	ad Elevation:	0.0 feet		Heav	y Trucks:	8.004	Grade Adju	ustment:	0.0			
Ro	ad Elevation:	0.0 feet		Lane Eq	uivalent D	istance (in	feet)					
	Road Grade:	0.0%			Autos:	46.701						
	Left View:	-90.0 degrees		Mediu	m Trucks:	46.511						
	Right View:	90.0 degrees		Heav	y Trucks:	46.530						
FHWA Noise Mod	el Calculation:	s										
VehicleType	REMEL	Traffic Flow D	istance	Finite	Road	Fresnel	Barrier Atte	en Beri	m Atten			
Autos:	68.46	2.86	0.0	34	-1.20	-4.69	0.0	00	0.000			
Medium Trucks:	79.45	-10.12	0.3	37	-1.20	-4.88	0.0	00	0.000			
Heavy Trucks:	84.25	-14.05	0.0	37	-1.20	-5.34	0.0	00	0.000			
Unmitigated Nois	e Levels (with	out Topo and barr	ier atte	nuation)								
VehicleType	Leq Peak Hou	r Leq Day	Leq E	Evening	Leq Nig	ght	Ldn	CN	VEL			
Autos:	70.	.5 67.9		67.0		64.0	71.2		71.6			
Medium Trucks:	68.			61.0		61.4	68.8		69.0			
Heavy Trucks:	69.	.4 67.9		56.4		60.7	68.8		68.8			
Vehicle Noise:	74.			68.3		67.0	74.5		74.8			
Centerline Distan	ce to Noise Co	ontour (in feet)										
				dBA	65 dB	A	60 dBA		dBA			
		Ldn: CNFI:		20	259		557	,	200			
				25	269		580	1:3	251			

Thursday, May 02, 2019

	FHW	A-RD-77-108	HIGHWA	AY NOISE P	REDICTIO	ON MO	DEL						
Road Name	o: OY Without F D: El Prado Rd. t: n/o Kimball A	,			Project I Job Nu								
SITE S	PECIFIC INP	UT DATA			NOISE MODEL INPUTS								
Highway Data				Site Cor	Site Conditions (Hard = 10, Soft = 15)								
Average Daily 7	Fraffic (Adt): 2	7,269 vehicle	es.			,	Autos:	15					
Peak Hour F	Percentage:	10%		Me	edium True	cks (2 A	(xles	15					
Peak Ho	our Volume: 2	,727 vehicles	6	He	avy Truck	ks (3+ A	(xles	15					
Veh	icle Speed:	45 mph		Vehicle	Miss								
Near/Far Lan	e Distance:	36 feet			icleType		Dav	Evening	Night	Daily			
Site Data				101			66.3%	13.5%	20.3%				
Box	rier Height:	0.0 feet		M	edium Tru		77.0%	5.3%	17.6%	4.70%			
Barrier Type (0-Wa		0.0			Heavy Trucks: 86.3% 1.5% 12.2% 1.90								
Centerline Dis		44.0 feet			·								
Centerline Dist. to		44.0 feet		Noise S	Noise Source Elevations (in feet)								
Barrier Distance to		0.0 feet			Autos:		000						
Observer Height (A	Above Pad):	5.0 feet			m Trucks.		297						
Pa	Hea	vy Trucks.	8.0	004	Grade Adj	ustment.	0.0						
	d Elevation:	0.0 feet 0.0 feet		Lane Eq	uivalent	Distand	ce (in f	eet)					
R	Road Grade:	0.0%			Autos	40.4	460						
	Left View:	-90.0 degree	:S	Mediu	m Trucks.	40.2	241						
	Right View:	90.0 degree	:S	Heavy Trucks: 40.262									
FHWA Noise Mode	l Calculations												
VehicleType		Traffic Flow	Distan		Road	Fresn		Barrier Atte		m Atten			
Autos:	68.46	2.22		1.28	-1.20		-4.61	0.0		0.000			
Medium Trucks:	79.45	-10.76		1.31	-1.20		-4.87	0.0		0.000			
Heavy Trucks:	84.25	-14.69		1.31	-1.20		-5.50	0.0	000	0.000			
Unmitigated Noise	Levels (withou	ut Topo and	barrier a	ttenuation)									
VehicleType	Leq Peak Hour	Leq Day		q Evening	Leq N	light		Ldn		VEL			
Autos:	70.8		88.2	67.3		64.3		71.5		71.9			
Medium Trucks:	68.8		66.9	61.3		61.7		69.1		69.3			
Heavy Trucks:	69.7		88.2	56.7		61.0		69.1		69.1 75.1			
Vehicle Noise:	74.6		72.6	68.6		67.3	'	74.8	5	/5.			
			1										
Centerline Distanc	e to Noise Con	itour (in reet,		70 dB4	65.4	RΔ	6	0 dRA	55	dΒΔ			
Centerline Distance	e to Noise Con	, , ,	dn:	70 dBA 92	65 d		6	0 dBA 428		dBA 21			

	HWA-RD)-77-108 HI	GHWAY	NOISE P	REDICTIO	N MO	DEL					
Scenario: OY With Road Name: Central Road Segment: s/o El P	۸v.	ect		Project Name: MCH Job Number: 10351								
SITE SPECIFIC	INPUT	DATA		NOISE MODEL INPUTS Site Conditions (Hard = 10, Soft = 15)								
Highway Data Average Daily Traffic (Adt, Peak Hour Percentage Peak Hour Volume Vehicle Speec	: 10 : 3,791 : 45	9 vehicles 1% vehicles imph		Me	edium Truck	ks (2 A	Autos: Axles):	15 15 15 15				
	. 70	ieel		Vel	nicleType		Day	Evening	Night	Daily		
Site Data Barrier Heigh Barrier Type (0-Wall, 1-Berm	: 0.0	-			Au ledium Trud Heavy Trud	cks:	66.3% 77.0% 86.3%	5.3%	20.3% 17.6% 12.2%	4.709		
Centerline Dist. to Barrier: 60.0 feet Centerline Dist. to Observer: 60.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet			Noise Source Elevations (in feet) Autos: 0.000 Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0 Lane Equivalent Distance (in feet)									
Road Grade Left Viev Right Viev	: 0.0 : -90.0 : 90.0	0% 0 degrees 0 degrees		Mediu	Autos: ım Trucks: vy Trucks:	45.0 45.0 45.0	869 676					
FHWA Noise Model Calculat			D: .	1 = -	5 /	_		D : 40		***		
VehicleType REMEL Autos: 68. Medium Trucks: 79. Heavy Trucks: 84.	46 45	3.65 -9.33 -13.26	0.	46 49 48	-1.20 -1.20 -1.20		-4.69 -4.88 -5.34	0.0	000 000 000	0.00 0.00 0.00		
Unmitigated Noise Levels (w	ithout To	opo and ba	rrier atte	nuation)								
VehicleType Leq Peak I		Leq Day	_	Evening	Leg Ni	ght		Ldn	C	NEL		
Autos: Medium Trucks: Heavy Trucks:	71.4 69.4 70.3	68 67 68	.5	67.9 61.9 57.3		64.9 62.3 61.6		72. 69.1	7	72. 69.		
Vehicle Noise:	75.2	73		69.2		68.0		75.4		75.		
Centerline Distance to Noise	Contour	r (in feet)										
		Ld CNE	n:	138 144	65 dE 297 310		6	60 dBA 640 667	1,	dBA 379 438		

Thursday, May 02, 2019

	FHV	VA-RD-77-108 H	IGHWAY	NOISE P	REDICTIO	ON MODE	L						
Scenario: Road Name: Road Segment:		,				lame: MC mber: 10:							
SITE SF	PECIFIC IN	PUT DATA		NOISE MODEL INPUTS									
Highway Data				Site Conditions (Hard = 10, Soft = 15)									
Average Daily Tra	affic (Adt):	34,918 vehicles		Autos: 15									
Peak Hour Pe	ercentage:	10%		Me	dium Truc	cks (2 Axl	es): 15						
Peak Hou	ır Volume:	3,492 vehicles		He	avy Truck	s (3+ Axl	es): 15						
Vehic	cle Speed:	55 mph		Vehicle	Miss								
Near/Far Lane	Distance:	154 feet			icleType	Da	y Evening	Night L	Daily				
Site Data				*01.			.3% 13.5%		3.40%				
Powie	or Hoimbte	0.0 feet		М	edium Tru	icks: 77	.0% 5.3%		4.70%				
Barrier Type (0-Wall	er Height:	0.0 reet 0.0			Heavy Tru	icks: 86	.3% 1.5%		1.90%				
Centerline Dist.		84.0 feet											
Centerline Dist. to		84.0 feet		Noise S	ource Ele								
Barrier Distance to	Observer:	0.0 feet			Autos:								
Observer Height (Ab	bove Pad):	5.0 feet			m Trucks:			-l'	^				
	Elevation:	0.0 feet		Heav	y Trucks:	8.004	1 Grade A	djustment: 0	.0				
Road	Elevation:	0.0 feet		Lane Eq	uivalent l	Distance	(in feet)						
Ro	ad Grade:	0.0%			Autos:	33.94	1						
	Left View:	-90.0 degrees		Mediu	m Trucks:	33.679	9						
R	Right View:	90.0 degrees		Heav	y Trucks:	33.70	5						
FHWA Noise Model	Calculation	s											
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier At	tten Berm	Atten				
Autos:	71.78	2.42	2.	42	-1.20	-4.	<i>75</i> 0.	.000	0.000				
Medium Trucks:	82.40	-10.56	2.	47	-1.20	-4.	88 0.	.000	0.000				
Heavy Trucks:	86.40	-14.49	2.	47	-1.20	-5.	21 0.	.000	0.000				
Unmitigated Noise L													
,,	eq Peak Hou			Evening	Leq N	-	Ldn	CNE					
Autos:	75			72.0		69.0	76.		76.6				
Medium Trucks:	73		-	65.6		66.0	73.		73.6				
Heavy Trucks:	73			60.2		64.5	72.		72.7				
Vehicle Noise:	78	.8 76	.8	73.1		71.7	79.	.1	79.4				
Centerline Distance	to Noise Co	ontour (in feet)						55 dB					
				dBA	65 d		60 dBA						
		La		340 732			1,577		7				
		CNE	L: 3	355 764 1,647 3,548					3				

	FHV	WA-RD-77-108	HIGH	WAY	NOISE P	REDICT	ION MC	DEL					
Road Nam	io: OY Withou ne: Euclid Av. nt: n/o Riversio	•					t Name: lumber:						
SITE	SPECIFIC IN	IPUT DATA			NOISE MODEL INPUTS								
Highway Data					Site Conditions (Hard = 10, Soft = 15)								
Average Daily	Traffic (Adt):	29,681 vehicle	es					Autos:	15				
Peak Hour	Percentage:	10%			Me	edium Tr	ucks (2	Axles):	15				
Peak H	lour Volume:	2,968 vehicle	s		He	avy Tru	cks (3+	Axles):	15				
Ve	hicle Speed:	55 mph			Vehicle	Miv							
Near/Far La	ne Distance:	154 feet				icleType	9	Day	Evening	Night	Daily		
Site Data							Autos:	66.3%	-	20.39	-		
Pa	rrier Height:	0.0 feet			Medium Trucks: 77.0% 5.3% 17.6% 4								
Barrier Type (0-W		0.0				Heavy T	rucks:	86.3%	1.5%	12.29	6 1.90%		
Centerline Di		84.0 feet											
Centerline Dist.		84.0 feet			Noise S				eet)				
Barrier Distance	to Observer:	0.0 feet				Auto		.000					
Observer Height ((Above Pad):	5.0 feet				m Truck		.297					
Pad Elevation: 0.0 feet					Hear	vy Truck	s: 8	.004	Grade Ad	ustmen	t: 0.0		
	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Distar	ice (in	feet)				
	Road Grade:	0.0%				Auto	s: 33	.941					
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 33	.679					
	Right View:	90.0 degree			Hear	vy Truck	s: 33	.705					
FHWA Noise Mod	el Calculation	s											
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fres	nel	Barrier Att	en Be	erm Atten		
Autos:	71.78	1.72		2.4	12	-1.20		-4.75	0.0	000	0.000		
Medium Trucks:	82.40	-11.26		2.4	17	-1.20		-4.88	0.0	000	0.000		
Heavy Trucks:	86.40	-15.20		2.4	17	-1.20		-5.21	0.0	000	0.000		
Unmitigated Noise	e Levels (with	out Topo and	barrie	er atte	nuation)								
VehicleType	Leq Peak Hou	ır Leq Day	/	Leq E	vening	Leq	Night		Ldn	(CNEL		
Autos:	74	.7	72.1		71.3		68.	3	75.4	1	75.9		
Medium Trucks:	72	.4	70.5		64.9		65.	3	72.7	7	72.9		
Heavy Trucks:	72	.5	71.0		59.5		63.	8	71.9)	71.9		
Vehicle Noise:	78	.1	76.0		72.4		71.	0	78.4	1	78.7		
Centerline Distant	ce to Noise Co	ontour (in feet)										
			L		dBA		dBA		60 dBA	-	5 dBA		
			Ldn:		05	_	57		1,415		3,048		
		CI	VEL:	3	18	6	86		1,478	3	3,184		

	FH\	WA-RD-77-108	HIGH	1 YAWH	IOISE P	REDICT	ION M	ODEL						
Road Nam	io: OY Withou e: Euclid Av.	,				Project Job N		MCH 10351						
Road Segmer	nt: n/o Schaef	er Av.												
	SPECIFIC IN	IPUT DATA							L INPUT	S				
Highway Data					Site Conditions (Hard = 10, Soft = 15)									
Average Daily	Traffic (Adt):	32,723 vehicle	es					Autos.	15					
Peak Hour	Percentage:	10%			Medium Trucks (2 Axles): 15									
Peak H	lour Volume:	3,272 vehicle	S		Heavy Trucks (3+ Axles): 15									
Ve	hicle Speed:	55 mph		 	Vehicle	Mix								
Near/Far Lai	ne Distance:	154 feet		F		icleType		Day	Evening	Night	Daily			
Site Data							Autos:	66.39	6 13.5%	20.3%	93.40%			
Rar	rier Height:	0.0 feet			М	edium T	rucks:	77.0%	6 5.3%	17.6%	4.70%			
Barrier Type (0-W		0.0			Heavy Trucks: 86.3% 1.5% 12.2% 1.90%									
Centerline Dis	. ,	84.0 feet			Maiss C	ouraa E	lovetio	no (in t	io o 4 l					
Centerline Dist.	to Observer:	84.0 feet		-	Noise Source Elevations (in feet) Autos: 0.000									
Barrier Distance	Barrier Distance to Observer: 0.0 feet					m Truck		.297						
Observer Height (vy Truck		3.004	Grade Ad	iustmen	t· 0.0						
Pa	ad Elevation:	0.0 feet								dourion	0.0			
Ros	ad Elevation:	0.0 feet			Lane Eq				feet)					
I	Road Grade:	0.0%				Auto		3.941						
	Left View:	-90.0 degre	es			m Truck		3.679						
	Right View:	90.0 degre	es		Hear	vy Truck	s: 33	3.705						
FHWA Noise Mode														
VehicleType	REMEL	Traffic Flow	Dis	stance		Road	Fres		Barrier Att		rm Atten			
Autos:	71.78	2.14		2.4		-1.20		-4.75		000	0.000			
Medium Trucks:	82.40			2.4		-1.20		-4.88		000	0.000			
Heavy Trucks:	86.40			2.4		-1.20		-5.21	0.0	000	0.000			
Unmitigated Noise														
VehicleType	Leq Peak Ho			Leq E	vening	,	Night		Ldn		NEL			
Autos:	75		72.6		71.7		68		75.9		76.3			
Medium Trucks:	72		70.9		65.3		65		73.2		73.3			
Heavy Trucks: Vehicle Noise:					59.9 64.2 72.3 72.8 71.4 78.8					72.4				
Centerline Distance					72.0				70.0		70.			
Contenine Distant	e to Horse O	ontour (III leet	,	70	dBA	65	dBA		60 dBA	55	5 dBA			
			Ldn:	32	25	7	01		1,510	3	,253			
	CNEL:					340 732 1,577 3,398								

	FHW	A-RD-77-108	HIG	I YAWH	NOISE PE	REDICTION	ON MO	DDEL			
Scenario: OY W Road Name: Euclid Road Segment: n/o Ch	Av.	•				Project I Job Nu		MCH 10351			
SITE SPECIFI	CINE	PUT DATA							L INPUT	S	
Highway Data					Site Con	ditions (Hard:	= 10, Sc	oft = 15)		
Average Daily Traffic (Ad Peak Hour Percenta Peak Hour Volun	e:	29,908 vehicle 10% 2,991 vehicles				dium Tru avy Truci		,	15 15 15		
Vehicle Sper	d:	55 mph		ŀ	Vehicle I	Miv					
Near/Far Lane Distan	e:	154 feet		ŀ		icleType		Dav	Evening	Night	Daily
Site Data							utos:	66.3%	Ü	20.3%	
Barrier Heig	nt.	0.0 feet			Me	edium Tru	ucks:	77.0%	5.3%	17.6%	4.70%
Barrier Type (0-Wall, 1-Ber	n):	0.0			F	leavy Tru	ucks:	86.3%	1.5%	12.2%	1.90%
Centerline Dist. to Barr		84.0 feet			Noise Sc	ource Ele	evatio	ns (in fe	eet)		
Centerline Dist. to Observ		84.0 feet				Autos	: 0	.000			
Barrier Distance to Observ		0.0 feet			Mediur	n Trucks	: 2	.297			
Observer Height (Above Pa Pad Flevati	,	5.0 feet 0.0 feet			Heav	y Trucks	: 8	.004	Grade Ad	ljustmen	t: 0.0
Road Flevati		0.0 feet		ŀ	Lane Eq	uivalent	Distar	nce (in i	feet)		
Road Gra		0.0%		ŀ		Autos		3.941	,		
Left Vie		-90.0 degree	25		Mediur	m Trucks	: 33	3.679			
Right Vie	w:	90.0 degree			Heav	y Trucks	: 33	3.705			
FHWA Noise Model Calcula	tions										
VehicleType REME	- [Traffic Flow	Di	stance	Finite	Road	Fres	nel	Barrier At	ten Be	rm Atten
	.78	1.75		2.4	_	-1.20		-4.75		000	0.00
	2.40	-11.23		2.4		-1.20		-4.88		000	0.00
	6.40	-15.16		2.4	-	-1.20		-5.21	0.0	000	0.00
Unmitigated Noise Levels			$\overline{}$					1			
VehicleType Leq Peal Autos:	Hour 74.8	- 1 - 7	72.2	Leq E	vening 71.3	Leq N	Night 68	_	Ldn 75.		NEL 75.
Medium Trucks:	72.4	-	70.5		64.9		65.		75.	-	75. 73.
Heavy Trucks:	72.5		71.1		59.5		63		71.	-	72.
Vehicle Noise:	78.1		76.1		72.4		71.		78.		78.
Centerline Distance to Nois	e Cor	ntour (in feet)								
		,		70	dBA	65 a	IBA .	6	i0 dBA	55	dBA
			Ldn:	3	06	66	0	-	1,422	3	,063
		CI	VEL:	3:	20	68	9		1,485	3	,200

Thursday, May 02, 2019

FH	WA-RD-77-108 HIGH	HWAY NOISE	PREDICTION	MODEL							
Scenario: OY Withou	t Project		Project Name: MCH								
Road Name: Euclid Av.			Job Num	ber: 10351							
Road Segment: n/o Edison	Av.										
SITE SPECIFIC IN	IPUT DATA				L INPUTS	;					
Highway Data		Site C	onditions (Ha	ard = 10, S	oft = 15)						
Average Daily Traffic (Adt):	35,053 vehicles			Autos:							
Peak Hour Percentage:	10%		ledium Truck	. , ,							
Peak Hour Volume:	3,505 vehicles	,	łeavy Trucks	(3+ Axles).	15						
Vehicle Speed:	55 mph	Vehicl	e Mix								
Near/Far Lane Distance:	154 feet	V	hicleType	Day	Evening	Night Daily					
Site Data			Auto	os: 66.3%	13.5%	20.3% 93.40%					
Barrier Height:	0.0 feet		Medium Truci	ks: 77.0%	5.3%	17.6% 4.70%					
Barrier Type (0-Wall, 1-Berm):	0.0		Heavy Truck	ks: 86.3%	1.5%	12.2% 1.90%					
Centerline Dist. to Barrier:	84.0 feet	Noise	Source Eleva	ations (in f	eet)						
Centerline Dist. to Observer:	84.0 feet		Autos:	0.000	,						
Barrier Distance to Observer:	0.0 feet	Med	ium Trucks:	2.297							
Observer Height (Above Pad):	5.0 feet		avv Trucks:	8.004	Grade Adii	ustment: 0.0					
Pad Elevation:	0.0 feet		,								
Road Elevation:	0.0 feet	Lane E	quivalent Di		feet)						
Road Grade:	0.0%		Autos:	33.941							
Left View:	-90.0 degrees		um Trucks:	33.679							
Right View:	90.0 degrees	He	avy Trucks:	33.705							
FHWA Noise Model Calculation	-										
VehicleType REMEL				Fresnel	Barrier Atte						
Autos: 71.78	2.44	2.42	-1.20	-4.75	0.0						
Medium Trucks: 82.40	-10.54	2.47	-1.20	-4.88	0.0						
Heavy Trucks: 86.40	-14.47	2.47	-1.20	-5.21	0.0	0.000					
Unmitigated Noise Levels (with			,								
VehicleType Leq Peak Ho		Leq Evening	Leq Nig		Ldn	CNEL					
Autos: 75		72	-	69.0	76.2	76.6					
Medium Trucks: 73		65		66.0	73.5	73.6					
	.2 71.8	60		64.5	72.6	72.7					
Vehicle Noise: 78		73	1	71.7	79.1	79.4					
Centerline Distance to Noise C	ontour (in feet)	70 -ID *	05.15		00 -(D4	55 -IDA					
	l dn:	70 dBA 341	65 dB/	4	50 dBA 1.581	55 dBA 3.405					
	CNEL:	356	766		1,651	3,557					

	FHW	/A-RD-77-108	HIGHV	YAY 1	NOISE PE	REDICT	ION MO	DEL			-
Road Nam	io: OY Without ne: Euclid Av. nt: n/o Eucalyp	,					Name: I umber:				
SITE	SPECIFIC IN	PUT DATA				N	IOISE N	10DE	L INPUTS	,	
Highway Data					Site Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	32,935 vehicle	es				,	Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2 A	xles):	15		
Peak H	lour Volume:	3,294 vehicle	s		He	avy Tru	cks (3+ A	xles):	15		
Ve	hicle Speed:	55 mph		F	Vehicle I	Miv					
Near/Far La	ne Distance:	154 feet		F		cleType		Dav	Evening	Night	Daily
Site Data					1011			66.3%		20.3%	,
Pa	rrier Height:	0.0 feet			Me	edium T	rucks:	77.0%	5.3%	17.6%	4.70%
Barrier Type (0-W		0.0			F	leavy T	rucks:	86.3%	1.5%	12.2%	1.90%
Centerline Di		84.0 feet			M-1 0-			- /! 4			
Centerline Dist.	to Observer:	84.0 feet			Noise So	Auto		•	eet)		
Barrier Distance	to Observer:	0.0 feet			1.4 m of 5 m	Auto n Truck		000			
Observer Height	(Above Pad):	5.0 feet						297	Grade Adju	ictmont	
P	ad Elevation:	0.0 feet			Heav	y Truck	s: 8.0	004	Grade Aujo	isunem	. 0.0
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Distand	e (in	feet)		
	Road Grade:	0.0%				Auto	s: 33.9	941			
	Left View:	-90.0 degree	es		Mediur	n Truck	s: 33.6	679			
	Right View:	90.0 degree	es		Heav	y Truck	s: 33.	705			
FHWA Noise Mod	el Calculations	;									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	el	Barrier Atte	n Bei	m Atten
Autos:	71.78	2.17		2.4	2	-1.20		-4.75	0.0	00	0.000
Medium Trucks:	82.40	-10.81		2.4	7	-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	86.40	-14.74		2.4	7	-1.20		-5.21	0.0	00	0.000
Unmitigated Nois	e Levels (witho	out Topo and	barrier	atter	nuation)						
VehicleType	Leq Peak Hou	r Leq Day	/ 1	Leq E	vening	Leq	Night		Ldn	C	NEL
Autos:	75.		72.6		71.7		68.7		75.9		76.3
Medium Trucks:		-	70.9		65.3		65.8		73.2		73.4
Heavy Trucks:	72.	9	71.5		59.9		64.2		72.3		72.4
Vehicle Noise:	78.	6	76.5		72.8		71.4		78.8		79.1
Centerline Distan	ce to Noise Co	ntour (in feet)								
					dBA		dBA	- 1	60 dBA		dBA
			Ldn:	-	27		04		1,516		267
		CI	VEL:	3	41	7	35		1,584	3,	412

	FHW	A-RD-77-108	HIGHW	AY N	OISE PI	REDICT	ION MC	DEL						
Scenario: OY Road Name: Euc Road Segment: s/o	clid Av.	•			Project Name: MCH Job Number: 10351									
SITE SPEC	IFIC IN	PUT DATA							L INPUTS	6				
Highway Data				S	Site Conditions (Hard = 10, Soft = 15)									
Average Daily Traffic	(Adt): 3	34,987 vehicle	es.					Autos:	15					
Peak Hour Percer	ntage:	10%			Medium Trucks (2 Axles): 15									
Peak Hour Vo	lume:	3,499 vehicles	3		He	avy Trud	cks (3+ .	4xles):	15					
Vehicle S	peed:	55 mph		v	ehicle	Miv								
Near/Far Lane Dist	tance:	154 feet		Ľ	VehicleType Day Evening Night									
Site Data					Autos: 66.3% 13.5% 20.3% 9									
Barrier He	o imba	0.0 feet			M	edium Ti	rucks:	77.0%		17.6%	4.70%			
Barrier Type (0-Wall, 1-E		0.0 1001			Heavy Trucks: 86.3% 1.5% 12.2% 1.9									
**	Centerline Dist. to Barrier: 84.0 feet				<u> </u>									
Centerline Dist. to Observer: 84.0 feet				٨	loise So	ource E			eet)					
	Barrier Distance to Observer: 84.0 feet					Auto		000						
Observer Height (Above		5.0 feet			Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0									
Pad Flev		0.0 feet			Heav	y Truck	s: 8.	004	Grade Adj	ustment	: 0.0			
Road Elev	ation:	0.0 feet		L	ane Eq	uivalen	t Distan	ce (in i	feet)					
Road G	Grade:	0.0%				Auto	s: 33.	941						
Left	View:	-90.0 degree	:S		Medium Trucks: 33.679									
Right	View:	90.0 degree	:S		Heav	y Truck	s: 33.	705						
FHWA Noise Model Cald	ulations													
	MEL	Traffic Flow	Dista		Finite		Fresi		Barrier Atte		m Atten			
10		2.43		2.42				-4.75 0.0		nn .	0.000			
Autos:	71.78													
Autos: Medium Trucks:	82.40	-10.55		2.47		-1.20		-4.88	0.0	00	0.000			
Autos: Medium Trucks: Heavy Trucks:	82.40 86.40	-10.55 -14.48		2.47 2.47						00	0.000			
Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise Leve	82.40 86.40 Is (witho	-10.55 -14.48 ut Topo and		2.47 2.47 attenu	uation)	-1.20 -1.20		-4.88	0.0	00	0.000			
Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise Leve VehicleType Leq P.	82.40 86.40 Is (witho	-10.55 -14.48 ut Topo and Leq Day	L	2.47 2.47	uation) ening	-1.20 -1.20	Night	-4.88 -5.21	0.0 0.0	00 00 Ci	0.000 0.000 NEL			
Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise Leve VehicleType Leq P	82.40 86.40 Is (without teak Hour 75.4	-10.55 -14.48 ut Topo and Leq Day	72.9	2.47 2.47 attenu	uation) ening 72.0	-1.20 -1.20	69.	-4.88 -5.21	0.0 0.0 Ldn 76.1	00 00 C	0.000 0.000 NEL 76.6			
Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise Leve VehicleType Leq P Autos: Medium Trucks:	82.40 86.40 Is (without 75.4	-10.55 -14.48 ut Topo and Leq Day	72.9 71.2	2.47 2.47 attenu	vation) ening 72.0 65.6	-1.20 -1.20	69.0	-4.88 -5.21	0.0 0.0 Ldn 76.1 73.4	00 00 C	0.000 0.000 NEL 76.6 73.6			
Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise Leve VehicleType Leq P	82.40 86.40 Is (without teak Hour 75.4	-10.55 -14.48 ut Topo and Leq Day	72.9	2.47 2.47 attenu	uation) ening 72.0	-1.20 -1.20	69.	-4.88 -5.21	0.0 0.0 Ldn 76.1	00 00 Ci	0.000 0.000 NEL 76.6 73.6			
Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise Leve VehicleType Leq P Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	82.40 86.40 Is (without 75.4 73.7 78.8	-10.55 -14.48 ut Topo and Leq Day 4	72.9 71.2 71.7	2.47 2.47 attenu	72.0 65.6 60.2	-1.20 -1.20	69.0 66.0 64.5	-4.88 -5.21	0.0 0.0 0.0 Ldn 76.1 73.4 72.6	00 00 Ci	0.000 0.000 NEL 76.6 73.6			
Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise Leve VehicleType Leq P Autos: Medium Trucks: Heavy Trucks:	82.40 86.40 Is (without 75.4 73.7 78.8	-10.55 -14.48 ut Topo and Leq Day 4	72.9 71.2 71.7	2.47 2.47 attenu	72.0 65.6 60.2 73.1	-1.20 -1.20 Leq	69.0 66.0 64.5	-4.88 -5.21	0.0 0.0 0.0 Ldn 76.1 73.4 72.6	00 00 Ci	0.000			
Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise Leve VehicleType Leq P Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	82.40 86.40 Is (without 75.4 73.7 78.8	-10.55 -14.48 ut Topo and Leq Day 1 2 3 ntour (in feet)	72.9 71.2 71.7	2.47 2.47 attenu .eq Ev	ration) ening 72.0 65.6 60.2 73.1	-1.20 -1.20 Leq	69.0 66.0 64.0 71.7	-4.88 -5.21	0.0 0.0 1.0 76.1 73.4 72.6 79.1	00 00 00 Ci	0.000 0.000 NEL 76.6 72.7 79.4			

	FHV	VA-RD-77-108	HIGI	1 YAWH	NOISE PR	REDICTIO	ON MC	DDEL			
Scenario: OY Road Name: Eu Road Segment: n/o	clid Av.	•				Project N Job Nui					
SITE SPEC	IFIC IN	IPUT DATA				NC	DISE	MODE	L INPUT	S	
Highway Data					Site Con	ditions (F	Hard =	= 10, So	ft = 15)		
Average Daily Traffic Peak Hour Perce Peak Hour Vo	ntage:	36,593 vehicle 10% 3,659 vehicle				dium Truc avy Truck		,	15 15 15		
Vehicle S	Speed:	55 mph		-	Vehicle I	Miv					
Near/Far Lane Dis	tance:	154 feet		-		icleType		Dav	Evening	Night	Daily
Site Data							ıtos:	66.3%	13.5%	20.3%	
Barrier H	loiaht:	0.0 feet			Me	edium Tru	cks:	77.0%	5.3%	17.6%	4.70%
Barrier Type (0-Wall, 1-L	Berm):	0.0			F	leavy Tru	cks:	86.3%	1.5%	12.2%	1.90%
Centerline Dist. to E		84.0 feet			Noise Sc	urce Ele	vatio	ns (in fe	et)		
Centerline Dist. to Obs		84.0 feet				Autos:	0	.000			
Barrier Distance to Obs		0.0 feet			Mediur	n Trucks:	2	.297			
Observer Height (Above Pad Flei	,	5.0 feet			Heav	y Trucks:	8	.004	Grade Ad	justmeni	: 0.0
Pad Elei Road Flei		0.0 feet		H	I ano Eas	uivalent L	Dietar	aco (in t	inat)		
Road Elei		0.0 feet 0.0%		H	Lane Ly	Autos:		.941	001)		
	View:	-90.0 degre	00		Mediur	n Trucks:		.679			
	View:	90.0 degre				y Trucks:		.705			
FHWA Noise Model Cald	culation	s									
VehicleType RE	MEL	Traffic Flow	Di	stance	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten
Autos:	71.78	2.63		2.4	2	-1.20		-4.75	0.0	000	0.00
Medium Trucks:	82.40	-10.35		2.4	7	-1.20		-4.88		000	0.00
Heavy Trucks:	86.40	-14.29		2.4	•	-1.20		-5.21	0.0	000	0.00
Unmitigated Noise Leve								1			
.,	eak Hou	- 1 - 7		Leq E	vening	Leq N		^	Ldn		NEL
Autos: Medium Trucks:	75 73		73.1 71.4		72.2 65.8		69. 66.	-	76.3 73.6		76. 73.
Heavy Trucks:	73		71.4		60.4		64.	-	73.0	-	73. 72.
Vehicle Noise:	79		77.0		73.3		71.		79.3	_	79.
Centerline Distance to N	Voise Cr	ontour (in feet	+)								
James Sidentification		(1111001	_	70	dBA	65 dl	BA	6	0 dBA	55	dBA
			Ldn:		50	755			1,627		504
		C	NEL:	30	66	789	9		1,699	3	,661

Thursday, May 02, 2019

	FHW	/A-RD-77-108	HIGH	NAY N	IOISE P	REDICTIO	ON MC	DEL			
Scenario: OY W Road Name: Euclid Road Segment: n/o Ki	Av.	,				Project I Job Nu					
SITE SPECIF	IC INI	PUT DATA				N	DISE	MODE	L INPUT	S	
Highway Data					Site Cor	ditions (Hard =	= 10, S	oft = 15)		
Average Daily Traffic (A Peak Hour Percenta Peak Hour Volur	ge:	34,574 vehicle 10% 3,457 vehicles				edium Truc eavy Truck		,	15		
Vehicle Spe		55 mph	•	L	770	avy muci	13 (3+	Axico).	. 10		
Near/Far Lane Distan		154 feet		-	Vehicle Veh	Mix icleType		Day	Evening	Night	Daily
Site Data						A	utos:	66.3%	13.5%	20.3%	93.40%
Barrier Heig	ıht:	0.0 feet			М	edium Tru	icks:	77.0%	5.3%	17.6%	4.70%
Barrier Type (0-Wall, 1-Ber		0.0			-	Heavy Tru	ıcks:	86.3%	1.5%	12.2%	1.90%
Centerline Dist. to Barr		84.0 feet			Voise S	ource Ele	vatio	ns (in f	eet)		
Centerline Dist. to Obsert		84.0 feet				Autos.	. 0	.000			
Barrier Distance to Observ	/er:	0.0 feet			Mediu	m Trucks.	. 2	.297			
Observer Height (Above Pa	,	5.0 feet			Heav	v Trucks	. 8	.004	Grade Ad	justmen	: 0.0
Pad Elevati		0.0 feet		L							
Road Elevati		0.0 feet		-	Lane Eq	uivalent			feet)		
Road Gra		0.0%				Autos.		.941			
Left Vi		-90.0 degree				m Trucks.		.679			
Right Vi	ew:	90.0 degree	es		Heav	y Trucks.	33	.705			
FHWA Noise Model Calcul	ations	;									
VehicleType REME	L	Traffic Flow	Dist	ance	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten
	1.78	2.38		2.4	-	-1.20		-4.75		000	0.000
	2.40	-10.60		2.4		-1.20		-4.88		000	0.000
,	6.40	-14.53		2.4		-1.20		-5.21	0.0	000	0.000
Unmitigated Noise Levels											
VehicleType Leq Pea				Leq E		Leg N	_		Ldn		NEL
Autos:	75.		72.8		71.9		68.		76.1		76.5
Medium Trucks:	73.		71.1		65.5		66.	-	73.4	•	73.6
Heavy Trucks:	73.		71.7		60.1		64.		72.5		72.6
Vehicle Noise:	78.	8	76.7		73.0		71.	6	79.1	1	79.3
Centerline Distance to Noi	se Co	ntour (in feet))	70 (/D.4	05	D4				-ID4
						65 d			60 dBA		dBA
			Ldn:	33		72			1,566		,374
	CNEL:				352 759 1,636 3,525					,525	

Thursday, May 02, 2019

	FHW	/A-RD-77-108	HIGHV	1 YAW	NOISE PE	REDICT	ION MO	DEL			
Road Nam	io: OY Without ne: Euclid Av. nt: n/o Bickmor	,					Name: I umber:				
SITE	SPECIFIC IN	PUT DATA				N	IOISE N	10DE	L INPUTS	,	
Highway Data					Site Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	22,353 vehicle	es				,	Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tri	ucks (2 A	xles):	15		
Peak H	lour Volume:	2,235 vehicle	s		He	avy Truc	cks (3+ A	xles):	15		
Ve	hicle Speed:	55 mph		-	Vehicle I	Miv					
Near/Far La	ne Distance:	154 feet		ŀ		cleType		Dav	Evening	Night	Daily
Site Data								66.3%		20.3%	,
Ra	rrier Height:	0.0 feet			Me	edium T	rucks:	77.0%	5.3%	17.6%	4.70%
Barrier Type (0-W		0.0			F	leavy Ti	rucks:	86.3%	1.5%	12.2%	1.90%
Centerline Di		84.0 feet		-	Noise So	roo F	lovotion	ı (in f	0.041		
Centerline Dist.	to Observer:	84.0 feet			Noise 30	Auto:		000	eet)		
Barrier Distance	to Observer:	0.0 feet			Modiu	n Truck		97			
Observer Height ((Above Pad):	5.0 feet				y Truck		004	Grade Adju	ietmant	. 0.0
Pa	ad Elevation:	0.0 feet			пеач	y ITUCK	s. o.t	JU4	Orade Haje	<i>isanon</i>	. 0.0
Roa	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Distand	e (in	feet)		
	Road Grade:	0.0%				Auto	s: 33.9	941			
	Left View:	-90.0 degree	es		Mediur	n Truck	s: 33.6	679			
	Right View:	90.0 degree	es		Heav	y Truck	s: 33.	705			
FHWA Noise Mod	el Calculations	;									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	el	Barrier Atte	n Bei	m Atten
Autos:	71.78	0.49		2.4	2	-1.20		-4.75	0.0	00	0.000
Medium Trucks:	82.40	-12.49		2.4	7	-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	86.40	-16.43		2.4	7	-1.20		-5.21	0.0	00	0.000
Unmitigated Noise	e Levels (witho	out Topo and	barrier	r atter	nuation)						
VehicleType	Leq Peak Hou			Leq E	vening	Leq	Night		Ldn	C	NEL
Autos:	73.		70.9		70.0		67.0		74.2		74.6
Medium Trucks:	71.	_	69.3		63.7		64.1		71.5		71.7
Heavy Trucks:	71.		69.8		58.2		62.6		70.7		70.7
Vehicle Noise:	76.		74.8		71.1		69.7		77.2		77.4
Centerline Distant	ce to Noise Co	ntour (in feet)								
			L		dBA		dBA	'	60 dBA		dBA
			Ldn:		52	-	44		1,171		523
		CI	VEL:	26	64	5	88		1,223	2,	635

	FHV	VA-RD-77-108	HIGHWA	Y NOISE P	REDICT	ION MO	DEL					
Road Nam	io: OY Without ne: Archibald A nt: s/o Limonite	v. ,				Name: lumber:						
SITE	SPECIFIC IN	PUT DATA			N	IOISE I	ИODE	L INPUT	S			
Highway Data				Site Conditions (Hard = 10, Soft = 15)								
Average Daily	Traffic (Adt):	27,324 vehicle	es	Autos: 15								
Peak Hour	Percentage:	10%				ucks (2 /						
Peak H	lour Volume:	2,732 vehicles	S	He	eavy Tru	cks (3+ /	Axles):	15				
Ve	hicle Speed:	45 mph		Vehicle Mix								
Near/Far La	ne Distance:	78 feet		VehicleType Day Evening Night								
Site Data				Autos: 66.3% 13.5% 20.3%						93.409		
Rai	rrier Height:	0.0 feet		М	edium T	rucks:	77.0%	5.3%	17.6%	4.709		
Barrier Type (0-W		0.0			Heavy T	rucks:	86.3%	1.5%	12.2%	1.909		
Centerline Dis		76.0 feet		Noise S	ouraa E	lovotion	o (in f	2041				
Centerline Dist.	to Observer:	76.0 feet		Noise 3	Auto		000	ei)				
Barrier Distance	to Observer:	0.0 feet		Modiu	Auto m Truck		000 297					
Observer Height ((Above Pad):	5.0 feet			m rruck vy Truck		297 004	Grade Ad	iuetmont	. 0.0		
Pa	ad Elevation:	0.0 feet		пеа	vy Truck	S. O.	004	Grade Au	usunen	. 0.0		
Roa	ad Elevation:	0.0 feet		Lane Eq	uivalen	t Distan	ce (in i	feet)				
,	Road Grade:	0.0%			Auto	s: 65.	422					
	Left View:	-90.0 degree	es	Mediu	m Truck	s: 65.	286					
	Diaht Vieus	90.0 degree	es	Hear	vy Truck	s: 65.	299					
	Right View:											
FHWA Noise Mode		s										
FHWA Noise Mode VehicleType		Traffic Flow	Distano		Road	Fresr		Barrier Att	en Ber	m Atten		
VehicleType Autos:	el Calculation		-	1.85	-1.20	Fresr	nel -4.73		en Ber			
VehicleType	el Calculation	Traffic Flow	-			Fresr		0.0		0.00		
VehicleType Autos:	REMEL 68.46	Traffic Flow 2.23	-	1.85	-1.20	Fresr	-4.73	0.0	000	0.00		
VehicleType Autos: Medium Trucks: Heavy Trucks:	68.46 79.45 84.25	7raffic Flow 2.23 -10.75 -14.68	-	1.85 1.84 1.84	-1.20 -1.20	Fresr	-4.73 -4.88	0.0	000	7m Atten 0.00 0.00 0.00		
VehicleType Autos: Medium Trucks: Heavy Trucks:	el Calculation: REMEL 68.46 79.45 84.25 e Levels (with	2.23 -10.75 -14.68 out Topo and Ir Leq Day	barrier at	1.85 1.84 1.84 (tenuation) q Evening	-1.20 -1.20 -1.20	Night	-4.73 -4.88 -5.25	0.0 0.0 0.0	000 000 000	0.00 0.00 0.00		
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos:	el Calculation: REMEL 68.46 79.45 84.25 e Levels (with	2.23 -10.75 -14.68 out Topo and or Leq Day	barrier at	1.85 1.84 1.84 ttenuation) q Evening 64.2	-1.20 -1.20 -1.20	Night 61.2	-4.73 -4.88 -5.25	0.0 0.0 0.0 <i>Ldn</i>	000 000 000 000	0.00 0.00 0.00 NEL 68.		
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos: Medium Trucks:	el Calculation REMEL 68.46 79.45 84.25 e Levels (with Leq Peak Hou- 67 65	2.23 -10.75 -14.68 out Topo and or Leq Day 6	barrier at Lee 65.1	1.85 1.84 1.84 (tenuation) q Evening 64.2 58.1	-1.20 -1.20 -1.20	Night 61.2 58.6	-4.73 -4.88 -5.25	0.0 0.0 0.0 Ldn 68.4 66.0	000 000 000 000	0.00 0.00 0.00 NEL 68. 66.		
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noiss VehicleType Autos: Medium Trucks: Heavy Trucks:	el Calculation. REMEL 68.46 79.45 84.25 e Levels (with Leq Peak Hou 67 65	2.23 -10.75 -14.68 out Topo and ir Leq Day 6 .7	barrier at Lee 65.1 63.7 65.1	1.85 1.84 1.84 (tenuation) q Evening 64.2 58.1 53.5	-1.20 -1.20 -1.20	Night 61.2 58.6 57.8	-4.73 -4.88 -5.25	0.0 0.0 0.0 <i>Ldn</i> 68.4 66.6	000 000 000 000	0.00 0.00 0.00 <i>NEL</i> 68. 66. 66.		
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	el Calculation. REMEL 68.46 79.45 84.25 e Levels (with Leq Peak Hou 67 65 66	7 Traffic Flow 2.23 -10.75 -14.68	barrier at Lee 65.1 63.7 65.1 69.4	1.85 1.84 1.84 (tenuation) q Evening 64.2 58.1	-1.20 -1.20 -1.20	Night 61.2 58.6	-4.73 -4.88 -5.25	0.0 0.0 0.0 Ldn 68.4 66.0	000 000 000 000	0.00 0.00 0.00 <i>NEL</i> 68. 66.		
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noiss VehicleType Autos: Medium Trucks: Heavy Trucks:	el Calculation. REMEL 68.46 79.45 84.25 e Levels (with Leq Peak Hou 67 65 66	7 Traffic Flow 2.23 -10.75 -14.68	barrier at Lee 65.1 63.7 65.1 69.4	1.85 1.84 1.84 (tenuation) q Evening 64.2 58.1 53.5	-1.20 -1.20 -1.20	Night 61.2 58.6 57.8	-4.73 -4.88 -5.25	0.0 0.0 0.0 <i>Ldn</i> 68.4 66.6	000 000 000 000 C.	0.00 0.00 0.00		
VehicleType Autos: Medium Trucks: Heavy Trucks: Unmitigated Noise VehicleType Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	el Calculation. REMEL 68.46 79.45 84.25 e Levels (with Leq Peak Hou 67 65 66	7 Traffic Flow 2.23 -10.75 -14.68 -14.68 -14.69 -14.69 -14.69 -14.69 -15.5 -15	barrier at Lee 65.1 63.7 65.1 69.4	1.85 1.84 1.84 1.84 <i>tenuation)</i> <i>q Evening</i> 64.2 58.1 53.5 65.4	-1.20 -1.20 -1.20 -1.20	Night 61.2 58.6 57.8 64.2	-4.73 -4.88 -5.25	0.0 0.0 0.0 <i>Ldn</i> 68.2 66.0 65.9	000 000 000 000 C.	0.00 0.00 0.00 NEL 68. 66. 66. 72.		

	FHV	VA-RD-77-108	HIGHWA	AY NC	ISE P	REDICT	ION M	ODEL			
Scenario: Road Name: Road Segment:		v.				Project Job N		MCH 10351			
	PECIFIC IN	PUT DATA							L INPUT	'S	
Highway Data				Si	te Con	ditions	(Hard	= 10, S	oft = 15)		
Average Daily Tr	,	29,340 vehicle	es					Autos:			
Peak Hour P		10%				dium Tr		,			
	ur Volume:	2,934 vehicle	S		He	avy Tru	cks (3+	Axles).	15		
	cle Speed:	55 mph		Ve	ehicle l	Иiх					
Near/Far Lane	Distance:	154 feet			Veh	icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	66.3%	13.5%	20.39	6 93.409
Barri	er Heiaht:	0.0 feet			Me	edium T	rucks:	77.0%	5.3%	17.69	6 4.709
Barrier Type (0-Wal	II, 1-Berm):	0.0			F	leavy T	rucks:	86.3%	1.5%	12.29	6 1.909
Centerline Dist.		84.0 feet		No	oise So	ource E	levatio	ns (in f	eet)		
Centerline Dist. to		84.0 feet				Auto	s: (0.000			
Barrier Distance to		0.0 feet			Mediui	m Truck	s: 2	2.297			
Observer Height (A	,	5.0 feet			Heav	y Truck	s: 8	3.004	Grade Ad	djustmer	nt: 0.0
	Elevation:	0.0 feet		-							
	Elevation:	0.0 feet		Lé	ne Eq	uivalen			teet)		
Ro	oad Grade:	0.0%				Auto		3.941			
	Left View:	-90.0 degree				m Truck		3.679			
F	Right View:	90.0 degree	es		Heav	y Truck	s: 3	3.705			
FHWA Noise Model											
VehicleType	REMEL	Traffic Flow	Distan		Finite	Road	Fre		Barrier At	_	erm Atten
Autos:	71.78	1.67		2.42		-1.20		-4.75		000	0.00
Medium Trucks:	82.40	-11.31		2.47		-1.20		-4.88		000	0.00
Heavy Trucks:	86.40	-15.25		2.47		-1.20		-5.21	0.	000	0.00
VehicleType L	Levels (with eq Peak Hou			eq Eve		Lon	Night	1	Ldn	Τ,	ONEL
Autos:	ey reak nou 74		72.1	ey Eve	71.2	Leq	rvigrit 68	2	75.		75.
Medium Trucks:	72		70.4		64.8		65		72.	•	72.
Heavy Trucks:	72		71.0		59.4		63		71.		71.
Vehicle Noise:	78		76.0		72.3		70		78.	-	78.
Centerline Distance	to Noise Co	ontour (in feet)								
		,		70 dE	BA .	65	dBA		60 dBA	5	5 dBA
			Ldn:	302		6	52		1,404	;	3,024

Thursday, May 02, 2019

FHW	/A-RD-77-108 HIGI	HWAY I	NOISE PE	REDICTIO	ом м	ODEL						
Scenario: OY Without Road Name: Archibald Av Road Segment: s/o Schleisn	v.			Project N Job Nu		: MCH : 10351						
SITE SPECIFIC IN	PUT DATA			NO	DISE	MODE	L INPUT	S				
Highway Data			Site Con	ditions (l	Hard	= 10, S	oft = 15)					
Average Daily Traffic (Adt):	24,024 vehicles		Autos: 15									
Peak Hour Percentage:	10%		Me	dium Truc	cks (2	Axles):	15					
Peak Hour Volume:	2,402 vehicles		He	avy Truck	(3+	- Axles):	15					
Vehicle Speed:	45 mph	-	Vehicle I									
Near/Far Lane Distance:	78 feet	ŀ		icleType		Dav	Evening	Night	Daily			
Site Data					ıtos:	66.3%	-	20.3%	93,40%			
Barrier Height:	0.0 feet		Me	edium Tru	icks:	77.0%	5.3%	17.6%	4.70%			
Barrier Type (0-Wall, 1-Berm):	0.0		F	leavy Tru	icks:	86.3%	1.5%	12.2%	1.90%			
Centerline Dist. to Barrier:	-	Noise Source Elevations (in feet)										
Centerline Dist. to Observer:						0.000	eet)					
Barrier Distance to Observer:	0.0 feet		Modium	Autos:		2.297						
Observer Height (Above Pad):	5.0 feet		Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0									
Pad Elevation:	0.0 feet		пеач	y Trucks.		5.004	Grade Au	justinent.	0.0			
Road Elevation:	0.0 feet		Lane Eq	uivalent l	Dista	nce (in	feet)					
Road Grade:	0.0%		Autos: 65.422									
Left View:	-90.0 degrees		Mediur	n Trucks:	6	5.286						
Right View:	90.0 degrees		Heav	y Trucks:	6	5.299						
FHWA Noise Model Calculations												
VehicleType REMEL		stance	Finite		Fre	snel	Barrier Att		m Atten			
Autos: 68.46	1.67	-1.8	-	-1.20		-4.73		000	0.000			
Medium Trucks: 79.45	-11.31	-1.8		-1.20		-4.88		000	0.000			
Heavy Trucks: 84.25	-15.24	-1.8		-1.20		-5.25	0.0	000	0.000			
Unmitigated Noise Levels (without				/ A	E-let		Ldn	-	VEL			
VehicleType Leq Peak Hour Autos: 67.		Leq E	vening 63.6	Leq N	iignt 60		Lan 67.8		VEL 68.2			
Medium Trucks: 65.			57.6		58		65.4		65.6			
Heavy Trucks: 66.			53.0		57		65.4		65.4			
Vehicle Noise: 70.			64.9		63		71.1		71.4			
Centerline Distance to Noise Co			01.0									
Jennerinne Distalle to Noise Co	intour (in reet)	70	dBA	65 d	BA		60 dBA	55	dBA			
			90 195 419 903									
	Ldn:	9	90	19	5		419	9	03			

	FH\	WA-RD-77-108	HIGH	WAY	NOISE P	REDICT	ION MC	DEL						
Road Nan	nio: OY Withou ne: Kimball Av. nt: w/o Mounta						t Name: lumber:							
SITE	SPECIFIC IN	IPUT DATA				ľ	NOISE	MODE	L INPUT	s				
Highway Data					Site Cor	nditions	(Hard =	= 10, S	oft = 15)					
Average Daily	Traffic (Adt):	21,661 vehicle	es					Autos:	15					
Peak Hour	Percentage:	10%			Me	edium Tr	ucks (2	Axles):	15					
Peak H	lour Volume:	2,166 vehicle	s		He	avy Tru	cks (3+	Axles):	15					
Ve	hicle Speed:	50 mph		ł	Vehicle Mix									
Near/Far La	ne Distance:	36 feet				icleType	2	Dav	Evening	Night	Daily			
Site Data					Autos: 66.3% 13.5% 20.3%									
	rrier Height:	0.0 feet			Autos: 66.3% 13.5% 20.3% 9 Medium Trucks: 77.0% 5.3% 17.6%									
Barrier Type (0-W		0.0 feet				Heavy T	rucks:	86.3%	1.5%	12.29	6 1.90%			
	ist. to Barrier:					·								
Centerline Dist.		44.0 feet			Noise S				eet)					
Barrier Distance		0.0 feet				Auto		.000						
Observer Height		5.0 feet				m Truck		.297						
	ad Elevation:	0.0 feet			Hear	vy Truck	s: 8	.004	Grade Ad	justmen	nt: 0.0			
	ad Flevation:	0.0 feet		İ	Lane Eq	uivalen	t Distar	ce (in	feet)					
	Road Grade:	0.0%		İ		Auto	s: 40	.460	-					
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 40	.241						
	Right View:	90.0 degre			Hear	vy Truck	s: 40	.262						
FHWA Noise Mod	el Calculation	s												
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fres	nel	Barrier Att	en Be	erm Atten			
Autos:	70.20	0.77		1.2	28	-1.20		-4.61	0.0	000	0.000			
Medium Trucks:	81.00	-12.22		1.3	31	-1.20		-4.87	0.0	000	0.000			
Heavy Trucks:	85.38	-16.15		1.3	31	-1.20		-5.50	0.0	000	0.000			
Unmitigated Nois	e Levels (with	out Topo and	barrie	er atte	nuation)									
VehicleType	Leq Peak Hou	ır Leq Day	′	Leq E	vening	Leq	Night		Ldn	(CNEL			
Autos:	71	.0	68.5		67.6		64.	6	71.8	3	72.2			
Medium Trucks:	68	.9	67.0		61.4		61.	8	69.2	2	69.4			
Heavy Trucks:	69	.3	67.9		56.3		60.	7	68.8	3	68.8			
Vehicle Noise:	74	.6	72.6		68.8		67.	4	74.9	9	75.2			
Centerline Distan	ce to Noise C	ontour (in feet)											
					70 dBA 65 dBA 60 dBA		-	5 dBA						
			Ldn:		93	_	:01		433		932			
	CNEL:				97 210 451 973									

	FHW	A-RD-77-108	HIGH	WAY N	OISE P	REDICT	ON MC	DDEL					
Road Nam	o: OY Without e: Kimball Av. nt: e/o Euclid A	,			Project Name: MCH Job Number: 10351								
SITE S	SPECIFIC IN	PUT DATA				N	OISE	MODE	L INPUT	S			
Highway Data				5	Site Conditions (Hard = 10, Soft = 15)								
Average Daily	Traffic (Adt):	20,429 vehicle	es					Autos:	15				
Peak Hour	Percentage:	10%			Medium Trucks (2 Axles): 15								
Peak H	our Volume:	2,043 vehicle	S		Heavy Trucks (3+ Axles): 15								
	hicle Speed:	50 mph		١	/ehicle	Mix							
Near/Far Lar	ne Distance:	51 feet		F	VehicleType Day Evening Night								
Site Data					Autos: 66.3% 13.5% 20.39						93.40%		
Rar	rier Heiaht:	0.0 feet			Medium Trucks: 77.0% 5.3% 17.6%								
Barrier Type (0-W		0.0			Medium Trucks: 77.0% 5.3% 17.6% 4.7 Heavy Trucks: 86.3% 1.5% 12.2% 1.5								
Centerline Dist. to Barrier: 49.0 feet					Jaisa S	ource El	ovation	ne (in f	not)				
Centerline Dist. to Observer: 49.0 feet					10/36 3	Auto:		.000	et)				
Barrier Distance	to Observer:	0.0 feet			Medium Trucks: 2,297								
Observer Height (A	Above Pad):	5.0 feet				vy Trucks		.004	Grade Ad	iuetmant	. 0.0		
Pa	ad Elevation:	0.0 feet			Heat	ry Trucks	s. 0.	.004	Orade Adj	usunone	0.0		
Roa	ad Elevation:	0.0 feet		L	.ane Eq	uivalent	Distan	ice (in i	feet)				
F	Road Grade:	0.0%			Autos: 42.140								
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 41	.929					
	Right View:	90.0 degree	es		Heav	y Trucks	s: 41	.950					
FHWA Noise Mode	el Calculations												
VehicleType	REMEL	Traffic Flow	Dist	ance						m Atten			
Autos:	70.20	0.51		1.01		-1.20		-4.64	0.0		0.00		
Medium Trucks:	81.00	-12.47		1.04		-1.20		-4.87	0.0		0.00		
Heavy Trucks:	85.38	-16.41		1.04	ļ.	-1.20		-5.44	0.0	100	0.00		
Unmitigated Noise										1			
,,, .	Leq Peak Hour	., .,		Leq Ev		Leq	Night		Ldn		NEL		
Autos:	70.	-	67.9		67.1		64.		71.2	-	71.		
Medium Trucks:	68.		66.4		60.8		61.	-	68.7		68.		
Heavy Trucks: Vehicle Noise:	68.		67.4 72.1		55.8 68.2		60. 66.	•	68.2 74.4		68. 74.		
Centerline Distance								-					
Contenine Distant	10 /10/36 00	nour (III leet		70 d	IBA	65	dBA	6	i0 dBA	55	dBA		
			Ldn:	96	3	20	06	•	445	9	58		
CNFI:				100 215 464 1,000									

				NOIDE I I	(201011	011 1110				
	OY Without		Project Name: MCH Job Number: 10351							
Road Name:					Job N	umber:	10351			
Road Segment:	w/o Euclid A	W.								
	PECIFIC IN	PUT DATA						L INPUT	s	
Highway Data				Site Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily Tr	raffic (Adt):	24,434 vehicles					Autos:	15		
Peak Hour Pe	ercentage:	10%			dium Tru					
Peak Hou	ur Volume:	2,443 vehicles		He	avy Truc	ks (3+ A	(xles	15		
Vehi	cle Speed:	50 mph		Vehicle I	Wix					
Near/Far Lane	Distance:	36 feet		_	icleType		Day	Evening	Night	Daily
Site Data					- /	lutos:	66.3%	13.5%	20.3%	93.40%
Rarri	er Heiaht:	0.0 feet		Me	edium Tr	ucks:	77.0%	5.3%	17.6%	4.70%
Barrier Type (0-Wal		0.0		F	leavy Tr	ucks:	86.3%	1.5%	12.2%	1.90%
Centerline Dist.		44.0 feet		Noise So	roo El	ovetion	o (in f	0.04)		
Centerline Dist. to	Observer:	44.0 feet		Noise 30	Autos		000	eei)		
Barrier Distance to	Observer:	0.0 feet		Modius	m Trucks		297			
Observer Height (Al	bove Pad):	5.0 feet			y Trucks		004	Grade Ad	iustment	. 0 0
Pad	Elevation:	0.0 feet		1 Icav	y IIucka	5. 0.1	JU4	Orado riaj	dournorn	0.0
Road	Elevation:	0.0 feet		Lane Eq	uivalent	Distan	ce (in	feet)		
Ro	oad Grade:	0.0%			Autos	3: 40.	460			
	Left View:	-90.0 degrees		Mediui	m Trucks	3: 40.	241			
F	Right View:	90.0 degrees		Heav	y Trucks	3: 40.	262			
FHWA Noise Model	Calculations	i		1						
VehicleType	REMEL	Traffic Flow	Distance	_		Fresr		Barrier Att	_	m Atten
Autos:	70.20	1.29		28	-1.20		-4.61		000	0.000
Medium Trucks:	81.00	-11.69		31	-1.20		-4.87		000	0.000
Heavy Trucks:	85.38	-15.63	1.	31	-1.20		-5.50	0.0	000	0.000
Unmitigated Noise I	•		arrier atte	enuation)						
	eq Peak Hou			Evening	Leq	Night		Ldn		NEL
Autos:	71.		9.0	68.1		65.1		72.3		72.7
Medium Trucks:	69.		7.5	61.9		62.3		69.7		69.9
Heavy Trucks:	69.		3.4	56.8		61.2		69.3		69.3
Vehicle Noise:	75.		3.1	69.3		68.0)	75.4	1	75.7
Centerline Distance	to Noise Co	ntour (in feet)								
) dBA		dBA		60 dBA		dBA
				101	21			469	,	010
		CNE	EL:	105	22	27		489	1,	054

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Thursday, May 02, 2019

FHWA-RD-77-108 HIGH	NAY NOISE PREDICTION MODEL			
Scenario: OY Without Project Road Name: Kimball Av. Road Segment: w/o Rincon Meadows Av.	Project Name: MCH Job Number: 10351			
SITE SPECIFIC INPUT DATA	NOISE MODEL INPUTS			
Highway Data	Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 21,291 vehicles	Autos: 15			
Peak Hour Percentage: 10%	Medium Trucks (2 Axles): 15			
Peak Hour Volume: 2,129 vehicles	Heavy Trucks (3+ Axles): 15			
Vehicle Speed: 50 mph	Vehicle Mix			
Near/Far Lane Distance: 51 feet	VehicleType Day Evening Night Dail			
Site Data	Autos: 66.3% 13.5% 20.3% 93.40			
Barrier Height: 0.0 feet	Medium Trucks: 77.0% 5.3% 17.6% 4.70			
Barrier Type (0-Wall, 1-Berm): 0.0	Heavy Trucks: 86.3% 1.5% 12.2% 1.90			
Centerline Dist. to Barrier: 49.0 feet	Noise Source Elevations (in feet)			
Centerline Dist. to Observer: 49.0 feet	Autos: 0.000			
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	,			
Road Elevation: 0.0 feet	Lane Equivalent Distance (in feet)			
Road Grade: 0.0%	Autos: 42.140			
Left View: -90.0 degrees	Medium Trucks: 41.929			
Right View: 90.0 degrees	Heavy Trucks: 41.950			
FHWA Noise Model Calculations				
	ance Finite Road Fresnel Barrier Atten Berm Atte			
Autos: 70.20 0.69 Medium Trucks: 81.00 -12.29	1.01 -1.20 -4.64 0.000 0.0 1.04 -1.20 -4.87 0.000 0.0			
Heavy Trucks: 81.00 -12.29 Heavy Trucks: 85.38 -16.23	1.04 -1.20 -4.87 0.000 0.0 1.04 -1.20 -5.44 0.000 0.0			
Unmitigated Noise Levels (without Topo and barri VehicleType Leq Peak Hour Leq Day	rattenuation) Leg Evening Leg Night Ldn CNEL			
Autos: 70.7 68.1	67.2 64.2 71.4 7			
Medium Trucks: 68.6 66.6	61.0 61.5 68.9 6			
Heavy Trucks: 69.0 67.6	56.0 60.3 68.4 6			
Vehicle Noise: 74.3 72.3	68.4 67.1 74.5 7			
Centerline Distance to Noise Contour (in feet)				
	70 dBA 65 dBA 60 dBA 55 dBA			
Ldn:	99 212 457 985			
CNFI:	103 221 477 1,028			

	FHW	A-RD-77-108	HIGH	1 YAW	NOISE PE	REDICT	ION MO	DEL			
Road Nam	io: OY Without ne: Kimball Av. nt: e/o Rincon I	,					Name: umber:				
	SPECIFIC IN	PUT DATA							L INPUTS	;	
Highway Data					Site Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	20,432 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2 A	(xles	15		
Peak F	lour Volume:	2,043 vehicle	S		He	avy Tru	cks (3+ A	(xles	15		
Ve	hicle Speed:	50 mph		F	Vehicle I	Mix					
Near/Far La	ne Distance:	51 feet		F		cleType		Dav	Evening	Night	Daily
Site Data							Autos:	66.3%	13.5%	20.3%	93.40%
Ra	rrier Height:	0.0 feet			Me	edium T	rucks:	77.0%	5.3%	17.6%	4.70%
Barrier Type (0-W		0.0			F	leavy T	rucks:	86.3%	1.5%	12.2%	1.90%
Centerline Di		49.0 feet			Noise So	uraa E	lovetion	o (in f	0.041		
Centerline Dist.	to Observer:	49.0 feet		F	Noise 30	Auto		000	eet)		
Barrier Distance	to Observer:	0.0 feet			Modiu	Auto n Truck		297			
Observer Height	(Above Pad):	5.0 feet				y Truck		004	Grade Adju	ietmani	- 00
P	ad Elevation:	0.0 feet		L	пеач	y Truck	S. O.I	JU4	Orade Haje	230110116	- 0.0
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 42.	140			
	Left View:	-90.0 degree	es		Mediui	n Truck	s: 41.	929			
	Right View:	90.0 degree	es		Heav	y Truck	s: 41.	950			
FHWA Noise Mod	el Calculations	i									
VehicleType	REMEL	Traffic Flow	Dist	tance	Finite	Road	Fresn	el	Barrier Atte	n Bei	rm Atten
Autos:	70.20	0.51		1.0	11	-1.20		-4.64	0.0	00	0.000
Medium Trucks:	81.00	-12.47		1.0	14	-1.20		-4.87	0.0	00	0.000
Heavy Trucks:	85.38	-16.40		1.0	14	-1.20		-5.44	0.0	00	0.000
Unmitigated Nois	e Levels (witho	ut Topo and	barrie	r atter	nuation)						
VehicleType	Leq Peak Hour			Leq E	vening	Leq	Night		Ldn	С	NEL
Autos:	70.		67.9		67.1		64.1		71.2		71.7
Medium Trucks:	68.		66.4		60.8		61.3		68.7		68.9
Heavy Trucks:	68.		67.4		55.8		60.1		68.2		68.3
Vehicle Noise:	74.	•	72.1		68.2		66.9	1	74.4		74.6
Centerline Distan	ce to Noise Co	ntour (in feet)								
			L		dBA		dBA	(60 dBA		dBA
			Ldn:	-	96	_	06		445		958
		CI	VEL:	1	00	2	15		464	1,	,000

	WA-RD-77-108	HIGH	HWAY N	NOISE P	REDICT	ION MO	DEL						
Scenario: OY Withou Road Name: Kimball Av Road Segment: e/o Main S	<i>'</i> .				.,	Name: lumber:							
SITE SPECIFIC II	NPUT DATA				ı	IOISE N	/IODE	L INPUTS	5				
Highway Data				Site Cor	ditions	(Hard =	10, Sc	oft = 15)					
Average Daily Traffic (Adt):	17,491 vehicl	es					Autos:	15					
Peak Hour Percentage:	10%			Me	dium Tr	ucks (2 A	Axles):	15					
Peak Hour Volume:	1,749 vehicle	s		He	avy Tru	cks (3+ A	(xles	15					
Vehicle Speed:	50 mph		-	Vehicle									
Near/Far Lane Distance:	51 feet				icleType		Dav	Evening	Night	Daily			
Site Data				VC//			66.3%		20.3%				
				M	edium T		77.0%		17.6%	4.70%			
Barrier Height:	0.0 feet				Heavy T		86.3%		12.2%	1.90%			
Barrier Type (0-Wall, 1-Berm):	0.0 49.0 feet				icavy i	ruons.	00.070	1.070	12.270	1.50 /			
Centerline Dist. to Barrier:		Noise S	ource E	levation	s (in fe	eet)							
	Centerline Dist. to Observer: 49.0 feet						Autos: 0.000						
Barrier Distance to Observer:	0.0 feet 5.0 feet			Medium Trucks: 2.297									
Observer Height (Above Pad): Pad Elevation:	0.0 feet			Heavy Trucks: 8.004 Grade Adjustment: 0.0									
Road Flevation:	0.0 feet			Lane Equivalent Distance (in feet)									
Road Elevation. Road Grade:	0.0%		F.	Autos: 42.140									
I eft View:	-90.0 degre	00		Medium Trucks: 41.929									
Right View:	90.0 degre												
					Heavy Trucks: 41.950								
				1 = 2				B : 4"		***			
VehicleType REMEL					Road	Fresn		Barrier Atte		m Atten			
VehicleType REMEL Autos: 70.20			1.0	1	-1.20		-4.64	0.0	00	0.000			
VehicleType REMEL Autos: 70.20 Medium Trucks: 81.00) -0.16) -13.15		1.0	1	-1.20 -1.20		-4.64 -4.87	0.0	00	0.000			
VehicleType REMEL Autos: 70.20 Medium Trucks: 81.00 Heavy Trucks: 85.38	-0.16 -13.15 3 -17.08		1.0 1.0 1.0	1 4 4	-1.20		-4.64	0.0	00	0.000 0.000 0.000			
VehicleType REMEL Autos: 70.20 Medium Trucks: 81.00 Heavy Trucks: 85.38 Unmitigated Noise Levels (with	-0.16 -13.15 -17.08	barri	1.0 1.0 1.0	1 4 4 nuation)	-1.20 -1.20 -1.20		-4.64 -4.87	0.0 0.0 0.0	00 00 00	0.000 0.000 0.000			
VehicleType REMEL Autos: 70.2C Medium Trucks: 81.0C Heavy Trucks: 85.38 Unmitigated Noise Levels (with VehicleType Leq Peak Ho	-0.16 -13.15 -17.08 hout Topo and	barri	1.0 1.0 1.0	1 4 4 nuation)	-1.20 -1.20 -1.20	Night	-4.64 -4.87 -5.44	0.0 0.0 0.0	00 00 00 CI	0.000 0.000 0.000			
VehicleType REMEL Autos: 70.2C Medium Trucks: 81.0C Heavy Trucks: 85.38 Unmitigated Noise Levels (with VehicleType Leq Peak Ho Autos: 66	-0.16 -13.15 -17.08 -17.08 -17.08 -17.08 -17.08 -17.08 -17.08 -17.08 -17.08 -17.08	barri y 67.3	1.0 1.0 1.0	1 4 4 nuation) ivening 66.4	-1.20 -1.20 -1.20	Night 63.4	-4.64 -4.87 -5.44	0.0 0.0 0.0 Ldn	00 00 00 00	0.000 0.000 0.000 VEL 71.0			
VehicleType REMEL Autos: 70.2C Medium Trucks: 81.0C Heavy Trucks: 85.38 Unmitigated Noise Levels (with VehicleType Leq Peak Ho Autos: Medium Trucks: 66	-0.16) -13.15 3 -17.08 hout Topo and ur Leq Day 9.9 7.7	67.3	1.0 1.0 1.0	1 4 4 4 nuation) vening 66.4 60.2	-1.20 -1.20 -1.20	Night 63.4	-4.64 -4.87 -5.44	0.0 0.0 0.0 Ldn 70.6 68.0	00 00 00 C/	0.000 0.000 0.000 VEL 71.0 68.2			
VehicleType REMEL Autos: 70.20 Medium Trucks: 81.00 Heavy Trucks: 85.38 Unmitigated Noise Levels (with VehicleType Leq Peak Ho Autos: 66 Medium Trucks: 66 Heavy Trucks: 66	-0.16) -13.15 3 -17.08 hout Topo and ur Leq Day 9.9 7.7	barri y 67.3	1.0 1.0 1.0	1 4 4 nuation) ivening 66.4	-1.20 -1.20 -1.20	Night 63.4	-4.64 -4.87 -5.44	0.0 0.0 0.0 Ldn	00 00 00 CI	0.000 0.000 0.000 VEL 71.0 68.2 67.6			
VehicleType REMEL Autos: 70.20 Medium Trucks: 81.00 Heavy Trucks: 85.38 Unmitigated Noise Levels (with VehicleType Leq Peak Ho Autos: 66 Medium Trucks: 66 Heavy Trucks: 66	0 -0.16 0 -13.15 3 -17.08 hout Topo and our Leq Day 9.9 7.7 8.1	67.3 65.8 66.7	1.0 1.0 1.0	1 4 4 4 nuation) vening 66.4 60.2 55.1	-1.20 -1.20 -1.20	Night 63.4 60.6 59.5	-4.64 -4.87 -5.44	0.0 0.0 0.0 Ldn 70.6 68.0 67.6	00 00 00 CI	0.000 0.000 0.000 VEL 71.0 68.2 67.6			
VehicleType REMEL Autos: 70.20 Medium Trucks: 81.00 Heavy Trucks: 85.38 Unmitigated Noise Levels (with VehicleType Leq Peak Ho Autos: 66 Medium Trucks: 66 Heavy Trucks: 66 Vehicle Noise: 75	0 -0.16 0 -13.15 3 -17.08 hout Topo and our Leq Day 9.9 7.7 8.1	67.3 65.8 66.7	1.0 1.0 1.0 1.0 Eer atten Leq E	1 4 4 4 nuation) vening 66.4 60.2 55.1	-1.20 -1.20 -1.20	Night 63.4 60.6 59.5	-4.64 -4.87 -5.44	0.0 0.0 0.0 Ldn 70.6 68.0 67.6	00 00 00 00	0.000 0.000 0.000			
VehicleType REMEL Autos: 70.20 Medium Trucks: 81.00 Heavy Trucks: 85.38 Unmitigated Noise Levels (with VehicleType Leq Peak Ho Autos: 66 Medium Trucks: 66 Heavy Trucks: 66 Vehicle Noise: 75	0 -0.16 0 -13.15 3 -17.08 hout Topo and our Leq Day 9.9 7.7 8.1	67.3 65.8 66.7	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	1 4 4 4 nuation) vening 66.4 60.2 55.1 67.6	-1.20 -1.20 -1.20 Leq	Night 63.4 60.6 59.5 66.2	-4.64 -4.87 -5.44	0.0 0.0 0.0 <i>Ldn</i> 70.6 68.0 67.6 73.7	00 00 00 C/	0.000 0.000 0.000 VEL 71.0 68.2 67.6			

	FHV	VA-RD-77-108	HIGHWA	Y N	OISE PR	EDICTI	ON MOD	EL			
	Scenario: OY Without Project Road Name: Kimball Av. Road Seament: e/o Mill Creek Av.						Name: N				
						Job N	umber: 1	0351			
Road Segme	nt: e/o Mill Cre	ek Av.									
	SPECIFIC IN	PUT DATA							L INPUTS	5	
Highway Data				S	Site Cond	litions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	18,591 vehicle	es				A	utos:	15		
Peak Hour	Percentage:	10%			Med	ium Tru	ıcks (2 A	xles):	15		
Peak H	lour Volume:	1,859 vehicles	S		Hea	vy Truc	cks (3+ A	xles):	15		
Ve	hicle Speed:	50 mph		ν	/ehicle M	lix					
Near/Far La	ne Distance:	51 feet		Ė		leType	- 1	Day	Evening	Night	Daily
Site Data						- /	Autos: 6	66.3%	13.5%	20.3%	93.40%
Bai	rrier Height:	0.0 feet			Med	dium Tr	rucks: 7	77.0%	5.3%	17.6%	4.70%
Barrier Type (0-W		0.0			He	eavy Tr	rucks: 8	36.3%	1.5%	12.2%	1.90%
Centerline Dis		49.0 feet		-	loise Sou	waa El	lovetione	/in f	0.041		
Centerline Dist.	to Observer:	49.0 feet			voise sui	Autos		•	cei)		
Barrier Distance	to Observer:	0.0 feet			Medium						
Observer Height ((Above Pad):	5.0 feet				Trucks			Grade Adj	ustmeni	: 00
Pa	ad Elevation:	0.0 feet		L							. 0.0
Roa	ad Elevation:	0.0 feet		L	.ane Equ	ivalent			feet)		
	Road Grade:	0.0%				Autos					
	Left View:	-90.0 degree			Medium						
	Right View:	90.0 degree	es		Heavy	Trucks	s: 41.9	50			
FHWA Noise Mode	el Calculation	S									
VehicleType	REMEL	Traffic Flow	Distan	ce	Finite F	Road	Fresne	el	Barrier Atte	en Be	rm Atten
Autos:	70.20	0.10		1.01		-1.20	-	4.64	0.0	00	0.000
Medium Trucks:	81.00	-12.88		1.04		-1.20	-	4.87	0.0	00	0.000
Heavy Trucks:	85.38	-16.81		1.04		-1.20	-	5.44	0.0	00	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier a	ttenı	uation)						
VehicleType	Leq Peak Hou			q Ev	ening	Leq	Night		Ldn		NEL
Autos:	70		67.5		66.6		63.6		70.8		71.3
Medium Trucks:	68		66.0		60.4		60.9		68.3		68.5
Heavy Trucks:	68		67.0		55.4		59.7		67.8		67.9
Vehicle Noise:	73	.7	71.7		67.8		66.5		74.0		74.2
Centerline Distant	ce to Noise Co	ontour (in feet)								

Thursday, May 02, 2019

	FH\	VA-RD-77-108 H	HIGHWAY	NOISE P	REDICTI	OM MO	DEL			
	o: OY Withou e: Kimball Av. ht: e/o Flight A	,			Project i Job Nu	Vame: I				
SITE S	SPECIFIC IN	IPUT DATA			N	OISE N	/IODE	L INPUT	S	
Highway Data				Site Cor	nditions (Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	14,790 vehicles	3			,	Autos:	15		
Peak Hour	Percentage:	10%		Me	dium Tru	cks (2 A	(xles	15		
Peak H	our Volume:	1,479 vehicles		He	avy Truc	ks (3+ A	(xles	15		
Vel	nicle Speed:	50 mph		Vehicle						
Near/Far Lar	ne Distance:	51 feet			icleType		Dav	Evening	Night	Daily
Site Data				V C//			66.3%		20.3%	
	ula u Halada	0.0.64		м	edium Tn		77.0%		17.6%	4.70%
Barrier Type (0-W	rier Height:	0.0 feet 0.0			Heavy Tri		86.3%		12.2%	1.90%
Centerline Dis	. ,	49.0 feet								
Centerline Dist.		49.0 feet		Noise S	ource Ele			eet)		
Barrier Distance		0.0 feet			Autos		000			
Observer Height (Medium Trucks: 2.297							
	d Flevation:	5.0 feet 0.0 feet		Heav	∕y Trucks	: 8.0	004	Grade Ad	iustment	0.0
	d Elevation:	0.0 feet		Lane Eq	uivalent	Distan	ce (in	feet)		
	Road Grade:	0.0%			Autos					
,	Left View:	-90.0 degrees		Mediu	m Trucks					
	Right View:	90.0 degrees			y Trucks					
FHWA Noise Mode	l Calculation	s								
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresn	el	Barrier Att	en Ber	m Atten
Autos:	70.20	-0.89	1.	01	-1.20		-4.64	0.0	000	0.000
Medium Trucks:	81.00	-13.87	1.	04	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	85.38	-17.81	1.	04	-1.20		-5.44	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and b	arrier atte	nuation)						
VehicleType	Leq Peak Hou	ır Leq Day	Leq	Evening	Leq N	light		Ldn	C	VEL
Autos:	69	.1 6	6.5	65.7		62.7		69.8	3	70.3
Medium Trucks:	67	.0 6	5.0	59.4		59.9	1	67.3	3	67.5
Heavy Trucks:	67	.4 6	6.0	54.4		58.7		66.8	3	66.9
Vehicle Noise:	72	.7 7	0.7	66.8		65.5	,	73.0)	73.2
Centerline Distanc	e to Noise Co	ontour (in feet)								
		-) dBA	65 c		(60 dBA		dBA
			Cirr.			73				
	Ldn: CNEL:					81 174 374 806				06

	FHW	/A-RD-77-108	HIGHW	VAY N	IOISE PE	REDICT	юм мо	DEL			
Road Nan	rio: OY Without ne: Limonite Av nt: w/o Archiba	Project .				Project	Name: lumber:	МСН			
SITE	SPECIFIC IN	PUT DATA				N	IOISE N	ИODE	L INPUTS	5	
Highway Data					Site Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	1 vehicle	es					Autos.	15		
Peak Hour	Percentage:	10%			Me	dium Tri	ucks (2 /	Axles).	: 15		
Peak F	lour Volume:	0 vehicles	S		He	avy Truc	cks (3+ A	Axles).	: 15		
Ve	hicle Speed:	50 mph			Vehicle I	Aire					
Near/Far La	ne Distance:	78 feet		H		nix cleType		Day	Evening	Night	Dailv
Site Data					VCIII			66.39		20.3%	
	rrier Height:	0.0 feet			Me	dium T		77.0%		17.6%	
Barrier Type (0-W		0.0			F	leavy Ti	rucks:	86.39	6 1.5%	12.2%	1.90%
Centerline Di		76.0 feet		L							
	Centerline Dist. to Observer: 76.0 feet						levation		eet)		
	Barrier Distance to Observer: 0.0 feet					Auto		000			
Observer Height	(Ahove Pad):	5.0 feet				n Truck		297			
	ad Elevation:	0.0 feet			Heav	y Truck	s: 8.	004	Grade Adj	ustmen	t: 0.0
	ad Flevation:	0.0 feet		1	Lane Equ	ıivalen	t Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 65.	422			
	Left View:	-90.0 degree	es		Mediur	n Truck	s: 65.	286			
	Right View:	90.0 degree			Heav	y Truck	s: 65.	299			
FHWA Noise Mod	el Calculations	3									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresr	nel	Barrier Atte	en Be	rm Atten
Autos:	70.20	-42.59		-1.8	5	-1.20		-4.73	0.0	00	0.000
Medium Trucks:	81.00	-55.57		-1.8	4	-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	85.38	-59.51		-1.8	4	-1.20		-5.25	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	atten	uation)						
VehicleType	Leq Peak Hou	r Leq Day	L	Leq E	vening	Leq	Night		Ldn	С	NEL
Autos:	24.	6	22.0		21.1		18.1	l	25.3		25.7
Medium Trucks:	22.	4	20.5		14.9		15.3	3	22.7		22.9
Heavy Trucks:			21.4		9.8		14.1	l	22.2	!	22.3
Vehicle Noise:	28.	1	26.1		22.3		20.9	9	28.4		28.7
Centerline Distan	ce to Noise Co	ntour (in feet)								
	7				70 dBA 65 dBA 60 dBA		55	dBA			
			Ldn:	0 0 1				1			
	CNEL:				0 0 1				1		

	FHW	A-RD-77-108	HIGHWAY	NOISE PI	REDICTION	ON MODEL			
Road Nam	io: OY Without ne: Pine Av. nt: w/o El Prado	•				Vame: MCH Imber: 1035			
SITE	SPECIFIC INF	PUT DATA			N	DISE MOD	EL INPUT	s	
Highway Data				Site Con	ditions (Hard = 10, 3	Soft = 15)		
Peak H	Percentage: lour Volume:	27 vehicle 10% 3 vehicles				Auto: cks (2 Axles ks (3+ Axles): 15		
	hicle Speed:	45 mph		Vehicle	Mix				
Near/Far La	ne Distance:	76 feet		Veh	icleType	Day	Evening	Night	Daily
Site Data					A	utos: 66.3	% 13.5%	20.3%	93.40%
Barrier Type (0-W	rrier Height: /all, 1-Berm):	0.0 feet 0.0			edium Tru Heavy Tru	icks: 77.0 icks: 86.3	,	17.6% 12.2%	
Centerline Dis	st. to Barrier:	60.0 feet		Noice S	ourco Ele	vations (in	foot)		
Centerline Dist.	to Observer:	60.0 feet		110/30 00	Autos		1001)		
Barrier Distance	to Observer:	0.0 feet		Mediu	m Trucks				
Observer Height (Above Pad):	5.0 feet			v Trucks		Grade Ad	liustment	. 0.0
Pa	ad Elevation:	0.0 feet			,			juourioria	. 0.0
Roa	ad Elevation:	0.0 feet		Lane Eq	uivalent	Distance (ii	ı feet)		
	Road Grade:	0.0%			Autos				
	Left View:	-90.0 degree	S	Mediu	m Trucks	46.511			
	Right View:	90.0 degree	S	Heav	y Trucks.	46.530			
FHWA Noise Mode				1					
VehicleType		Traffic Flow	Distance		Road	Fresnel	Barrier Att		m Atten
Autos:	68.46	-27.82	-	.34	-1.20	-4.69		000	0.000
Medium Trucks:	79.45	-40.80	-	.37	-1.20	-4.88		000	0.000
Heavy Trucks:	84.25	-44.74		.37	-1.20	-5.34	1 0.0	000	0.000
Unmitigated Noise									
VehicleType	Leq Peak Hour			Evening	Leq N	•	Ldn		NEL
Autos:	39.8		37.2	36.3		33.3	40.	-	40.9
Medium Trucks:	37.8		35.9	30.3		30.7	38.		38.3
Heavy Trucks:	38.7		37.2	25.7		30.0	38.		38.2
Vehicle Noise:	43.6	3 4	11.6	37.6		36.4	43.	В	44.1
Centerline Distant	ce to Noise Co	ntour (in feet)							

	FHWA	A-RD-77-108 H	HIGHWAY	NOISE P	REDICTIO	ON MODEL			
Road Nan	io: OY Without F ne: Limonite Av. nt: e/o Archibald	,				lame: MCH mber: 1035	İ		
	SPECIFIC INP	UT DATA				DISE MODI		S	
Highway Data				Site Con	ditions (Hard = 10, S	oft = 15)		
Average Daily	Traffic (Adt): 2:	2,105 vehicles	3			Autos	: 15		
Peak Hour	Percentage:	10%		Me	dium Truc	cks (2 Axles)	: 15		
Peak F	lour Volume: 2	,211 vehicles		He	avy Truck	s (3+ Axles)	: 15		
Ve	hicle Speed:	50 mph		Vehicle I	Mix				
Near/Far La	ne Distance:	78 feet			icleType	Day	Evening	Night	Daily
Site Data					A	itos: 66.39	6 13.5%	20.3%	93.40%
Ra	rrier Height:	0.0 feet		Me	edium Tru	icks: 77.09	6 5.3%	17.6%	4.70%
Barrier Type (0-W		0.0		F	Heavy Tru	icks: 86.39	6 1.5%	12.2%	1.90%
Centerline Di	st. to Barrier:	76.0 feet		Noise St	urce Fle	vations (in	foot)		
Centerline Dist.	to Observer:	76.0 feet		140/36 30	Autos:	-	eei)		
Barrier Distance	to Observer:	0.0 feet		Modiu	n Trucks:				
Observer Height	(Above Pad):	5.0 feet			v Trucks:		Grade Ad	iustment	. 0.0
P	ad Elevation:	0.0 feet			-			dournorn.	0.0
Ro	ad Elevation:	0.0 feet		Lane Eq	uivalent l	Distance (in	feet)		
	Road Grade:	0.0%			Autos:	65.422			
	Left View:	-90.0 degrees	3	Mediui	m Trucks:	65.286			
	Right View:	90.0 degrees	3	Heav	y Trucks:	65.299			
FHWA Noise Mod	el Calculations								
VehicleType	REMEL 1	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Att	en Ber	m Atten
Autos:	70.20	0.85	-1.8	35	-1.20	-4.73	0.0	000	0.000
Medium Trucks:	81.00	-12.13	-1.8	34	-1.20	-4.88	0.0	000	0.000
Heavy Trucks:	85.38	-16.06	-1.8	34	-1.20	-5.25	0.0	000	0.000
Unmitigated Nois		ıt Topo and b	arrier atte	nuation)					
VehicleType	Leq Peak Hour	Leq Day		Evening	Leg N		Ldn		VEL
Autos:	68.0	-	5.4	64.5		61.5	68.7		69.1
Medium Trucks:	65.8		3.9	58.3		58.7	66.		66.3
Heavy Trucks:	66.3	6-	4.8	53.3		57.6	65.7	7	65.8
Vehicle Noise:	71.6	6	9.5	65.7		64.4	71.8	3	72.1
Centerline Distan	ce to Noise Con	tour (in feet)							

Thursday, May 02, 2019

	FH\	VA-RD-77-108 H	IIGHWAY	NOISE PI	REDICTION	OM MO	DEL				
Scenari Road Name Road Segmen		,			Project i Job Nu	Vame: I					
SITE S	SPECIFIC IN	PUT DATA			N	DISE N	/IODE	L INPUT	s		
Highway Data				Site Con	ditions (Hard =	10, S	oft = 15)			
Average Daily	Traffic (Adt):	7,772 vehicles				,	Autos:	15			
Peak Hour	Percentage:	10%		Me	dium Tru	cks (2 A	(xles	15			
Peak H	our Volume:	777 vehicles		He	avy Truc	ks (3+ A	(xles	15			
Vel	hicle Speed:	45 mph		Vehicle							
Near/Far Lar	ne Distance:	76 feet			icleType		Dav	Evening	Night	Daily	
Site Data				V C//			66.3%		20.3%		
		0.0.6		М	edium Tn		77.0%		17.6%	4.70%	
Barrier Type (0-W	rier Height:	0.0 feet 0.0			Heavy Tri		86.3%		12.2%	1.90%	
Centerline Dis	. ,	0.0 60.0 feet							12.270	1.0070	
Centerline Dist.		60.0 feet		Noise So	ource Ele			eet)			
Barrier Distance		0.0 feet		Autos: 0.000							
Observer Height (Medium Trucks: 2.297								
	nd Flevation:	5.0 feet 0.0 feet		Heav	ry Trucks	: 8.0	004	Grade Ad	iustment	0.0	
	d Elevation:	0.0 feet		Lane Eq	uivalent	Distan	ce (in	feet)			
	Road Grade:	0.0%			Autos			,			
,	Left View:	-90.0 degrees		Mediu	m Trucks						
	Right View:	90.0 degrees			y Trucks						
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresn	el	Barrier Att	en Ber	m Atten	
Autos:	68.46	-3.23	0.3	34	-1.20		-4.69	0.0	000	0.000	
Medium Trucks:	79.45	-16.21	0.3	37	-1.20		-4.88	0.0	000	0.000	
Heavy Trucks:	84.25	-20.14	0.3	37	-1.20		-5.34	0.0	000	0.000	
Unmitigated Noise	Levels (with	out Topo and b	arrier atte	nuation)							
VehicleType	Leq Peak Hou	r Leq Day	Leq I	Evening	Leq N	light		Ldn	C	VEL	
Autos:	64	.4 61	1.8	60.9		57.9	1	65.1	I	65.5	
Medium Trucks:	62	.4 60	0.5	54.9		55.3		62.7	7	62.9	
Heavy Trucks:	63		1.8	50.3		54.6	<u> </u>	62.7	7	62.8	
Vehicle Noise:	68	.2 66	6.2	62.2		61.0)	68.4	1	68.7	
Centerline Distanc	e to Noise Co	ontour (in feet)									
-			70	dBA	65 c	IBA .	- (60 dBA	55	dBA	
		Lo	dn:				71				
	Ldn: CNEL:				10					91	

	FH	WA-RD-77-108	HIGH	HWAY	NOISE P	REDICT	ION MO	DEL			
	o: OY Withou e: Pine Av. nt: e/o Euclid	,					t Name: lumber:				
SITE	SPECIFIC IN	NPUT DATA				- 1	NOISE N	/IODE	L INPUT	s	
Highway Data					Site Cor	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	28,876 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Ti	ucks (2 A	Axles):	15		
Peak H	our Volume:	2,888 vehicle	s		He	avy Tru	cks (3+ A	Axles):	15		
Ve	hicle Speed:	45 mph			Vehicle	Miv					
Near/Far La	ne Distance:	76 feet				icleTyp	9	Dav	Evening	Night	Daily
Site Data								66.3%		20.3%	
Rai	rier Height:	0.0 feet			М	edium 7	rucks:	77.0%	5.3%	17.6%	4.70%
Barrier Type (0-W	-	0.0			1	Heavy 7	rucks:	86.3%	1.5%	12.2%	1.90%
Centerline Dis		60.0 feet									
Centerline Dist.		60.0 feet			Noise S				eet)		
Barrier Distance	Barrier Distance to Observer: 0.0 feet					Auto		000			
Observer Height (Above Pad):	5.0 feet			Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0,0						
	ad Elevation:	0.0 feet			Heav	y Truck	s: 8.0	004	Grade Ad	justmen	t: 0.0
Roa	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Distan	ce (in i	feet)		
1	Road Grade:	0.0%			Autos: 46.701						
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 46.	511			
	Right View:	90.0 degre	es		Heav	y Truck	s: 46.	530			
FHWA Noise Mode	el Calculation	IS									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresn	iel	Barrier Att	en Be	rm Atten
Autos:	68.46			0.3		-1.20		-4.69		000	0.000
Medium Trucks:	79.45			0.3		-1.20		-4.88		000	0.000
Heavy Trucks:	84.25	-14.44		0.0	37	-1.20		-5.34	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and	barri	er atte	nuation)						
VehicleType	Leq Peak Ho			Leq E	vening	Leq	Night		Ldn	_	NEL
Autos:			67.5		66.6		63.6		70.8	-	71.2
Medium Trucks:			66.2		60.6		61.0		68.4		68.6
Heavy Trucks:	69	9.0	67.5		56.0		60.3	3	68.4	1	68.5
Vehicle Noise:	73	3.9	71.9		67.9		66.7	,	74.1	1	74.4
Centerline Distant	e to Noise C	ontour (in feet)								
			L		70 dBA 65 dBA			ϵ	0 dBA	55	5 dBA
			Ldn:		113 243				524		,130
	CNEL:				118 254 547 1,			,178			

	FHW	A-RD-77-108	HIGH	WAY N	IOISE PI	REDICTI	ION MO	DEL					
Road Nam	io: OY Without le: Pine Av. nt: w/o W. Pres	•					Name: umber:						
SITE	SPECIFIC INF	PUT DATA				N	IOISE I	MODE	L INPUT	S			
Highway Data					Site Cor	ditions	(Hard =	10, Sc	ft = 15)				
Average Daily	Traffic (Adt): 1	8,578 vehicle	es					Autos:	15				
Peak Hour	Percentage:	10%			Me	dium Tru	ucks (2)	Axles):	15				
Peak H	lour Volume:	1,858 vehicle	S		He	avy Truc	cks (3+)	Axles):	15				
Ve	hicle Speed:	45 mph		F	Vehicle	Miss							
Near/Far La	ne Distance:	76 feet		H		icleType		Dav	Evening	Night	Daily		
Site Data					*0,,		Autos:	66.3%	0	20.3%	,		
Por	rrier Height:	0.0 feet			М	edium Tı	rucks:	77.0%		17.6%			
Barrier Type (0-W		0.0 feet				Heavy Tr	rucks:	86.3%	1.5%	12.2%	1.90%		
Centerline Di	. ,	60.0 feet		L									
	Centerline Dist. to Observer: 60.0 feet					ource El			eet)				
Barrier Distance to Observer: 0.0 feet						Autos		000					
Observer Height ((Above Pad):	5.0 feet			Medium Trucks: 2.297								
	ad Elevation:	0.0 feet			Heavy Trucks: 8.004 Grade Adjustment: 0.0								
	ad Elevation:	0.0 feet			Lane Equivalent Distance (in feet)								
	Road Grade:	0.0%			Autos: 46.701								
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 46.	511					
	Right View:	90.0 degree	es		Heavy Trucks: 46.530								
FHWA Noise Mode	el Calculations												
VehicleType		Traffic Flow	Dist	ance		Road	Fresi		Barrier Att		m Atten		
Autos:	68.46	0.56		0.3		-1.20		-4.69	0.0		0.000		
Medium Trucks:	79.45	-12.43		0.3		-1.20		-4.88		000	0.000		
Heavy Trucks:	84.25	-16.36		0.3	7	-1.20		-5.34	0.0	000	0.000		
Unmitigated Noise	e Levels (witho	ut Topo and	barrie	r atten	uation)								
VehicleType	Leq Peak Hour	Leq Day	,	Leq E	vening	Leq	Night		Ldn	C	NEL		
Autos:	68.2	=	65.6		64.7		61.7		68.9		69.3		
Medium Trucks:	66.2	=	64.3		58.7		59.		66.5		66.7		
Heavy Trucks: 67.1 65.6				54.0 58.4 66.5			66.5						
Vehicle Noise: 72.0 70.0					65.9		64.7	′	72.2	<u> </u>	72.5		
Centerline Distant	ce to Noise Cor	ntour (in feet)	70				10.4					
							dBA						
			Ldn:	84 181 391			42						
	CNEL:					88 189 407 878				78			

	FH	WA-RD-77-108	HIGH	HWAY N	OISE PF	REDICT	ION M	ODEL				
	: OY Withou	t Project					t Name					
Road Name						Job N	lumber	10351				
Road Segmen	t: w/o Chino	Corona Rd.										
	PECIFIC IN	IPUT DATA							L INPUT	S		
Highway Data					Site Con	ditions	(Hard	= 10, S	oft = 15)			
Average Daily 1	raffic (Adt):	32,911 vehic	les					Autos:	15			
Peak Hour F		10%					,	Axles):				
	our Volume:	3,291 vehicle	es		He	avy Tru	cks (3+	Axles):	15			
	icle Speed:	45 mph		1	/ehicle l	Ліх						
Near/Far Lan	e Distance:	76 feet			Vehi	cleType	9	Day	Evening	Night	Daily	
Site Data							Autos:	66.3%	13.5%	20.3%	93.40%	
Barı	rier Heiaht:	0.0 feet			Me	edium 7	rucks:	77.0%	5.3%	17.6%	4.70%	
Barrier Type (0-Wa	all, 1-Berm):	0.0			F	leavy T	rucks:	86.3%	1.5%	12.2%	1.90%	
Centerline Dis		60.0 feet		1	Voise Sc	urce E	levatio	ns (in f	eet)			
Centerline Dist. to		60.0 feet				Auto	s: (0.000				
Barrier Distance to		0.0 feet			Mediur	n Truck	(S: 2	2.297				
Observer Height (A	,	5.0 feet			Heav	y Truck	rs: 8	3.004	Grade Adj	justment	0.0	
	d Elevation:	0.0 feet		١,	one Fa	ilizalan	4 Dioto	naa (in	foot)			
	d Elevation: Road Grade:	0.0 feet			Lane Equivalent Distance (in feet) Autos: 46.701							
, n	l eft View:	0.0%			Mediur			5.511				
	Right View:	-90.0 degre				y Truck		5.530				
			.03			,		3.000				
FHWA Noise Mode	REMEL	Traffic Flow	Di	stance	Finite	Dood	Ero	snel	Barrier Att	on Box	m Atten	
VehicleType Autos:	68.46			0.34		-1.20	ries	-4.69		000	0.00	
Medium Trucks:	79.45			0.37		-1.20		-4.88		000	0.00	
Heavy Trucks:	84.25			0.37		-1.20		-5.34		000	0.000	
Unmitigated Noise	Levels (with	out Topo and	l barri	er atten	uation)							
VehicleType	Leq Peak Ho	ur Leq Da	У	Leq Ev	rening	Leq	Night		Ldn		NEL	
Autos:	70		68.1		67.2		64	-	71.4		71.	
Medium Trucks:	68		66.7		61.1		61		69.0		69.2	
Heavy Trucks:	69		68.1		56.5		60		69.0		69.0	
Vehicle Noise:	74		72.5		68.4		67	.2	74.7	7	75.0	
Centerline Distanc	e to Noise C	ontour (in fee	t)		1							
			L	70 c			dBA	(60 dBA		dBA	
		_	Ldn:			,	233					
		C	NEL:	12	8	2	.//		596	1,	285	

Thursday, May 02, 2019

	FH\	WA-RD-77-108	HIGH	1 YAW	NOISE PI	REDICT	ION M	ODEL				
Road Nar	rio: OY Withou ne: Pine Av. ent: w/o E. Pres	•				Project Job N		: MCH : 10351				
SITE	SPECIFIC IN	IPUT DATA		П			IOISE	MODE	L INPUT	s		
Highway Data	SI EOII IO III	II OI DAIA			Site Con							
Average Daily	Traffic (Adt):	30.018 vehicle	es					Autos				
	r Percentage:	10%			Me	dium Tr	ıcks (2	Axles).	15			
	Hour Volume:	3.002 vehicle	s		He	avy True	ks (3+	Axles).	15			
Ve	ehicle Speed:	45 mph										
	ane Distance:	76 feet		-	Vehicle	icleType		Day	Evening	Night	Doilu	
Site Data					ven		Autos:	Day 66.3%		20.3%	Daily 93,40%	
						edium T		77.0%		17.6%	4.70%	
	rrier Height:	0.0 feet				Heavy T		86.3%		12.2%		
Barrier Type (0-V	. ,	0.0				leavy II	ucns.	00.57	0 1.570	12.2/0	1.50 /	
	ist. to Barrier:	60.0 feet			Noise Source Elevations (in feet)							
	nterline Dist. to Observer: 60.0 feet					Autos: 0.000						
		0.0 feet			Medium Trucks: 2.297							
Observer Height	(Above Pad): Pad Flevation:	5.0 feet 0.0 feet			Heavy Trucks: 8.004 Grade Adjustment: 0.0							
	ad Elevation: ad Flevation:	0.0 feet		H	Lane Equivalent Distance (in feet)							
, AC	Road Grade:	0.0%		H		Auto		3.701	1001)			
	I eft View:	-90.0 degree	00		Madiu	m Truck		6.511				
	Right View:	90.0 degree				y Truck		6.530				
FHWA Noise Mod	del Calculation	s										
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fre	snel	Barrier Att	en Ber	m Atten	
Autos.	68.46	2.64		0.3	4	-1.20		-4.69	0.0	000	0.000	
Medium Trucks.	79.45	-10.34		0.3	7	-1.20		-4.88	0.0	000	0.000	
Heavy Trucks.	84.25	-14.28		0.3	7	-1.20		-5.34	0.0	000	0.000	
Unmitigated Nois	e Levels (with	out Topo and	barrie	r atter	nuation)							
VehicleType	Leq Peak Hou	ır Leq Day	/	Leq E	vening	Leq	Night		Ldn	C	NEL	
Autos.			67.7		66.8		63		71.0	-	71.4	
Medium Trucks.			66.3		60.7		61		68.6	-	68.8	
	Heavy Trucks: 69.1 67.7				56.1		60		68.6	-	68.6	
	Vehicle Noise: 74.1 72.1				68.0		66	.0	74.3)	74.6	
Centerline Distan	ice to Noise C	ontour (in feet)	70	70 dBA 65 dBA 60 dBA 5		EE.	dBA				
			I dn:					160				
			VFI:		21	_	50 60		561		208	
		Ci	VLL.	1.	41		JU		301	١,	200	

	FHW	/A-RD-77-108	HIGH	WAY I	NOISE PE	REDICT	ION MO	DEL			
Road Nam	io: OY Without ne: Pine Av. nt: w/o Hellmar	,					Name: I umber:				
SITE	SPECIFIC IN	PUT DATA				N	IOISE N	10DE	L INPUTS	5	
Highway Data					Site Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	29,448 vehicle	es				,	Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2 A	xles):	15		
Peak H	lour Volume:	2,945 vehicle	S		He	avy Tru	cks (3+ A	xles):	15		
Ve	hicle Speed:	45 mph		ŀ	Vehicle I	Miv					
Near/Far La	ne Distance:	76 feet		ŀ		cleType		Dav	Evening	Night	Daily
Site Data								66.3%		20.39	-
Ra	rrier Height:	0.0 feet			Me	edium T	rucks:	77.0%	5.3%	17.69	6 4.70%
Barrier Type (0-W		0.0			F	leavy T	rucks:	86.3%	1.5%	12.29	6 1.90%
Centerline Di		60.0 feet			Noise So	uraa E	lovotion	ı (in f	0.041		
Centerline Dist.	Centerline Dist. to Observer: 60.0 feet					Auto		000	eet)		
Barrier Distance	Barrier Distance to Observer: 0.0 feet					Auto n Truck		97			
Observer Height ((Above Pad):	5.0 feet				y Truck		004	Grade Adj	uetman	t 0.0
Pa	ad Elevation:	0.0 feet			пеач	y Truck	s. o.t	JU4	Orace Auj	usuncn	i. 0.0
Roa	ad Elevation:	0.0 feet		L	Lane Eq	uivalen	t Distand	e (in	feet)		
	Road Grade:	0.0%				Auto	s: 46.7	701			
	Left View:	-90.0 degree	es		Mediui	n Truck	s: 46.	511			
	Right View:	90.0 degree	es		Heav	y Truck	s: 46.	530			
FHWA Noise Mod	el Calculations	;									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresn	el	Barrier Atte	en Be	erm Atten
Autos:	68.46	2.56		0.3	4	-1.20		-4.69	0.0	00	0.000
Medium Trucks:	79.45	-10.43		0.3	7	-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	84.25	-14.36		0.3	7	-1.20		-5.34	0.0	00	0.000
Unmitigated Noise	e Levels (witho	out Topo and	barrie	er atter	nuation)						
VehicleType	Leq Peak Hou			Leq E	vening	Leq	Night		Ldn	(CNEL
Autos:	70.		67.6		66.7		63.7		70.9		71.3
Medium Trucks:	68.	_	66.3		60.7		61.1		68.5		68.7
Heavy Trucks:	69.		67.6		56.0		60.4		68.5		68.5
Vehicle Noise:	74.		72.0		67.9		66.7		74.2		74.5
Centerline Distant	ce to Noise Co	ntour (in feet)	70			10.4		00 104	-	- 10.4
			L				5 dBA				
			Ldn:	114 247 531			,145				
	CNEL:				119 257 554 1,193				,193		

		VA-RD-77-108	HIGH	IWAY N	IOISE P								
	o: OY With Pr	oject					Name:						
	e: Central Av.					Job N	lumber:	10351					
Road Segmen													
SITE S Highway Data	SPECIFIC IN	PUT DATA		_	Sito Cor				L INPUT: oft = 15)	S			
					Site Con	uiuoiis	(Haru						
Average Daily	. ,	31,954 vehicl	es					Autos.					
	Percentage:	10%				dium Tr							
	our Volume:	3,195 vehicle	S		He	avy Tru	CKS (3+	Axies).	: 15				
	hicle Speed:	45 mph			Vehicle	Mix							
Near/Far Lar	ne Distance:	76 feet		Ī	Veh	icleType	,	Day	Evening	Night	Daily		
Site Data							Autos:	66.29	6 13.5%	20.3%	93.48%		
Ran	rier Height:	0.0 feet			М	edium T	rucks:	77.19	6 5.3%	17.6%	4.64%		
Barrier Type (0-Wa		0.0				Heavy T	rucks:	86.3%	6 1.5%	12.2%	1.88%		
Centerline Dis		60.0 feet		-	M-: 0			/! /	4				
Centerline Dist. t	to Observer:	60.0 feet		-	Noise Source Elevations (in feet)								
Barrier Distance t	Barrier Distance to Observer: 0.0 feet					Autos: 0.000 Medium Trucks: 2.297							
Observer Height (/	Observer Height (Above Pad): 5.0 feet								0				
	d Elevation:	0.0 feet			Heat	y Truck	s: 8	.004	Grade Ad	ustment	: 0.0		
Roa	d Elevation:	0.0 feet			Lane Equivalent Distance (in feet)								
F	Road Grade:	0.0%				Auto	s: 46	.701					
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 46	.511					
	Right View:	90.0 degre	es		Heavy Trucks: 46.530								
FHWA Noise Mode	el Calculation												
VehicleType	REMEL	Traffic Flow	Dis	stance		Road	Fres		Barrier Att		rm Atten		
Autos:	68.46	2.91		0.3		-1.20		-4.69	0.0		0.00		
Medium Trucks:	79.45	-10.12		0.3	7	-1.20		-4.88	0.0	000	0.000		
Heavy Trucks:	84.25	-14.05		0.3	7	-1.20		-5.34	0.0	000	0.000		
Unmitigated Noise			barri	er atten	uation)								
,,	Leq Peak Hou		_	Leq E	vening	Leq	Night		Ldn		NEL		
Autos:	70		67.9		67.0		64	-	71.2		71.		
Medium Trucks:	68		66.6		61.0		61.		68.8		69.0		
Heavy Trucks:	69		67.9		56.4		60		68.8		68.8		
Vehicle Noise:	Vehicle Noise: 74.3 72.3				68.3		67	.1	74.5	5	74.		
Centerline Distanc	e to Noise Co	ontour (in feet)										
			L		dBA		dBA		60 dBA		dBA		
		_	Ldn:		120 259 559 1,2								
	CNEL:				125 270 582 1,255								

Thursday, May 02, 2019

	io: OY Without						t Name.					
	e: Schleismar					Job N	lumber.	10351				
Road Segme	nt: w/o Archiba	ld Av.										
	SPECIFIC IN	PUT DATA							L INPUT	S		
Highway Data				-	Site Cor	iditions	(Hard	= 10, Sc				
Average Daily	Traffic (Adt):	31,944 vehicle	s					Autos:	15			
Peak Hour	Percentage:	10%			Me	edium Ti	ucks (2	Axles):	15			
Peak H	lour Volume:	3,194 vehicles	3		He	avy Tru	cks (3+	Axles):	15			
Ve	hicle Speed:	45 mph		F	Vehicle	Mix						
Near/Far La	ne Distance:	78 feet		F		icleType	э	Day	Evening	Night	Daily	
Site Data							Autos:	66.3%	13.5%	20.3%	93.409	
Rai	rrier Height:	0.0 feet			М	edium 7	rucks:	77.0%	5.3%	17.6%	4.70%	
Barrier Type (0-W		0.0				Heavy T	rucks:	86.3%	1.5%	12.2%	1.909	
Centerline Dis		76.0 feet		ŀ	M-1 0			(! 6-	4)			
Centerline Dist.	to Observer:	76.0 feet		P	Noise Source Elevations (in feet) Autos: 0.000							
Barrier Distance	to Observer:	0.0 feet						0.000				
Observer Height (Above Pad): 5.0 feet						m Truck		2.297	Crada Ad	i rotmont		
Pa	ad Elevation:	0.0 feet			Heal	/y Truck	is: E	3.004	Grade Ad	jusimeni.	0.0	
Roa	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Dista	nce (in :	feet)			
	Road Grade:	0.0%				Auto	s: 65	5.422				
	Left View:	-90.0 degree	s		Mediu	m Truck	rs: 65	5.286				
	Right View:	90.0 degree	es		Heav	y Truck	rs: 65	5.299				
FHWA Noise Mode	el Calculation	s										
VehicleType	REMEL	Traffic Flow	Dist	tance	e Finite Road Fresnel Barrier Atten					m Atten		
Autos:	68.46	2.91		-1.8	-	-1.20		-4.73		000	0.00	
Medium Trucks:	79.45	-10.07		-1.8		-1.20		-4.88	0.0	000	0.00	
Heavy Trucks:	84.25	-14.01		-1.8	4	-1.20		-5.25	0.0	000	0.00	
Unmitigated Noise	e Levels (with	out Topo and	barrie	r atten	nuation)							
VehicleType	Leq Peak Hou			Leq E	vening	Leq	Night		Ldn		VEL	
Autos:	68		65.7		64.8		61		69.0		69.	
Medium Trucks:	66		64.4		58.8		59	-	66.7		66.	
	Heavy Trucks: 67.2 65.8				54.2 58.5 66.6				66.			
Vehicle Noise: 72.1 70.1				66.1		64	.9	72.4	1	72.		
Centerline Distand	ce to Noise Co	ntour (in feet)	70	10.4	-	10.4				10.4	
			L		dBA		dBA	6	50 dBA 507		dBA	
Ldn:				109 235 114 245					092			
			JFI:				45		528	,	138	

Thursday, May 02, 2019

_	FH\	WA-RD-77-108	HIGHWAY	' NOISE P	REDICTION	ON MO	DDEL				
Road Nar	rio: OY With Pone: Central Av.	roject			Project i	Name:					
SITE	SPECIFIC IN	IPUT DATA						L INPUT	S		
Highway Data				Site Cor	nditions (Hard:	= 10, S	oft = 15)			
Average Daily	Traffic (Adt):	38,873 vehicle	es				Autos:	15			
Peak Hou	r Percentage:	10%		Me	dium Tru	cks (2	Axles):	15			
Peak I	Hour Volume:	3,887 vehicle	s	He	avy Truc	ks (3+	Axles):	15			
Ve	ehicle Speed:	45 mph		Vehicle	Miv						
Near/Far La	ane Distance:	78 feet			icleType		Dav	Evening	Night	Daily	
Site Data						utos:	66.2%	-	20.3%	,	
D-	arrier Height:	0.0 feet		М	edium Tri	ucks:	77.1%	5.3%	17.6%	4.80%	
Barrier Type (0-V		0.0 1661			Heavy Tri	ucks:	86.3%	1.5%	12.2%	2.16%	
	ist. to Barrier:	60.0 feet									
Centerline Dist		60.0 feet		Noise Source Elevations (in feet)							
Barrier Distance			Autos: 0.000								
Observer Height			Medium Trucks: 2.297 Heavy Trucks: 8,004 Grade Adjustment: 0.0								
	Pad Flevation:	5.0 feet 0.0 feet		Heav	y Trucks	: 8	.004	Grade Ad	justmeni	: 0.0	
Ro	ad Flevation:	0.0 feet		Lane Eq	uivalent	Dista	nce (in	feet)			
	Road Grade:	0.0%			Autos	: 45	.869				
	Left View:	-90.0 degree	es	Mediu	m Trucks	: 45	.676				
	Right View:	90.0 degree		Heav	y Trucks	: 45	.695				
FHWA Noise Mod	lel Calculation	s		1							
VehicleType	REMEL	Traffic Flow	Distance	e Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten	
Autos.	68.46	3.75	0	.46	-1.20		-4.69	0.0	000	0.000	
Medium Trucks.	79.45	-9.13	0	.49	-1.20		-4.88	0.0	000	0.000	
Heavy Trucks.	84.25	-12.59	0	.48	-1.20		-5.34	0.0	000	0.000	
Unmitigated Nois	e Levels (with	out Topo and	barrier att	enuation)							
VehicleType	Leq Peak Hou	- , - ,	Leq	Evening	Leq I			Ldn	_	NEL	
Autos.			68.9	68.0		65	-	72.2	_	72.6	
Medium Trucks.			67.7	62.1		62	-	69.9	-	70.1	
Heavy Trucks.				57.9 62.3 70.4				70.4			
	Vehicle Noise: 75.5 73.5			69.3		68	.2	75.7	7	76.0	
Centerline Distan	ce to Noise C	ontour (in feet									
				70 dBA 65 dBA			60 dBA		dBA		
			Ldn:		44 310			669		,440	
		Ci	NEL:	150 323				696	1,	499	

	FH\	WA-RD-77-108	HIGH	IWAY	NOISE P	REDICT	ION M	DDEL			
Road Nam	io: OY With Pone: El Prado R nt: n/o Kimbal	d.				.,	t Name: lumber:				
SITE	SPECIFIC IN	IPUT DATA							L INPUT	s	
Highway Data					Site Cor	nditions	(Hard:	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	28,653 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10%			Me	edium Tr	ucks (2	Axles):	15		
Peak H	lour Volume:	2,865 vehicle	s		He	eavy Tru	cks (3+	Axles):	15		
Ve	hicle Speed:	45 mph			Vehicle	Miv					
Near/Far La	ne Distance:	36 feet				icleType	9	Dav	Evening	Night	Daily
Site Data							Autos:	66.2%	-	20.3%	
Pa	rrier Height:	0.0 feet			М	edium T	rucks:	77.1%	5.3%	17.6%	4.71%
Barrier Type (0-W		0.0				Heavy T	rucks:	86.3%	1.5%	12.2%	2.14%
Centerline Di		44.0 feet									
Centerline Dist.		44.0 feet			Noise S				eet)		
Barrier Distance		0.0 feet				Auto		.000			
	Observer Height (Above Pad): 5.0 feet					m Truck		.297			
	ad Elevation:	0.0 feet			Hear	vy Truck	s: 8	.004	Grade Ad	justmen	t: 0.0
	ad Flevation:	0.0 feet			Lane Eq	uivalen	t Distai	nce (in	feet)		
	Road Grade:	0.0%				Auto	s: 40	.460			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 40	.241			
	Right View:	90.0 degre			Hear	vy Truck	s: 40	.262			
FHWA Noise Mod	el Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten
Autos:	68.46	2.43		1.3	28	-1.20		-4.61	0.0	000	0.000
Medium Trucks:	79.45	-10.54		1.3	31	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-13.96		1.3	31	-1.20		-5.50	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrie	er atte	nuation)						
VehicleType	Leq Peak Hou	ur Leq Day	/	Leq E	vening	Leq	Night		Ldn	C	NEL
Autos:	71	.0	68.4		67.5		64	.5	71.7	7	72.1
Medium Trucks:	69	0.0	67.1		61.5		61.	.9	69.3	3	69.5
Heavy Trucks:	Heavy Trucks: 70.4 69.0				57.4 61.7 69.8				69.9		
Vehicle Noise:	75	5.0	73.0		68.8		67	.7	75.2	2	75.4
Centerline Distant	ce to Noise C	ontour (in feet)								
-				70	dBA	65	dBA	6	60 dBA	55	5 dBA
			Ldn:		97 210		10		452	- !	973
		C	NEL:	1	101 218 470 1,			,013			

	FH\	WA-RD-77-108	HIGH	WAY N	OISE P	REDICT	ION MC	DEL			
	o: OY With Poe: Euclid Av. nt: n/o Riversi	•					t Name: Number:				
SITE S	SPECIFIC IN	IPUT DATA				- 1	NOISE	MODE	L INPUT	S	
Highway Data					Site Cor	ditions	(Hard =	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	30,326 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Ti	rucks (2	Axles):	15		
Peak H	our Volume:	3,033 vehicle	S		He	avy Tru	icks (3+	Axles):	15		
Vei	hicle Speed:	55 mph		,	/ehicle	Miv					
Near/Far Lar	ne Distance:	154 feet		H.		icleTyp	е	Dav	Evening	Night	Daily
Site Data							Autos:	66.2%		20.3%	
Ran	rier Heiaht:	0.0 feet			М	edium 7	rucks:	77.1%	5.3%	17.6%	5.05%
Barrier Type (0-W		0.0				Heavy 7	rucks:	86.3%	1.5%	12.2%	2.49%
Centerline Dis	. ,	84.0 feet		١.	Vaisa C	0.11400 E	levation	o (in f	004)		
Centerline Dist.	to Observer:	84.0 feet		,	voise 3	Auto		.000	eet)		
Barrier Distance	Barrier Distance to Observer: 0.0 feet					Auto m Truck		.000			
Observer Height (Observer Height (Above Pad): 5.0 feet					n Truck vy Truck		.004	Grade Ad	iuctmon	. 0.0
Pa	ad Elevation:	0.0 feet			пеач	ry Truci	18. 0.	.004	Grade Au,	usunem	. 0.0
Roa	ad Elevation:	0.0 feet		L	Lane Eq	uivalen	t Distan	ce (in	feet)		
F	Road Grade:	0.0%				Auto	s: 33	.941			
	Left View:	-90.0 degre	es		Mediu	m Truck	rs: 33	.679			
	Right View:	90.0 degre	es		Heavy Trucks: 33.705						
FHWA Noise Mode	el Calculation										
VehicleType	REMEL	Traffic Flow	Dis	stance		Road	Fres		Barrier Att		m Atten
Autos:	71.78	1.77		2.42	-	-1.20		-4.75	0.0		0.00
Medium Trucks:	82.40			2.47		-1.20		-4.88	0.0		0.00
Heavy Trucks:	86.40	-13.93		2.47	7	-1.20		-5.21	0.0	100	0.000
Unmitigated Noise			_					,			
,,	Leq Peak Hou			Leq Ev		Leq	Night		Ldn		NEL
Autos:	74		72.2		71.3		68.		75.5		75.9
Medium Trucks:	72		70.9		65.3		65.		73.1		73.
Heavy Trucks:										73.2	
Vehicle Noise: 78.6 76.6					72.6		/1.	4	78.8	3	79.
Centerline Distanc	Centerline Distance to Noise Contour (in feet)				70 dBA 65 dBA 60 dBA 55			dBA			
			Ldn:					263			
							400				
	CNEL:					340 /33 1,578 3,40				.00	

	FHV	VA-RD-77-108 HI	GHWAY	NOISE P	REDICTION	ON MODEL		
Scenario: Road Name: Road Segment:		•				Name: MCI mber: 103		
	ECIFIC IN	PUT DATA					EL INPUT	S
Highway Data				Site Con	ditions (Hard = 10,	Soft = 15)	
Average Daily Tra Peak Hour Pe Peak Hou	. ,	35,531 vehicles 10% 3,553 vehicles				Auto cks (2 Axles ks (3+ Axles	s): 15	
Vehic	le Speed:	55 mph		Vehicle I	Mix			
Near/Far Lane	Distance:	154 feet		Veh	icleType	Dav	Evening	Night Daily
Site Data						utos: 66.2	Ü	20.3% 92.59%
Rarrie	er Height:	0.0 feet		Me	edium Tru	icks: 77.1	% 5.3%	17.6% 5.00%
Barrier Type (0-Wall	-	0.0		F	leavy Tru	icks: 86.3	1.5%	12.2% 2.40%
Centerline Dist.		84.0 feet		Noise So	ource Ele	vations (in	feet)	
Centerline Dist. to		84.0 feet			Autos		,	
Barrier Distance to		0.0 feet		Mediu	n Trucks			
Observer Height (Ab	,	5.0 feet		Heav	y Trucks.	8.004	Grade Ad	iustment: 0,0
	Elevation:	0.0 feet						
	Elevation:	0.0 feet		Lane Eq		Distance (i	n feet)	
	ad Grade:	0.0%			Autos.			
	Left View: light View:	-90.0 degrees 90.0 degrees			n Trucks. v Trucks.	00.010		
FHWA Noise Model	Calculation							
VehicleType	REMEL		Distance	Finite	Road	Fresnel	Barrier Att	en Berm Atten
Autos:	71.78	2.46	2.4		-1.20	-4.7	5 0.0	0.00
Medium Trucks:	82.40	-10.21	2.4	17	-1.20	-4.8	8 0.0	0.00
Heavy Trucks:	86.40	-13.39	2.4	17	-1.20	-5.2	1 0.0	0.00
Unmitigated Noise L	evels (with	out Topo and bar	rrier atte	nuation)				
VehicleType Le	eq Peak Hou	r Leq Day	Leq E	vening	Leq N	light	Ldn	CNEL
Autos:	75.	.5 72.	9	72.0		69.0	76.2	76.
Medium Trucks:	73.	.5 71.	5	65.9		66.4	73.8	74.
Heavy Trucks:	74.	.3 72.	8	61.3		65.6	73.7	73.
Vehicle Noise:	79	.2 77.	2	73.2		72.0	79.5	79.
Centerline Distance	to Noise Co	ontour (in feet)						
				dBA	65 d		60 dBA	55 dBA
		Ldr		60	77		1,671	3,600
		CNFI	. 2	7.			3.752	

Thursday, May 02, 2019

	FH\	VA-RD-77-108 I	HIGHWAY	NOISE P	REDICTIO	ON MC	DDEL					
	o: OY With Pr e: Euclid Av. t: n/o Chino A	,			Project N Job Nu							
SITE S	PECIFIC IN	IPUT DATA			NO	DISE	MODE	L INPUT	s			
Highway Data				Site Cor	nditions (i	Hard =	= 10, S	oft = 15)				
Average Daily 1	raffic (Adt):	30,662 vehicles	s				Autos:	15				
Peak Hour F	Percentage:	10%		Ме	dium Truc	cks (2	Axles):	15				
Peak Ho	our Volume:	3,066 vehicles		He	avy Truck	ks (3+	Axles):	15				
Veh	icle Speed:	55 mph		Vehicle	Miv							
Near/Far Lan	e Distance:	154 feet			icleType		Dav	Evening	Night	Daily		
Site Data						utos:	66.2%	-	20.3%	,		
Pari	rier Height:	0.0 feet		М	edium Tru	icks:	77.1%		17.6%			
Barrier Type (0-Wa		0.0 feet			Heavy Tru	icks:	86.3%	1.5%	12.2%	2.48%		
Centerline Dis		84.0 feet		N-1 0	·		/! 6	41				
Centerline Dist. to		84.0 feet		Noise S	ource Ele			eet)				
Barrier Distance to	o Observer:	0.0 feet		Autos: 0.000 Medium Trucks: 2.297								
Observer Height (A	Observer Height (Above Pad): 5.0 feet				Heavy Trucks: 8.004 Grade Adjustment: 0.0							
Pa	Pad Elevation: 0.0 feet				y Trucks:	8	.004	Grade Ad	jusimeni	. 0.0		
Roa	d Elevation:	0.0 feet		Lane Eq	uivalent l	Distar	ıce (in	feet)				
F	load Grade:	0.0%			Autos:	33	.941					
	Left View:	-90.0 degrees	S	Mediu	m Trucks:	33	.679					
	Right View:	90.0 degrees	s	Heav	y Trucks:	33	.705					
FHWA Noise Mode	I Calculation	s		1								
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fres	nel	Barrier Att	ten Bei	m Atten		
Autos:	71.78	1.82	2.	42	-1.20		-4.75	0.0	000	0.000		
Medium Trucks:	82.40	-10.83	2.	47	-1.20		-4.88	0.0	000	0.000		
Heavy Trucks:	86.40	-13.91	2.	47	-1.20		-5.21	0.0	000	0.000		
Unmitigated Noise	Levels (with		oarrier atte	nuation)								
,,	Leq Peak Hοι	, ,		Evening	Leq N	_		Ldn		NEL		
Autos:	74		2.2	71.3		68.		75.		76.0		
Medium Trucks:	72		0.9	65.3		65.	-	73.2	_	73.4		
Heavy Trucks:	73		2.3	60.7 65.1 73.2					73.2			
	Vehicle Noise: 78.7 76.6			72.6		71.	4	78.9	9	79.		
Centerline Distanc	e to Noise Co	ontour (in feet)	7/					00 104		dBA		
		,		70 dBA 65 dBA			1.523			ава 282		
				328 707 342 737			,					
		CN	LL.	J+4Z	/3	,		1,307	3,	3,420		

	FHW	/A-RD-77-108	HIGH	NAY 1	NOISE PF	REDICT	ION MO	DEL			
Road Nam	io: OY With Prone: Euclid Av.	•					Name: lumber:				
	SPECIFIC IN	PUT DATA							L INPUTS	5	
Highway Data					Site Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	33,515 vehicle	es					Autos.	15		
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2 A	Axles).	15		
Peak F	lour Volume:	3,352 vehicle	s		He	avy Tru	cks (3+ A	Axles).	15		
Ve	hicle Speed:	55 mph		-	Vehicle I	/liv					
Near/Far La	ne Distance:	154 feet		ŀ		cleType		Dav	Evening	Night	Daily
Site Data								66.29		20.3%	-
Ra	rrier Height:	0.0 feet			Me	dium T	rucks:	77.19	5.3%	17.6%	5.00%
Barrier Type (0-W		0.0			F	leavy T	rucks:	86.3%	1.5%	12.2%	2.42%
Centerline Di		84.0 feet		-	Noise Sc	uraa E	lovetion	o (in i	0.041		
Centerline Dist.	to Observer:	84.0 feet			Noise Sc	Auto		000	eet)		
Barrier Distance	to Observer:	0.0 feet			A 4 E	Auto n Truck		JUU 297			
Observer Height	(Above Pad):	5.0 feet				y Truck		297	Grade Adj	uetman	t: 0.0
P	ad Elevation:	0.0 feet			пеач	y ITUCK	S. O.I	JU4	Orace Auj	asuncn	. 0.0
Ro	ad Elevation:	0.0 feet			Lane Equ	ıivalen	t Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 33.	941			
	Left View:	-90.0 degree	es		Mediur	n Truck	s: 33.	679			
	Right View:	90.0 degree	es		Heav	y Truck	s: 33.	705			
FHWA Noise Mod	el Calculations	3									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	iel	Barrier Atte	en Be	rm Atten
Autos:	71.78	2.21		2.4	2	-1.20		-4.75	0.0	00	0.000
Medium Trucks:	82.40	-10.47		2.4	7	-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	86.40	-13.61		2.4	7	-1.20		-5.21	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrie	r atter	nuation)						
VehicleType	Leq Peak Hou			Leq E	vening	Leq	Night		Ldn	С	NEL
Autos:	75.	2	72.6		71.7		68.7	,	75.9		76.3
Medium Trucks:		_	71.3		65.7		66.1		73.5		73.7
Heavy Trucks:	74.		72.6		61.0		65.4		73.5		73.5
Vehicle Noise:	79.	0	77.0		73.0		71.8	3	79.2		79.5
Centerline Distan	ce to Noise Co	ntour (in feet)								
					dBA		dBA		60 dBA		5 dBA
			Ldn:	-	47		47		1,609		,466
		CI	VEL:	36	361 778 1,677 3,6				,613		

						REDICT					
	io: OY With Pr	oject				Project					
	ne: Euclid Av. nt: n/o Eucaly	stue Av				JOD IV	umber.	10351			
•	,,										
SITE Highway Data	SPECIFIC IN	IPUT DATA							EL INPUT: oft = 15)	S	
				3	ille Coi	iaiuoris	(паги				
Average Daily	. ,	33,836 vehicle	!S				! (0	Autos			
	Percentage:	10%				edium Tri		,			
	lour Volume:	3,384 vehicles	3		He	eavy Truc	cks (3+	Axies)	: 15		
	hicle Speed:	55 mph		ν	'ehicle	Mix					
Near/Far La	ne Distance:	154 feet			Ver	icleType		Day	Evening	Night	Daily
Site Data						/	lutos:	66.29	6 13.5%	20.3%	92.61%
Ва	rrier Height:	0.0 feet			М	edium T	ucks:	77.19	6 5.3%	17.6%	4.98%
Barrier Type (0-W		0.0				Heavy Ti	rucks:	86.39	6 1.5%	12.2%	2.41%
Centerline Di	st. to Barrier:	84.0 feet		۸	loise S	ource El	evatio	ns (in i	feet)		
Centerline Dist.	to Observer:	84.0 feet		- 1		Auto		0.000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck		.297			
Observer Height		5.0 feet				vy Truck		3.004	Grade Ad	ustment	0.0
	ad Elevation:	0.0 feet		_							
	ad Elevation:	0.0 feet		L	ane Eq	uivalen			feet)		
	Road Grade:	0.0%				Auto		3.941			
	Left View:	-90.0 degree				m Truck		3.679			
	Right View:	90.0 degree	:S		Hear	vy Truck	s: 33	3.705			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fres	snel	Barrier Att	en Ber	m Atten
Autos:	71.78	2.25		2.42		-1.20		-4.75	0.0	00	0.000
Medium Trucks:	82.40	-10.44		2.47		-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	86.40	-13.59		2.47		-1.20		-5.21	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrie	er attenu	ıation)						
VehicleType	Leq Peak Hou	ır Leq Day		Leq Ev	ening	Leq	Night		Ldn	C	NEL
Autos:	75	.3	72.7		71.8		68	.8	76.0)	76.4
Medium Trucks:	73	.2	71.3		65.7		66	.1	73.6	i	73.7
Heavy Trucks: 74.1 72.6										73.6	
Vehicle Noise:	79	.0	77.0		73.0		71	.8	79.3	3	79.5
Centerline Distan	ce to Noise Co	ontour (in feet,	1								
				70 d	BA	65	dBA		60 dBA	55	dBA
			de	24			-1		1 617		404

Ldn: 348 751 1,617 3,484

CNEL: 363 782 1,685 3,631

F	HWA	-RD-77-108 H	IIGHW	/AY N	NOISE PE	REDICT	ION MO	DEL			
Scenario: OY With Road Name: Euclid Av Road Segment: n/o Ediso	<i>i</i> .						t Name: lumber:				
SITE SPECIFIC	INP	JT DATA							L INPUT	5	
Highway Data					Site Con	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily Traffic (Adt).	35	,847 vehicles	3					Autos:	15		
Peak Hour Percentage.		10%			Me	dium Tı	ucks (2 A	Axles):	15		
Peak Hour Volume.	3,	585 vehicles			He	avy Tru	cks (3+ A	Axles):	15		
Vehicle Speed.		55 mph		H	Vehicle I	Mix					
Near/Far Lane Distance.		154 feet		-		icleType	9	Day	Evening	Night	Daily
Site Data								66.2%	-	20.3%	
Barrier Height.		0.0 feet			Me	edium T	rucks:	77.1%	5.3%	17.6%	4.98%
Barrier Type (0-Wall, 1-Berm).		0.0			F	leavy T	rucks:	86.3%	1.5%	12.2%	2.39%
Centerline Dist. to Barrier	:	84.0 feet		H	Noise So	nurce F	levation	s (in fe	opt)		
Centerline Dist. to Observer	:	84.0 feet		ľ	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Auto		000	,00,		
Barrier Distance to Observer	:	0.0 feet			Madiu	n Truck		297			
Observer Height (Above Pad): 5.0 feet						y Truck		004	Grade Ad	ustment	0.0
Pad Elevation	:	0.0 feet		L		•					0.0
Road Elevation		0.0 feet		L	Lane Eq	uivalen	t Distan	ce (in i	feet)		
Road Grade.		0.0%				Auto	s: 33.	941			
Left View	-	90.0 degrees	3			m Truck		679			
Right View	:	90.0 degrees	\$		Heav	y Truck	s: 33.	705			
FHWA Noise Model Calculation	ons										
VehicleType REMEL		raffic Flow	Dista		_	Road	Fresr		Barrier Att		m Atten
Autos: 71.7		2.50		2.4	-	-1.20		-4.75	0.0		0.000
Medium Trucks: 82.4	10	-10.20		2.4		-1.20		-4.88	0.0		0.000
Heavy Trucks: 86.4	10	-13.38		2.4	7	-1.20		-5.21	0.0	00	0.000
Unmitigated Noise Levels (wi	_										
14.41.4.7		Leg Day	L	.eq E	vening	Leq	Night		Ldn		VEL 76.6
VehicleType Leq Peak H											
Autos:	75.5	7.	2.9		72.0		69.0		76.2		
Autos: Medium Trucks:	75.5 73.5	7.	1.6		66.0		66.4		73.8		74.0
Autos: Medium Trucks: Heavy Trucks:	75.5	7. 7						ļ }			74.0 73.8
Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	75.5 73.5 74.3 79.3	7. 7 7. 7	1.6 2.9		66.0 61.3		66.4 65.6	ļ }	73.8 73.7		74.0 73.8
Autos: Medium Trucks: Heavy Trucks:	75.5 73.5 74.3 79.3	7. 7 7. 7	1.6 2.9	70 (66.0 61.3	65	66.4 65.6	l 3	73.8 73.7		74.0 73.8 79.8 dBA
Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	75.5 73.5 74.3 79.3	7. 7. 7. 7. 7. 7.	1.6 2.9		66.0 61.3 73.3		66.4 65.6 72.0	6	73.8 73.7 79.5	55	74.0 73.8 79.8

Thursday, May 02, 2019

	FH)	WA-RD-77-108	HIGI	HWAY	NOISE PI	REDICTI	ON N	IODEL				
Road Nan	rio: OY With P ne: Euclid Av. nt: n/o Merrill	.,				Project Job N		e: MCH r: 10351				
	SPECIFIC IN	NPUT DATA							L INPUT	s		
Highway Data					Site Con	ditions	(Haro	l = 10, S	oft = 15)			
Average Daily	Traffic (Adt):	37,570 vehicl	es					Autos:	15			
Peak Hour	Percentage:	10%			Me	dium Tru	ıcks (.	2 Axles):	15			
Peak F	lour Volume:	3,757 vehicle	:S		He	avy Truc	ks (3	+ Axles):	15			
Ve	ehicle Speed:	55 mph			Vehicle	Miv						
Near/Far La	ne Distance:	154 feet				icleType		Dav	Evening	Night	Daily	
Site Data							lutos:	66.2%	-	20.3%	,	
Pa	rrier Height:	0.0 feet			М	edium Tr	ucks:	77.1%	5.3%	17.6%	4.94%	
Barrier Type (0-W		0.0			1	Heavy Tr	ucks:	86.3%	1.5%	12.2%	2.36%	
Centerline Di	. ,	84.0 feet			Noise So							
Centerline Dist.	to Observer:	84.0 feet			Noise 3	Autos		0.000	eet)			
Barrier Distance	arrier Distance to Observer: 0.0 feet					Autos m Trucks		2.297				
Observer Height	oserver Height (Above Pad): 5.0 feet								Crada As	livotmont		
P	ad Elevation:	0.0 feet			Heav	y Trucks	S.:	8.004	Grade Ad	jusimeni	. 0.0	
Ro	ad Elevation:	0.0 feet			Lane Equivalent Distance (in feet)							
	Road Grade:	0.0%				Autos	s: 3	3.941				
	Left View:	-90.0 degre	es		Medium Trucks: 33.679							
	Right View:	90.0 degre	es		Heav	y Trucks	s: 3	3.705				
FHWA Noise Mod	lel Calculation	ıs										
VehicleType	REMEL	Traffic Flow	Di	stance		Road	Fre	esnel	Barrier At		m Atten	
Autos:				2.4	-	-1.20		-4.75		000	0.000	
Medium Trucks:				2.4		-1.20		-4.88		000	0.000	
Heavy Trucks:	86.40	-13.23		2.4	17	-1.20		-5.21	0.0	000	0.000	
Unmitigated Nois			barri	er atte	nuation)							
VehicleType	Leq Peak Ho			Leq E	vening	Leq	Night		Ldn		NEL	
Autos:		5.7	73.1		72.2		-	9.2	76.		76.8	
Medium Trucks:		3.7	71.7		66.1		-	6.6	74.	-	74.2	
	Heavy Trucks: 74.4 73.0				61.4 65.8 73.8					73.9		
Vehicle Noise:	Vehicle Noise: 79.5 77.4				73.5		7:	2.2	79.	7	80.0	
Centerline Distan	ce to Noise C	ontour (in fee	t)									
			L		70 dBA 65 d			(60 dBA		dBA	
			Ldn:	-	72	80			1,725	- /	716	
		С	NEL:	3	87	83	35		1,799	875		

Thursday, May 02, 2019

Thursday, May 02, 2019 Thursday,

	FH\	WA-RD-77-108	HIGH	WAY NO	DISE PF	REDICTIO	N MOI	DEL			
	o: OY With Poe: Euclid Av.	,				Project N Job Nu					
	SPECIFIC IN	IPUT DATA							LINPUTS	5	
Highway Data				S	ite Con	ditions (l	lard =	10, So	ft = 15)		
Average Daily	Traffic (Adt):	36,035 vehicl	es				A	lutos:	15		
Peak Hour I	Percentage:	10%			Me	dium Truc	ks (2 A	xles):	15		
Peak He	our Volume:	3,603 vehicle	S		He	avy Truck	s (3+ A	xles):	15		
	hicle Speed:	55 mph		V	ehicle l	Mix					
Near/Far Lar	ne Distance:	154 feet			Vehi	cleType		Day	Evening	Night	Daily
Site Data						Αι	itos:	66.2%	13.5%	20.3%	92.68%
Bar	rier Height:	0.0 feet			Ме	edium Tru	cks:	77.1%	5.3%	17.6%	4.94%
Barrier Type (0-Wa	all, 1-Berm):	0.0			F	łeavy Tru	cks:	36.3%	1.5%	12.2%	2.37%
Centerline Dis		84.0 feet		N	oise Sc	urce Ele	vations	(in fe	et)		
Centerline Dist. t		84.0 feet				Autos:		•	,		
Barrier Distance t		0.0 feet			Mediur	n Trucks:	2.2	97			
Observer Height (/		5.0 feet			Heav	y Trucks:	8.0	04	Grade Adj	ustmen	t: 0.0
	d Elevation:	0.0 feet		-							
	d Elevation:	0.0 feet		L	ane Eq	uivalent l			eet)		
F	Road Grade:	0.0%				Autos:					
	Left View:	-90.0 degre				n Trucks:					
	Right View:	90.0 degre	es		Heav	y Trucks:	33.7	05			
FHWA Noise Mode	el Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite		Fresn	_	Barrier Atte		rm Atten
Autos:	71.78	2.53		2.42		-1.20		4.75	0.0		0.000
Medium Trucks:	82.40			2.47		-1.20		4.88	0.0		0.000
Heavy Trucks:	86.40	-13.39		2.47		-1.20		5.21	0.0	00	0.000
Unmitigated Noise											
	Leq Peak Hou			Leq Eve		Leq N			Ldn		NEL
Autos:		i.5	72.9		72.1		69.1		76.2		76.7
Medium Trucks:		1.5	71.5		65.9		66.4		73.8		74.0
Heavy Trucks:		.3	72.8		61.3		65.6		73.7		73.8
Vehicle Noise:).3	77.3		73.3		72.0		79.5	i	79.8
Centerline Distance	e to Noise C	ontour (in fee)	70 dl	24	65 di	24	-	0 dBA		5 dBA
			I dn:					-			
		0	Lan: NFI:					3,619 3,773			
		C.	VEL:	3//	377 813 1,751 3,7				,113		

	FHV	VA-RD-77-108	HIGH	WAY N	OISE P	REDICT	ION MC	DDEL			
	o: OY With Pro e: Euclid Av. at: n/o Bickmon	•					Name: lumber:				
	SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data				5	Site Cor	ditions	(Hard =	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	23,421 vehicle	es					Autos:	15		
Peak Hour I	Percentage:	10%			Me	dium Tr	ucks (2	Axles):	15		
Peak He	our Volume:	2,342 vehicle	s		He	avy Tru	cks (3+	Axles):	15		
Vel	hicle Speed:	55 mph			/ehicle	Miv					
Near/Far Lar	ne Distance:	154 feet				icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	66.2%	13.5%	20.3%	92.489
Rar	rier Height:	0.0 feet			М	edium T	rucks:	77.1%	5.3%	17.6%	5.00%
Barrier Type (0-Wa		0.0			1	Heavy T	rucks:	86.3%	1.5%	12.2%	2.53%
Centerline Dis	t. to Barrier:	84.0 feet		,	Voise S	ource F	levation	ıs (in fe	et)		
Centerline Dist. t	to Observer:	84.0 feet		F.		Auto		.000	,00,		
Barrier Distance t	to Observer:	0.0 feet			Mediu	m Truck		.297			
Observer Height (/	Above Pad):	5.0 feet				vy Truck		.004	Grade Ad	iustment	0.0
Pa	d Elevation:	0.0 feet									
Roa	d Elevation:	0.0 feet		1	Lane Eq			ice (in i	eet)		
F	Road Grade:	0.0%				Auto		.941			
	Left View:	-90.0 degre	es			m Truck		.679			
	Right View:	90.0 degre	es		Heav	y Truck	s: 33	.705			
FHWA Noise Mode	el Calculation:	s									
VehicleType	REMEL	Traffic Flow	Dis	tance		Road	Fres		Barrier Att		m Atten
Autos:	71.78	0.65		2.42	-	-1.20		-4.75	0.0		0.00
Medium Trucks:	82.40	-12.03		2.47		-1.20		-4.88		000	0.00
Heavy Trucks:	86.40	-14.99		2.47	7	-1.20		-5.21	0.0	000	0.00
Unmitigated Noise	•										
	Leq Peak Hou			Leq Ev			Night		Ldn		NEL
Autos:	73.	-	71.1		70.2		67.	_	74.4		74.
Medium Trucks:	71.	-	69.7		64.1		64.	-	72.0		72.
Heavy Trucks: Vehicle Noise:	72. 77.	•	71.2 75.5		59.7 71.4		64. 70.	-	72.1 77.7		72.: 78.
Centerline Distance					71.4		70.		,,,,		70.
Centerline Distanc	e to Noise Co	mour (in feet	,	70 a	iBA	65	dBA	6	0 dBA	55	dBA
			Ldn:	27	5	5	92		1,276	2,	749

	FHV	VA-RD-77-108	HIGHW	AY NO	OISE P	REDICT	TION MO	DEL			
	o: OY With Process Euclid Av. t: n/o Kimball	•					t Name: Number:				
	PECIFIC IN	PUT DATA							L INPUT	s	
Highway Data				S	ite Con	ditions	(Hard =				
Average Daily T	. ,	35,621 vehicle	es					Autos:			
Peak Hour F		10%					rucks (2)				
	our Volume:	3,562 vehicle	S		He	avy Tru	icks (3+ i	Axles):	15		
	icle Speed:	55 mph		ν	ehicle l	Mix					
Near/Far Lan	e Distance:	154 feet			Veh	icleTyp	е	Day	Evening	Night	Daily
Site Data							Autos:	66.2%	13.5%	20.3%	92.689
Barı	rier Height:	0.0 feet			Me	edium 7	rucks:	77.1%	5.3%	17.6%	4.949
Barrier Type (0-Wa	-	0.0			F	Heavy 7	rucks:	86.3%	1.5%	12.2%	2.389
Centerline Dis	t. to Barrier:	84.0 feet			laisa Si	ourco E	levation	e (in f	not)		
Centerline Dist. to	o Observer:	84.0 feet		/	iorse sc	Auto		000	eei)		
Barrier Distance to	o Observer:	0.0 feet			Madiuu	m Truck		297			
Observer Height (A	Above Pad):	5.0 feet				y Truck		004	Grade Ad	liustment	: 0.0
Pa	d Elevation:	0.0 feet								,	- 0.0
Road	d Elevation:	0.0 feet		L	ane Eq		t Distan	ce (in	feet)		
R	Road Grade:	0.0%				Auto		941			
	Left View:	-90.0 degree	es			m Truck		679			
	Right View:	90.0 degree	es		Heav	ry Truck	rs: 33.	705			
FHWA Noise Mode											
VehicleType	REMEL	Traffic Flow	Distan			Road	Fresi		Barrier At		m Atten
Autos:	71.78	2.48		2.42		-1.20		-4.75		000	0.00
Medium Trucks:	82.40	-10.25		2.47		-1.20		-4.88		000	0.00
Heavy Trucks:	86.40	-13.43		2.47		-1.20		-5.21	0.0	000	0.00
Unmitigated Noise	•						A Contact	1	Labo		NE
VehicleType I	Leq Peak Hou 75.		72.9	eq Ev	ening 72.0	Leq	Night 69.0	1	Ldn 76.:		NEL 76.
Medium Trucks:	73.	-	71.5		65.9		66.3	-	76	_	73.
Heavy Trucks:	74		71.5 72.8		61.2		65.6	-	73.		73.
Vehicle Noise:	79.		77.2		73.2		72.0	-	79.		79.
Centerline Distance	e to Noise Co	ntour (in feet)								
								_		_	
Ochternine Distance	0 10 710,00 00	,		70 di	BA	65	dBA	(60 dBA	55	dBA
Centerinie Distance	0.10710100 00		Ldn:	70 di 359	9	7	774 807		1,668 1,738	3,	dBA 593 745

Thursday, May 02, 2019

FH	WA-RD-77-108 HIGI	HWAY NOISE P	REDICTION N	MODEL		
Scenario: OY With P			Project Nam			
Road Name: Archibald			Job Numbe	er: 10351		
Road Segment: n/o Limoni	e Av.					
SITE SPECIFIC II	IPUT DATA		NOIS	E MODE	L INPUTS	
Highway Data		Site Co.	nditions (Hard	d = 10, Sc	oft = 15)	
Average Daily Traffic (Adt):	29,511 vehicles			Autos:	15	
Peak Hour Percentage:	10%	Me	edium Trucks (2 Axles):	15	
Peak Hour Volume:	2,951 vehicles	He	eavy Trucks (3	+ Axles):	15	
Vehicle Speed:	55 mph	Vehicle	Miv			
Near/Far Lane Distance:	154 feet		nicleType	Dav	Evening	Night Daily
Site Data			Autos	66.2%	-	20.3% 93.44%
Barrier Height:	0.0 feet	N	ledium Trucks	77.1%	5.3%	17.6% 4.67%
Barrier Type (0-Wall, 1-Berm):	0.0		Heavy Trucks	86.3%	1.5%	12.2% 1.89%
Centerline Dist. to Barrier:	84.0 feet	Noise S	ource Elevati	ons (in fe	eet)	
Centerline Dist. to Observer:	84.0 feet	110,000	Autos:	0.000	,,,,	
Barrier Distance to Observer:	0.0 feet	Mediu	im Trucks:	2.297		
Observer Height (Above Pad):	5.0 feet		vv Trucks:	8.004	Grade Adii	stment: 0.0
Pad Elevation:	0.0 feet		,			
Road Elevation:	0.0 feet	Lane Ed	juivalent Dist	ance (in	feet)	
Road Grade:	0.0%			33.941		
Left View:	-90.0 degrees			33.679		
Right View:	90.0 degrees	Hea	vy Trucks: 3	33.705		
FHWA Noise Model Calculation	is					
VehicleType REMEL	Traffic Flow Dia	stance Finite	Road Fre	esnel	Barrier Atte	n Berm Atten
Autos: 71.78	1.70	2.42	-1.20	-4.75	0.00	0.000
Medium Trucks: 82.40	-11.32	2.47	-1.20	-4.88	0.00	0.000
Heavy Trucks: 86.40	-15.25	2.47	-1.20	-5.21	0.00	0.000
Unmitigated Noise Levels (with	out Topo and barri	er attenuation)				
VehicleType Leq Peak Ho		Leq Evening	Leq Night		Ldn	CNEL
	.7 72.1	71.2		8.2	75.4	75.8
	2.4 70.4	64.8		5.3	72.7	72.9
	2.4 71.0	59.4		3.7	71.8	71.9
Vehicle Noise: 78	3.1 76.0	72.3	3 7	0.9	78.4	78.6
Centerline Distance to Noise C	ontour (in feet)					
		70 dBA	65 dBA		60 dBA	55 dBA
	Ldn: CNFI:	303 317	653 682		1,406 1,469	3,030 3.165

	FHV	VA-RD-77-108	HIGH	WAY	NOISE P	REDICT	ION MC	DEL			
Road Nam	io: OY With Proper Archibald A nt: s/o Limonite	v.					t Name: lumber:				
SITE S	SPECIFIC IN	PUT DATA				ı	NOISE	MODE	L INPUT	S	
Highway Data					Site Cor	ditions	(Hard =	: 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	28,057 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2	Axles):	15		
Peak H	our Volume:	2,806 vehicle	S		He	avy Tru	cks (3+	Axles):	15		
Ve	hicle Speed:	45 mph		1	Vehicle	Miv					
Near/Far Lai	ne Distance:	78 feet		1		icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	66.2%		20.39	
Par	rier Height:	0.0 feet			М	edium T	rucks:	77.1%	5.3%	17.69	4.66%
Barrier Type (0-W	-	0.0				Heavy T	rucks:	86.3%	1.5%	12.29	6 1.97%
Centerline Dis		76.0 feet		-							
Centerline Dist.	to Observer:	76.0 feet			Noise S				eet)		
Barrier Distance	to Observer:	0.0 feet				Auto		000			
Observer Height (Observer Height (Above Pad): 5.0 feet					m Truck		297	Crada Ad	i atma	4 0 0
Pa	ad Elevation:	0.0 feet			Hear	y Truck	s: 8.	004	Grade Ad	usunen	ii. 0.0
Roa	ad Elevation:	0.0 feet		ĺ	Lane Eq	uivalen	t Distan	ce (in	feet)		
I	Road Grade:	0.0%				Auto	s: 65	422			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 65	.286			
	Right View:	90.0 degree	es		Hear	y Truck	s: 65	299			
FHWA Noise Mode	el Calculation:	S									
VehicleType	REMEL	Traffic Flow	Dis	tance		Road	Fres		Barrier Att	_	erm Atten
Autos:	68.46	2.35		-1.8		-1.20		-4.73		000	0.000
Medium Trucks:	79.45	-10.68		-1.8		-1.20		-4.88		000	0.000
Heavy Trucks:	84.25	-14.42		-1.8	34	-1.20		-5.25	0.0	000	0.000
Unmitigated Noise			barrie	er atte	nuation)			,			
VehicleType	Leq Peak Hou			Leq E	vening		Night		Ldn		CNEL
Autos:	67.		65.2		64.3		61.		68.5		68.9
Medium Trucks:	65.		63.8		58.2		58.		66.		66.2
Heavy Trucks: Vehicle Noise:	66. 71.		65.4 69.6		53.8 65.5		58. 64.		66.2 71.8		66.3 72.1
Centerline Distance					00.0		04.	•	, 1.0		12.1
Contonino Distant	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	mour (m reet	_	70	dBA	65	dBA	6	60 dBA	5	5 dBA
			Ldn:	1	01	2	17		467	1	,006
	CNEL:				105 226 486 1,048					,048	

	FHW	A-RD-77-108	HIGH	IWAY	NOISE P	REDICT	ION MO	DEL			
Road Nam	io: OY With Pro le: Kimball Av. nt: w/o Mountain	,					Name: umber:				
SITE	SPECIFIC INF	PUT DATA				N	IOISE I	MODE	L INPUT	S	
Highway Data					Site Cor	nditions	(Hard =	: 10, Sc	oft = 15)		
Average Daily	Traffic (Adt): 2	22,859 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10%			Me	edium Tri	ucks (2 i	4xles):	15		
Peak H	our Volume: 2	2,286 vehicle	S		He	eavy Truc	cks (3+)	4xles):	15		
Ve	hicle Speed:	50 mph			Vehicle	Miv					
Near/Far Lai	ne Distance:	36 feet				icleType		Dav	Evening	Night	Daily
Site Data							Autos:	66.2%		20.3%	,
Par	rier Height:	0.0 feet			М	edium T	rucks:	77.1%	5.3%	17.6%	4.75%
Barrier Type (0-W		0.0 1001				Heavy Ti	rucks:	86.3%	1.5%	12.2%	2.22%
Centerline Dis	. ,	44.0 feet									
Centerline Dist		44.0 feet			Noise S				eet)		
Barrier Distance	to Observer:	0.0 feet				Auto		000			
Observer Height (Above Pad):	5.0 feet				m Truck		297			
	ad Elevation:	0.0 feet			Hear	vy Truck	s: 8.	004	Grade Adj	ustment	0.0
	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Distan	ce (in i	feet)		
I	Road Grade:	0.0%				Auto	s: 40.	460			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 40.	241			
	Right View:	90.0 degree	es		Hear	vy Truck	s: 40.	262			
FHWA Noise Mode	el Calculations										
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresi	nel	Barrier Atte	en Bei	m Atten
Autos:	70.20	0.98		1.2	28	-1.20		-4.61	0.0	000	0.00
Medium Trucks:	81.00	-11.94		1.3	31	-1.20		-4.87	0.0	000	0.00
Heavy Trucks:	85.38	-15.24		1.3	31	-1.20		-5.50	0.0	000	0.00
Unmitigated Noise	e Levels (witho	ut Topo and	barrie	er atte	nuation)						
VehicleType	Leq Peak Hour	Leq Day	′	Leq E	vening	Leq	Night		Ldn	C	NEL
Autos:	71.3	-	68.7		67.8		64.8	-	72.0		72.4
Medium Trucks:	69.2	=	67.3		61.7		62.1		69.5		69.
Heavy Trucks:	70.2		68.8		57.2		61.6		69.7		69.
Vehicle Noise:	75.1	•	73.1		69.0		67.8	3	75.3	3	75.
Centerline Distance	ce to Noise Cor	ntour (in feet)	70		0.5	10.4				10.4
			Later		dBA		dBA	6	60 dBA		dBA
			Ldn:					93			
	CNEL:					103 223 480 1,035					035

	FHWA	-RD-77-108 I	HIGHWA'	/ NO	OISE PR	EDICTI	ON MO	DEL			
Scenario: OY W Road Name: Archii Road Segment: s/o S	oald Av.					Project i Job Nu	Name: I umber:				
SITE SPECIF	IC INPU	JT DATA		Ţ					L INPUT	S	
Highway Data				S	ite Cond	litions (
Average Daily Traffic (A		,178 vehicle:	S					Autos:	15		
Peak Hour Percenta	ige:	10%				lium Tru		/	15		
Peak Hour Volu	me: 2,	418 vehicles			Hea	vy Truc	ks (3+ A	(xles	15		
Vehicle Spe	ed:	45 mph		ν	ehicle M	lix					
Near/Far Lane Distar	ice:	78 feet		Ė	Vehic	leType		Day	Evening	Night	Daily
Site Data						Α	utos:	66.2%	13.5%	20.3%	93.35%
Barrier Hei	tht.	0.0 feet		1	Me	dium Tr	ucks:	77.1%	5.3%	17.6%	4.71%
Barrier Type (0-Wall, 1-Be		0.0			Н	eavy Tri	ucks:	86.3%	1.5%	12.2%	1.95%
Centerline Dist. to Bar	rier:	76.0 feet			loise So	urco Ek	ovation	c (in f	not)		
Centerline Dist. to Obser	ver:	76.0 feet		-	10/36 30/	Autos		000	ei)		
Barrier Distance to Obser	ver:	0.0 feet			Medium			297			
Observer Height (Above P	ad):	5.0 feet				Trucks		004	Grade Ad	iustment	. 0 0
Pad Elevai	ion:	0.0 feet		L						juoumom	0.0
Road Elevai	ion:	0.0 feet		L	ane Equ	ivalent	Distan	ce (in :	feet)		
Road Gra	ide:	0.0%				Autos	: 65.	422			
Left V	ew: -	90.0 degrees	S		Medium	Trucks	65.	286			
Right V	ew:	90.0 degrees	S		Heavy	Trucks	: 65.	299			
FHWA Noise Model Calcul	ations										
VehicleType REMI	L T	raffic Flow	Distanc	е	Finite F	Road	Fresn	el	Barrier Att	en Bei	m Atten
Autos:	88.46	1.70	-1	.85		-1.20		-4.73	0.0	000	0.000
	9.45	-11.28	-1	.84		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	34.25	-15.11	-1	.84		-1.20		-5.25	0.0	000	0.000
Unmitigated Noise Levels		t Topo and b	arrier att	enu	ıation)						
VehicleType Leq Pea		Leq Day		Ev	ening	Leq I	Vight		Ldn		NEL
Autos:	67.1	-	4.5		63.6		60.6		67.8	-	68.2
Medium Trucks:	65.1	-	3.2		57.6		58.0		65.5	-	65.6
Heavy Trucks:	66.1	6	4.7		53.1		57.4		65.5	5	65.6
Vehicle Noise:	71.0	6	9.0		64.9		63.7	_	71.2	2	71.4
Centerline Distance to No.	se Cont	our (in feet)									

Thursday, May 02, 2019

	FH\	WA-RD-77-10	8 HIG	HWAY	NOISE P	REDICTI	ON M	ODEL			
Road Nan	rio: OY With Pi ne: Kimball Av. nt: w/o Euclid					Project Job Ni		: MCH : 10351			
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data					Site Con	ditions	(Hard	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	24,497 vehic	les					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tru	icks (2	2 Axles):	15		
Peak F	lour Volume:	2,450 vehicl	es		He	avy Truc	ks (3-	+ Axles):	15		
Ve	ehicle Speed:	50 mph			Vehicle I	Miv					
Near/Far La	ne Distance:	36 feet				icleType	T	Dav	Evening	Night	Daily
Site Data							utos:	66.2%	-	20.3%	,
Pa	rrier Height:	0.0 feet			Me	edium Tr	ucks:	77.1%	5.3%	17.6%	
Barrier Type (0-V		0.0			F	leavy Tr	ucks:	86.3%	1.5%	12.2%	1.99%
,,,,,	ist. to Barrier:	44.0 feet									
Centerline Dist.	to Observer:	44.0 feet			Noise So				eet)		
Barrier Distance	to Observer:	0.0 feet				Autos		0.000			
Observer Height	(Above Pad):	5.0 feet				m Trucks		2.297	0		
	ad Elevation:	0.0 feet			Heav	y Trucks	E.	8.004	Grade Ad	yustment	: 0.0
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalent	Dista	nce (in	feet)		
	Road Grade:	0.0%				Autos	: 4	0.460			
	Left View:	-90.0 degre	ees		Mediui	n Trucks	: 4	0.241			
	Right View:	90.0 degr	ees		Heav	y Trucks	: 4	0.262			
FHWA Noise Mod	lel Calculation	ıs									
VehicleType	REMEL	Traffic Flow		stance	Finite		Fre	snel	Barrier At	ten Ber	m Atten
Autos:		1.29		1.2		-1.20		-4.61		000	0.000
Medium Trucks:				1.3		-1.20		-4.87		000	0.000
Heavy Trucks:	85.38	-15.4		1.3	31	-1.20		-5.50	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	d barrı	ier atte	nuation)						
VehicleType	Leq Peak Hou	ur Leq Da	iy .	Leq E	vening	Leq I	Vight		Ldn		NEL
Autos:	71		69.0		68.1			5.1	72.	-	72.7
Medium Trucks:			67.6		62.0		-	2.4	69.	-	70.0
Heavy Trucks:			68.6		57.1		6	1.4	69.	5	69.6
Vehicle Noise:	75	5.2	73.2		69.3		68	3.0	75.	5	75.8
Centerline Distan	ce to Noise C	ontour (in fee	et)								-
			Į		dBA	65 (60 dBA		dBA
			Ldn:		02	22			474	,	021
		(NEL:	1	07	22	29		494	1,	065

Thursday, May 02, 2019

	FHW	/A-RD-77-108	нісну	NAY N	IOISE PE	EDICT	ON MO	DEL			
Road Nan	rio: OY With Prone: Kimball Av.	oject			.0.02.1.	Project	Name: umber:	MCH			
SITE	SPECIFIC IN	PUT DATA				N	OISE N	/IODE	L INPUTS	5	
Highway Data					Site Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	20,520 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tri	icks (2 A	(xles	15		
Peak F	Hour Volume:	2,052 vehicles	S		He	avy Truc	cks (3+ A	(xles	15		
Ve	ehicle Speed:	50 mph		F	Vehicle I	Miss					
Near/Far La	ane Distance:	51 feet		H		icleType		Dav	Evening	Night	Dailv
Site Data					VCIII			66.2%		20.3%	. ,
	rrier Height:	0.0 feet			Me	edium Ti		77.1%		17.6%	
Barrier Type (0-W		0.0 feet			F	leavy Ti	ucks:	86.3%	1.5%	12.2%	1.89%
	ist. to Barrier:	49.0 feet		L							
Centerline Dist.		49.0 feet		Ľ	Noise Sc				eet)		
Barrier Distance		0.0 feet				Auto		000			
Observer Height		5.0 feet				n Truck		297			
	ad Elevation:	0.0 feet			Heav	y Truck	s: 8.0	004	Grade Adj	ustmen	t: 0.0
	ad Elevation:	0.0 feet		- 1	Lane Equ	uivalen	Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 42.	140			
	I eft View:	-90.0 degree	20		Mediur	n Truck	s: 41.	929			
	Right View:	90.0 degree			Heav	y Truck	s: 41.	950			
FHWA Noise Mod	lel Calculations	;									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresn	iel	Barrier Atte	en Be	rm Atten
Autos:	70.20	0.53		1.0	1	-1.20		-4.64	0.0	00	0.000
Medium Trucks:	81.00	-12.48		1.0	4	-1.20		-4.87	0.0	00	0.000
Heavy Trucks:	85.38	-16.41		1.0	4	-1.20		-5.44	0.0	00	0.000
Unmitigated Nois	e Levels (witho	out Topo and	barrier	r atten	nuation)						
VehicleType	Leq Peak Hou	r Leq Day		Leq E	vening	Leq	Night		Ldn	С	NEL
Autos:	70.	5	68.0		67.1		64.1		71.3		71.7
Medium Trucks:	68.	4	66.4		60.8		61.3	3	68.7		68.9
Heavy Trucks:	68.	8	67.4		55.8		60.1		68.2		68.3
Vehicle Noise:	74.	1	72.1		68.3		66.9)	74.4		74.7
Centerline Distan	ce to Noise Co	ntour (in feet)								
				70 (dBA	65	dBA	- (60 dBA	55	5 dBA
			Ldn:	9	6	2	07		445	-	959
		CI	VEL:	10	00	2	16		465	1	,001

Thursday, May 02, 2019

	FH\	WA-RD-77-10	B HIGH	WAY N	IOISE P	REDICTI	ON MO	DEL			
	o: OY With Po: E: Kimball Av at: e/o Rincon					Project Job N	Name: umber:				
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data					Site Cor	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	20,523 vehic	les					Autos:	15		
Peak Hour I	Percentage:	10%				dium Tru					
Peak H	our Volume:	2,052 vehicle	es		He	avy Truc	ks (3+)	4xles):	15		
Vel	nicle Speed:	50 mph			Vehicle	Mix					
Near/Far Lar	ne Distance:	51 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						F	lutos:	66.2%	13.5%	20.3%	93.439
Bar	rier Heiaht:	0.0 feet			M	edium Tr	ucks:	77.1%	5.3%	17.6%	4.679
Barrier Type (0-Wa	all, 1-Berm):	0.0			-	Heavy Tr	ucks:	86.3%	1.5%	12.2%	1.899
Centerline Dis	t. to Barrier:	49.0 feet		- 17	Noise S	ource El	evation	s (in fe	eet)		
Centerline Dist. t	o Observer:	49.0 feet		F		Autos		000	,		
Barrier Distance t	o Observer:	0.0 feet			Mediu	m Trucks		297			
Observer Height (/	Above Pad):	5.0 feet			Heav	vy Trucks		004	Grade Ad	iustment	: 0.0
	d Elevation:	0.0 feet		-							
	d Elevation:	0.0 feet		Ľ	Lane Eq	uivalent			feet)		
F	Road Grade:	0.0%				Autos		140			
	Left View:	-90.0 degre				m Trucks		929			
	Right View:	90.0 degre	ees		Heav	y Trucks	8: 41.	950			
FHWA Noise Mode	l Calculation			-							
VehicleType	REMEL	Traffic Flow		stance		Road	Fresi		Barrier Att		m Atten
Autos:	70.20	0.53		1.0	•	-1.20		-4.64		000	0.00
Medium Trucks:	81.00	-12.48		1.0		-1.20		-4.87		000	0.00
Heavy Trucks:	85.38	-16.40)	1.0	4	-1.20		-5.44	0.0	000	0.00
Unmitigated Noise								1			
	Leq Peak Ho		,	Leq E		Leq			Ldn		NEL
Autos:	70		68.0		67.1		64.		71.3	-	71.
Medium Trucks:	68		66.4		60.8		61.3	-	68.7		68.
Heavy Trucks: Vehicle Noise:	68		67.4 72.1		55.8 68.3		60.1		68.2 74.4		68. 74.
					30.3		00.	,	74.	*	74.
Centerline Distanc	e to Noise C	ontour (in fee	t)	70.0	dBA	65.0	dBA	-	0 dBA	55	dBA
			I dn:								160
				9	h	20)/		445	9	

	FH\	WA-RD-77-108	HIGH	WAY N	DISE P	REDICTIO	N MOI	DEL			
	o: OY With P					Project Na					
	e: Kimball Av	-				Job Nun	nber: 1	10351			
Road Segmen	it: w/o Rincon	Meadows Av.									
	SPECIFIC IN	NPUT DATA							L INPUT	S	
Highway Data				S	ite Con	ditions (H	ard =	10, So	oft = 15)		
Average Daily	Traffic (Adt):	21,382 vehicl	es				A	Autos:	15		
Peak Hour	Percentage:	10%				dium Truci			15		
Peak H	our Volume:	2,138 vehicle	S		He	avy Trucks	3+ A	xles):	15		
Vel	hicle Speed:	50 mph		ν	ehicle l	Mix					
Near/Far Lar	ne Distance:	51 feet		F	Veh	icleType		Day	Evening	Night	Daily
Site Data						Aut	os:	66.2%	13.5%	20.3%	93.43%
Rar	rier Heiaht:	0.0 feet			Me	edium Truc	ks:	77.1%	5.3%	17.6%	4.68%
Barrier Type (0-W	all, 1-Berm):	0.0			F	leavy Truc	ks:	86.3%	1.5%	12.2%	1.89%
Centerline Dis		49.0 feet		Λ	loise So	ource Elev	ations	in fe	eet)		
Centerline Dist. t		49.0 feet				Autos:	0.0	000			
Barrier Distance t		0.0 feet			Mediui	m Trucks:	2.2	97			
Observer Height (,	5.0 feet			Heav	y Trucks:	8.0	04	Grade Adj	iustment	: 0.0
	d Elevation:	0.0 feet				-					
	d Elevation:	0.0 feet		L	ane Eq	uivalent D			reet)		
F	Road Grade:	0.0%				Autos:	42.1				
	Left View:	-90.0 degre				n Trucks:	41.9				
	Right View:	90.0 degre	es		Heav	y Trucks:	41.9	950			
FHWA Noise Mode		-									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite		Fresn	_	Barrier Att		rm Atten
Autos:	70.20			1.01		-1.20		4.64	0.0		0.000
Medium Trucks:	81.00			1.04		-1.20		-4.87		000	0.000
Heavy Trucks:	85.38			1.04		-1.20		-5.44	0.0	000	0.000
Unmitigated Noise VehicleType	Lea Peak Ho					/ A/			Ldn		NEL
Autos:	- 1		68.1	Leq Ev	ening 67.3	Leq Ni	9nt 64.3		71.4		NEL 71.9
Medium Trucks:			66.6		61.0		61.5		68.9		69.1
Heavy Trucks:			67.6		56.0		60.3		68.4		68.5
Vehicle Noise:		1.3	72.3		68.4		67.1		74.6		74.8
Centerline Distance	e to Noise C	ontour (in feet	!)								
				70 di	BA	65 dB	A	6	i0 dBA	55	i dBA
			Ldn:	99		212			458	9	986
		C	NEL:	103 222 478 1,029				,029			

Thursday, May 02, 2019

Average Daily Traffic (Adt): 18,680 vehicles		FH\	WA-RD-77-108	HIGH	WAY I	NOISE PI	REDICT	ION M	ODEL			
	Road Nan	ne: Kimball Av.					.,					
Average Daily Traffic (Adt): 18,680 vehicles	SITE	SPECIFIC IN	IPUT DATA				N	IOISE	MODE	L INPUT	S	
Peak Hour Volume: 1,868 vehicles Heavy Trucks (2 Axles): 15	Highway Data					Site Con	ditions	(Hard	= 10, S	oft = 15)		
Peak Hour Volume: 1,868 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 51 feet Vehicle Mix Vehicle Type Day Evening Night Dail Day D	Average Daily	Traffic (Adt):	18,680 vehicle	es					Autos	15		
Vehicle Speed: So mph Near/Far Lane Distance: S1 feet Vehicle Mix Vehicle Type Day Evening Night Daily Night Daily Near/Far Lane Distance: S1 feet Vehicle Type Day Evening Night Daily Night Daily Night Daily Night Daily Night Daily Night	Peak Hour	Percentage:	10%			Me	dium Tru	ıcks (2	Axles).	15		
Near/Far Lane Distance: 51 feet VehicleType Day Evening Night Daily Daily Near National	Peak I	Hour Volume:	1,868 vehicle	s		He	avy Truc	cks (3+	Axles).	15		
Near/Far Lane Distance: 51 feet VehicleType Day Evening Night Daily Real Daily Real Night Daily Real Night Daily Real Night Daily Real Night Daily Real Night Daily Real Night Daily Real Night Daily Real Night Daily Night Night Night Night Night Night Night Night Night Night Night Night Night Night	Ve	ehicle Speed:	50 mph		-	1/-1-1-1-						
Autos: 66.2% 13.5% 20.3% 93.44 Medium Trucks: 77.1% 5.3% 17.6% 4.67 Heavy Trucks: 86.3% 1.5% 12.2% 1.89 Heavy Trucks: 2.297 Heavy Trucks: 2.297 Heavy Trucks: 2.297 Heavy Trucks: 49.00 Heavy Trucks: 2.297 Heavy Trucks: 80.00 Medium Trucks: 2.297 Heavy Trucks: 80.00 Medium Trucks: 2.297 Heavy Trucks: 80.00 Medium Trucks: 2.297 Heavy Trucks: 80.00 Medium Trucks: 2.297 Heavy Trucks: 80.00 Grade Adjustment: 0.0 Heavy Trucks: 80.00 Medium Trucks: 80.00 Medium Trucks: 80.00 Heavy Trucks: 80.00 Medium Trucks: 80.00 Heavy Trucks: 80.00 Medium Trucks: 80.00 Heavy Trucks: 80.00 Medium Trucks: 80.00 Heavy Trucks: 80.00 Medium Trucks: 80.00 Heavy Tr	Near/Far La	ne Distance:	51 feet					. 1	Day	Evonina	Night	Daily
Medium Trucks: 77.1% 5.3% 17.8% 4.67	Cita Data					ven						,
Barrier Type (C-Wall, 1-Berm): 0.0 feet Heavy Trucks: 86.3% 1.5% 12.2% 1.88						44						
Noise Source Elevations (in feet) Autos: 0.000									,			
Noise Source Elevations In Test		. ,				,	icavy II	ucns.	00.57	0 1.570	12.2/0	1.0370
Barrier Distance to Observer: 0.0 feet Autos: 0.000						Noise So	ource El	evatio	ns (in f	eet)		
Diserver Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Lane Equivalent Distance (in feet) Lane Equivalent Distance (in feet)							Auto	s: (0.000			
Pad Elevation: 0.0 feet Heavy Trucks: 8.004 Grade Adjustment: 0.0						Mediu	m Truck	s: 2	2.297			
Road Elevation: 0.0 feet Road Grade: 0.0% Autos: 42.140		. ,				Heav	y Trucks	s: 8	3.004	Grade Ad	justment	0.0
Road Grade: 0.0%					ŀ	I ano Ea	uivalon	Dieta	nco (in	foot)		
Left View:	Ro				ŀ	Lane Ly				ieei)		
Right View: 90.0 degrees Heavy Trucks: 41.950 HWA Noise Model Calculations Vehicle Type REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Bern Atten Autos: 70.20 0.12 1.01 -1.20 -4.64 0.000 0.0 Medium Trucks: 81.00 -12.89 1.04 -1.20 -4.87 0.000 0.0 Medium Trucks: 85.38 -16.81 1.04 -1.20 -5.44 0.000 0.0 Medium Trucks: 85.38 -16.81 1.04 -1.20 -5.44 0.000 0.0 Medium Trucks: 85.38 -16.81 1.04 -1.20 -5.44 0.000 0.0 Medium Trucks: 85.38 -16.81 1.04 -1.20 -5.44 0.000 0.0 Medium Trucks: 85.38 -16.81 1.04 -1.20 -5.44 0.000 0.0 Medium Trucks: 85.08 66.67 66.7 63.7 70.8 71.8 Medium Trucks: 68.0 66.0 60.4 60.9 68.3 68.4 68.4 67.0 55.4 59.7 67.8 66.5 74.0 74.8 Medium Trucks: 84.8 67.0 55.4 59.7 67.8 66.5 74.0 74.8 Medium Trucks: 85.0 67.0 74.8 67.0 74.8 66.5 74.0 74.8 Medium Trucks: 85.0 67.0 67.8 67.0 67.8 67.0 67.8 67.0 67.8 67.0 67.8 67.0 67.8 67.0 67.8 67.0 67.0 67.8 67.0 67						Modiu						
WehicleType												
VehicleType		Right view:	90.0 degree	es		пеал	у писк	s. 4	1.930			
Autos: 70.20 0.12 1.01 -1.20 -4.64 0.000 0.0 Medium Trucks: 81.00 -12.89 1.04 -1.20 -4.87 0.000 0.0 Meavy Trucks: 85.38 -16.81 1.04 -1.20 -5.44 0.000 0.0 Immitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 70.1 67.6 66.7 63.7 70.8 71 Medium Trucks: 68.0 66.0 60.4 60.9 68.3 76 Heavy Trucks: 68.4 67.0 55.4 59.7 67.8 67 Vehicle Noise: 73.7 71.7 67.8 66.5 74.0 74 enterline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 90 194 418 90	FHWA Noise Mod											
Medium Trucks: 81.00 -12.89 1.04 -1.20 -4.87 0.000 0.00 Heavy Trucks: 85.38 -16.81 1.04 -1.20 -5.44 0.000 0.0 militigated Noise: Levels (without Topo and barrier attenution) VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 70.1 67.6 66.7 63.7 70.8 77 Medium Trucks: 68.0 66.0 60.4 60.9 68.3 66 Heavy Trucks: 68.4 67.0 55.4 59.7 67.8 66 Vehicle Noise: 73.7 71.7 67.8 66.5 74.0 72 enterline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 90 194 418 90				Dist				Fre				
Heavy Trucks: 85.38												0.000
Numitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL												0.000
VehicleType	, , , , , ,						-1.20		-5.44	0.0	000	0.000
Autos: 70.1 67.6 66.7 63.7 70.8 71 Medium Trucks: 68.0 66.0 60.4 60.9 68.3 68 Heavy Trucks: 68.4 67.0 55.4 59.7 67.8 67.8 Vehicle Noise: 73.7 71.7 67.8 66.5 74.0 74 enterline Distance to Noise Contour (in feet) TO dBA 65 dBA 60 dBA 55 dBA Ldn: 90 194 418 901									_		1	
Medium Trucks: 68.0 66.0 60.4 60.9 68.3 68 Heavy Trucks: 68.4 67.0 55.4 59.7 67.8 66 Vehicle Noise: 73.7 71.7 67.8 66.5 74.0 74 enterline Distance to Noise Contour (in feet) Ldn: 90 194 418 901	,,		, ,	_	Leq E		Leq					
Heavy Trucks: 68.4 67.0 55.4 59.7 67.8 67.0 Vehicle Noise: 73.7 71.7 67.8 66.5 74.0 74											-	71.3
Vehicle Noise: 73.7 71.7 67.8 66.5 74.0 72 enterline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 dBA Ldn: 90 194 418 901											-	68.5
70 dBA 65 dBA 60 dBA 55 dBA Ldn: 90 194 418 901											_	67.9 74.2
70 dBA 65 dBA 60 dBA 55 dBA Ldn: 90 194 418 901	Centerline Distan	ce to Noise C	ontour (in feet)								
					70	dBA	65	dBA		60 dBA	55	dBA
ONEL 04 202 400 040				Ldn:	9	90	19	94		418	9	101
CNEL: 94 203 436 940			CI	NEL:	9	94	20	03		436	9	140

	FH	WA-RD-77-108	HIGH	WAY I	NOISE P	REDICT	ION MO	DDEL			
Road Na	ario: OY With P me: Kimball Av ent: e/o Main S	r. [*]				.,	Name: lumber:				
SITE	SPECIFIC II	NPUT DATA							L INPUT	s	
Highway Data					Site Cor	nditions	(Hard:	= 10, S	oft = 15)		
Average Dail	y Traffic (Adt):	17,579 vehicl	es					Autos:	15		
Peak Hou	ır Percentage:	10%			Me	edium Tr	ucks (2	Axles):	15		
Peak	Hour Volume:	1,758 vehicle	s		He	eavy Tru	cks (3+	Axles):	15		
ν	ehicle Speed:	50 mph		ŀ	Vehicle	Miv					
Near/Far L	ane Distance:	51 feet		-		icleType	9	Dav	Evenina	Night	Dailv
Site Data							Autos:	66.2%		20.3%	
P	arrier Height:	0.0 feet			М	edium T	rucks:	77.1%	5.3%	17.6%	4.67%
Barrier Type (0-		0.0				Heavy T	rucks:	86.3%	1.5%	12.2%	1.89%
	Dist. to Barrier:	49.0 feet		-							
Centerline Dis		49.0 feet		ļ.	Noise Source Elevations (in feet)						
Barrier Distance	e to Observer:	0.0 feet				Auto		.000			
	Observer Height (Above Pad): 5.0 feet					m Truck		.297			
	Pad Elevation:	0.0 feet			Hear	vy Truck	s: 8	.004	Grade Ad	justmen	t: 0.0
	nad Flevation:	0.0 feet		-	Lane Eq	uivalen	t Distar	nce (in	feet)		
	Road Grade:	0.0%				Auto	s: 42	.140			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 41	.929			
	Right View:	90.0 degre			Hear	vy Truck	s: 41	.950			
FHWA Noise Mo	del Calculation	15									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten
Autos	: 70.20	-0.14		1.0)1	-1.20		-4.64	0.0	000	0.000
Medium Trucks	81.00	-13.15		1.0)4	-1.20		-4.87	0.0	000	0.000
Heavy Trucks	85.38	-17.08		1.0)4	-1.20		-5.44	0.0	000	0.000
Unmitigated Noi	se Levels (with	nout Topo and	barrie	er atte	nuation)						
VehicleType	Leq Peak Ho	ur Leq Da	/	Leq E	vening	Leq	Night		Ldn	С	NEL
Autos	: 6	9.9	67.3		66.4		63.	4	70.6	3	71.0
Medium Trucks	: 6	7.7	65.8		60.2		60.	6	68.0)	68.2
Heavy Trucks	: 6	3.1	66.7		55.1		59.	5	67.6	3	67.6
Vehicle Noise	: 7:	3.4	71.4		67.6		66.	.3	73.7	7	74.0
Centerline Dista	nce to Noise C	ontour (in fee	t)								
				70	dBA	65	dBA	(60 dBA	55	dBA
			Ldn:	8	37	1	86		402	8	365
	CNEL:				90 195 419 903					903	

	FHV	VA-RD-77-108	HIGHW	AY NO	DISE PI	REDICT	ON MO	DEL				
Road Nan	rio: OY With Pr ne: Limonite Av ent: w/o Archiba					Project Job N	Name: umber:					
	SPECIFIC IN	PUT DATA							L INPUT	S		
Highway Data				Si	ite Cor	ditions	(Hard =	= 10, Sc	oft = 15)			
Average Daily	Traffic (Adt):	1 vehicle	es					Autos:	15			
	Percentage:	10%			Me	dium Tri	ıcks (2	Axles):	15			
Peak I	Hour Volume:	0 vehicle	s		He	avy Truc	cks (3+	Axles):	15			
Ve	ehicle Speed:	50 mph		V	ehicle	Miv						
Near/Far La	ane Distance:	78 feet		-		icleType		Dav	Evening	Night	Daily	
Site Data							lutos:	66.2%	13.5%	20.3%	93.41%	
D-	rrier Height:	0.0 feet			М	edium Ti	ucks:	77.1%	5.3%	17.6%	4.69%	
Barrier Type (0-V		0.0			- 1	Heavy Ti	ucks:	86.3%	1.5%	12.2%	1.90%	
,, ,	ist. to Barrier:	76.0 feet		_								
Centerline Dist.		76.0 feet		N	oise S	ource E			eet)			
Barrier Distance		0.0 feet			Autos: 0.000							
Observer Height		5.0 feet				m Truck		.297				
Pad Elevation: 0.0 feet					Heav	y Truck	s: 8	.004	Grade Adj	ustment	: 0.0	
Road Elevation: 0.0 feet				Lá	ane Eq	uivalen	Distar	ice (in	feet)			
Road Elevation: 0.0 feet Road Grade: 0.0%						Auto	s: 65	.422				
	Left View:		20		Medium Trucks: 65.286							
	Left View: -90.0 degrees Right View: 90.0 degrees				Heavy Trucks: 65.299							
FHWA Noise Mod	lel Calculation	s										
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fres	nel	Barrier Atte	en Bei	m Atten	
Autos:	70.20	-42.59		-1.85		-1.20		-4.73	0.0	100	0.000	
Medium Trucks:	81.00	-55.58		-1.84		-1.20		-4.88	0.0	00	0.000	
Heavy Trucks:	85.38	-59.51		-1.84		-1.20		-5.25	0.0	000	0.000	
Unmitigated Nois	nmitigated Noise Levels (without Topo and barrier at		attenu	ation)								
VehicleType				.eq Eve	ening	Leq	Night		Ldn	C	NEL	
Autos:	Autos: 24.6 22.0			21.1		18.	1	25.3	3	25.7		
Medium Trucks:	Medium Trucks: 22.4 20.5				14.9		15.	3	22.7	,	22.9	
Heavy Trucks: 22.8 21.4			9.8 14.1 22.2			2	22.3					
Vehicle Noise: 28.1 26.1					22.3		20.	9	28.4	ı	28.7	
Centerline Distance to Noise Contour (in feet)												
			L	70 dE	ЗА		dBA	(60 dBA	55	dBA	
			Ldn:	0)		1		1	
CNEL:				0 0 1 1					1			

Barrier Height: D.0 feet Barrier Type (0-Wall, 1-Berm): D.0 Centerline Dist. to Barrier: 49.0 feet Centerline Dist. to Observer: 49.0 feet Centerline Dist. to Observer: 49.0 feet Centerline Dist. to Observer: 49.0 feet Centerline Dist. to Observer: 49.0 feet Centerline Dist. to Observer: 49.0 feet Centerline Dist. to Observer: 49.0 feet Centerline Dist. for Observer: 49.0 feet Centerline Dist. for Observer: 49.0 feet Centerline Dist. for Observer: 49.0 feet Centerline Dist. for Observer: 49.0 feet Centerline Dist. for Observer: 49.0 feet Centerline Dist. for Observer: 49.0 feet Centerline Dist. for Observer: 49.0 feet Centerline Dist. for Observer: 49.0 feet Centerline Dist. for Observer: 49.0 feet Centerline Dist. for Observer: 49.0 feet Centerline Dist. for Observer: 49.0 feet Centerline Dist. for Observer: 49.0 feet Centerline Dist. for Observer: 49.0 feet Centerline Dist. for Observer: 49.0 feet Centerline Dist. for Observer: 49.0 feet Centerline Dist. for Observer: 49.0 feet Centerline Dist. for Observer: 49.0 feet Centerline Dist. feet Centerline Dis		SPECIFIC IN	PUT DATA						L INPUT	S	
Peak Hour Percentage: 10%	lighway Data				Site Cor	nditions	(Hard =	= 10, Sc	oft = 15)		
Peak Hour Volume: Vehicle Speed:	Average Daily	Traffic (Adt):	14,803 vehicles					Autos:	15		
Vehicle Speed: 50 mph Near/Far Lane Distance: 51 feet Site Data Site Data Autos: 66.2% 13.5% 20.3% 58.2% 20.3% 58.2% 20.3% 58.2% 20.3% 58.2% 20.3% 59.2% 20.3% 59.2% 20.3% 59.2% 20.3% 59.2% 20.3% 59.2% 20.3% 59.2% 20.3% 59.2% 20.3% 59.3% 20.3% 59.3% 20.3% 59.2% 20.3% 59.3% 20.3% 59.3% 20.3% 59.3% 20.3% 59.3% 20.3% 59.3% 20.3% 59.3% 20.3% 59.3% 20.3% 59.3% 20.3% 59.3% 20.3% 59.3% 20.3%	Peak Hour	Percentage:	10%		Me	edium Tru	ıcks (2	Axles):	15		
Near/Far Lane Distance: 51 feet Vericle MMX Vericle Type Day Evening Night Neither Type Day Evening Night Neither Type Night Neither Type Night Neither Type Night Neither Type Night	Peak H	our Volume:	1,480 vehicles		He	eavy Truc	cks (3+	Axles):	15		
Site Data Sarrier Height: Barrier Height: D.0 feet Autos: 66.2% 13.5% 20.3% 5.0% 17.6% Medium Trucks: 77.1% 5.3% 17.6% Medium Trucks: 77.1% 5.3% 17.6% Medium Trucks: 86.3% 1.5% 12.2% Medium Trucks: 86.3% 1.5% 12.2% Medium Trucks: 86.2% 13.5% 12.2% Medium Trucks: 86.2% 13.5% 12.2% Medium Trucks: 86.3% 1.5% 12.2% Medium Trucks: 86.3% 1.5% 12.2% Medium Trucks: 86.3% 1.5% 12.2% Medium Trucks: 86.3% 1.5% 12.2% Medium Trucks: 86.0% 1.5% 12.2% Medium Trucks: 86.0% 1.5% 12.2% Medium Trucks: 86.0% 1.5% 12.2% Medium Trucks: 86.0% 1.5% 12.2% Medium Trucks: 86.0% Grade Adjustment: 4.0% Medium Trucks: 86.0% Grade Adjustment: 4.0% Medium Trucks: 41.929 Medium Trucks: 41.929 Medium Trucks: 41.929 Medium Trucks: 41.929 Medium Trucks: 41.929 Medium Trucks: 81.00 -13.88 1.04 -1.20 -4.64 0.000 Medium Trucks: 85.38 1.781 1.04 -1.20 -4.64 0.000 Medium Trucks: 85.38 1.781 1.04 -1.20 -4.64 0.000 Medium Trucks: 85.38 1.781 1.04 -1.20 -5.44 0.000 Medium Trucks: 69.1 66.5 65.7 62.7 69.8 Medium Trucks: 67.4 66.0 54.4 58.7 66.8 Medium Trucks: 67.4 66.0 54.4 58.7 66.8 Medium Trucks: 67.4 66.0 54.4 58.7 66.8 Medium Trucks: 67.4 66.0 54.4 58.7 66.8 Medium Trucks: 67.4 66.0 54.4 58.7 66.8 Medium Trucks: 67.4 66.0 54.4 58.7 66.8 Medium Trucks: 67.4 66.0 54.4 58.7 66.8 Medium Trucks: 67.4 66.0 54.4 58.7 66.8 Medium Trucks: 67.4 66.0 54.4 58.7 66.8 Medium Trucks: 67.4 66.0 54.4 58.7 66.8 Medium Trucks: 67.4 66.0 54.4 58.7 66.8 Medium Trucks: 67.4 66.0 54.4 58.7 66.8 Medium Trucks: 67.4 66.0 54.4 58.7 66.8 Medium Trucks: 67.4 66.0 54.4 58.7 66.8 Medium Trucks: 67.4 66.0 54.4 58.7 66.8 Medium Trucks: 67.4 66.0 54.4 58.7 66.8 Medium Trucks: 67.4 66.0 54.4 58.7 66.8 Medium Trucks: 67.4 66.0 65.0 65	Vel	nicle Speed:	50 mph		Vehicle	Mix					
Autos: 66.2% 13.5% 20.3% 5 Medium Trucks: 77.1% 5.3% 17.5% Centerline Dist. to Barrier 49.0 feet Centerline Dist. to Diserver: 49.0 feet Autos: 0.000 Medium Trucks: 86.3% 1.5% 12.2%	Near/Far Lar	ne Distance:	51 feet		Veh	icleTvpe		Dav	Evenina	Niaht	Dailv
Barrier Type (0-Wall, 1-Berm):	ite Data							66.2%			93.41%
Barrier Type (0-Wall, 1-Berm):	Bar	rier Heiaht:	0.0 feet		M	ledium Tr	rucks:	77.1%	5.3%	17.6%	4.69%
Noise Source Elevations (in feet)		-	0.0			Heavy Tr	rucks:	86.3%	1.5%	12.2%	1.90%
Centerline Dist. to Observer: 49,0 feet Barrier Distance to Observer: 0.0 feet Content of Con	Centerline Dis	t. to Barrier:	49.0 feet		Maine C	ouroo El	los rodios	an (in f	2041		
Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 1	Centerline Dist. t	o Observer:	49.0 feet		Noise 3				ei)		
Diserver Height (Above Pad):	Barrier Distance t	o Observer:	0.0 feet		Modis						
Pad Elevation: 0.0 feet Road Glevation: 0.0 feet Road Glevation: 0.0 feet Road Grade: 0.0% Left View: 90.0 degrees Right View: 90.0 degrees Heavy Trucks: 41.929 Heavy Trucks: 41.950 Heavy	Observer Height (Above Pad):	5.0 feet						Grade Ad	iuetmant	. 0 0
Road Grade:	Pa	d Elevation:	0.0 feet		пеа	vy Trucks	s. o	.004	Orade Adj	usunom	0.0
Left View:	Roa	d Elevation:	0.0 feet		Lane Eq	uivalent	Distar	ice (in i	feet)		
	F	Road Grade:	0.0%			Autos	s: 42	.140			
		Left View:	-90.0 degrees		Mediu	m Trucks	s: 41	.929			
VehicleType		Right View:	90.0 degrees		Hea	vy Trucks	s: 41	.950			
Autos: 70.20	HWA Noise Mode	l Calculations	;								
Medium Trucks: 81.00	VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten
Heavy Trucks: 85.38 -17.81 1.04 -1.20 -5.44 0.000	Autos:	70.20	-0.89	1	.01	-1.20		-4.64	0.0	000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation) Vehicle Type Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNE	Medium Trucks:	81.00	-13.88	1	.04	-1.20		-4.87	0.0	000	0.000
VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNI Autos: 69.1 66.5 65.7 62.7 69.8 Medium Trucks: 67.0 65.0 59.4 59.9 67.3 Heavy Trucks: 67.4 66.0 54.4 58.7 66.8 Vehicle Noise: 72.7 70.7 66.8 65.5 73.0 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 d	Heavy Trucks:	85.38	-17.81	1	.04	-1.20		-5.44	0.0	000	0.000
Autos: 69.1 66.5 65.7 62.7 69.8 Medium Trucks: 67.0 65.0 59.4 59.9 67.3 Heavy Trucks: 67.4 66.0 54.4 58.7 66.8 Vehicle Noise: 72.7 70.7 66.8 65.5 73.0 Centerline Distance to Noise Contour (In feet) 70 dBA 65 dBA 60 dBA 55 d				arrier att	enuation)						
Medium Trucks: 67.0 65.0 59.4 59.9 67.3 Heavy Trucks: 67.4 66.0 54.4 58.7 66.8 Vehicle Noise: 72.7 70.7 66.8 65.5 73.0 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 d	,,	- 1	- 1 - 7								
Heavy Trucks: 67.4 66.0 54.4 58.7 66.8 Vehicle Noise: 72.7 70.7 66.8 65.5 73.0 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 d								-			70.3
Vehicle Noise: 72.7 70.7 66.8 65.5 73.0 Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 d		67.									67.5
Centerline Distance to Noise Contour (in feet) 70 dBA 65 dBA 60 dBA 55 d	Heavy Trucks:	67.	4 66	.0	54.4						66.9
70 dBA 65 dBA 60 dBA 55 d				.7	66.8		65.	5	73.0)	73.2
	enterline Distanc	e to Noise Co	ntour (in feet)					1		1	
								1 6			
Ldn: 77 166 359 773											
CNEL: 81 174 374 806			CNE	L:	81	17	74		374	8	06

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Project Name: MCH Job Number: 10351

Scenario: OY With Project Road Name: Kimball Av. Road Segment: e/o Flight Av.

Thursday, May 02, 2019

	B HIGH	HWAY	NOISE P	REDICTION	ON MC	DDEL					
Road Na	nrio: OY With P me: Limonite A ent: e/o Archiba	v.				Project I Job Nu					
SITE	SPECIFIC II	IPUT DATA				N	OISE	MODE	L INPUT	S	
Highway Data					Site Cor	nditions (Hard =	= 10, S	oft = 15)		
Average Daily	y Traffic (Adt):	22,688 vehic	les					Autos:	15		
Peak Hou	r Percentage:	10%			Me	dium Tru	cks (2	Axles).	15		
Peak	Hour Volume:	2,269 vehicle	es		He	avy Truci	ks (3+	Axles).	15		
V	ehicle Speed:	50 mph			Vehicle	Miv					
Near/Far L	ane Distance:	78 feet				icleType		Dav	Evening	Night	Daily
Site Data							utos:	66.2%		20.3%	
	arrier Height:	0.0 feet			М	edium Tru	ıcks:	77.1%		17.6%	
Barrier Type (0-		0.0 feet				Heavy Tru	ıcks:	86.3%	1.5%	12.2%	2.00%
,,,,	Dist. to Barrier:	76.0 feet									
Centerline Dis		76.0 feet			Noise S						
Barrier Distance	e to Observer:	0.0 feet			Autos: 0.000 Medium Trucks: 2.297						
Observer Height	(Above Pad):	5.0 feet					-		Crada Ad	ii rotmon	
	Pad Elevation:	0.0 feet			Heal	y Trucks	. 8	.004	Grade Ad	jusunen	. 0.0
R	oad Elevation:	0.0 feet			Lane Eq	uivalent	Distar	ice (in	feet)		
	Road Grade:	0.0%				Autos	: 65	.422			
	Left View:				Mediu	m Trucks	: 65	.286			
	Right View:				Heav	y Trucks	: 65	.299			
FHWA Noise Mo	del Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite Road		Fresnel		Barrier Att	en Be	rm Atten
Autos		0.96		-1.8		-1.20		-4.73		000	0.000
Medium Trucks	: 81.00	-12.03		-1.8		-1.20		-4.88	0.0	000	0.000
Heavy Trucks	: 85.38	-15.73		-1.8	34	-1.20		-5.25	0.0	000	0.000
Unmitigated Nois											
VehicleType	Leq Peak Ho			Leq E	vening	Leq N			Ldn		NEL
Autos		3.1	65.5		64.6		61.		68.8		69.2
Medium Trucks		i.9	64.0		58.4		58.		66.2		66.4
Heavy Trucks		5.6	65.2		53.6		57.		66.0		66.1
Vehicle Noise		.7	69.7		65.8		64.	5	72.0)	72.3
Centerline Dista	nce to Noise C	ontour (in fee	t)	70	70 dBA 65 dBA			60 dBA			i dBA
			Ldn:		03	22			479		
					08	22	_		500	1,032 1,077	
CNEL:					23	-		500	'		

	FHV	VA-RD-77-108	HIGHW	/AY N	IOISE PR	EDICT	ION MC	DEL			
Road Nam	io: OY With Pr ne: Pine Av. nt: w/o El Prad	,					Name: lumber:				
SITE	SPECIFIC IN	PUT DATA				N	IOISE	MODE	L INPUT	s	
Highway Data					Site Con	ditions	(Hard =	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	27 vehicle	:S					Autos.	15		
Peak Hour	Percentage:	10%			Med	dium Tr	ucks (2	Axles).	: 15		
Peak H	lour Volume:	3 vehicles	5		Hea	avy Tru	cks (3+	Axles).	15		
Ve	hicle Speed:	45 mph		H	Vehicle I	Niv					
Near/Far La	ne Distance:	76 feet		H		и х cleТуре		Dav	Evening	Night	Daily
Site Data					*0///		Autos:	66.29		20.3%	
Rai	rrier Height:	0.0 feet			Ме	dium T	rucks:	77.19	6 5.3%	17.6%	4.69%
Barrier Type (0-W		0.0			H	leavy T	rucks:	86.39	6 1.5%	12.2%	1.90%
Centerline Dis		60.0 feet		- -							
Centerline Dist.	to Observer:	60.0 feet		-	Noise So				eet)		
Barrier Distance	to Observer:	0.0 feet				Auto		.000			
Observer Height ((Above Pad):	5.0 feet				n Truck		.297	0		4. 0.0
	ad Elevation:	0.0 feet			Heav	y Truck	s: 8	.004	Grade Ad	ustmen	t: 0.0
Roa	ad Elevation:	0.0 feet			Lane Equ	iivalen	t Distan	ce (in	feet)		
1	Road Grade:	0.0%				Auto	s: 46	.701			
	Left View:	-90.0 degree	:S		Mediun	n Truck	s: 46	.511			
	Right View:	90.0 degree			Heav	y Truck	s: 46	.530			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite		Fres	nel	Barrier Att	en Be	rm Atten
Autos:	68.46	-27.82		0.3		-1.20		-4.69		000	0.000
Medium Trucks:	79.45	-40.81		0.3		-1.20		-4.88		000	0.000
Heavy Trucks:	84.25	-44.74		0.3	7	-1.20		-5.34	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier	atten	uation)						
VehicleType	Leq Peak Hou		L	.eq E	vening	Leq	Night		Ldn		NEL
Autos:	39	.8 3	37.2		36.3		33.	3	40.5	5	40.9
Medium Trucks:	37		35.9		30.3		30.	7	38.	I	38.3
Heavy Trucks:	38	.7 3	37.2		25.7		30.	0	38.1	l	38.2
Vehicle Noise:	43	.6	11.6		37.6		36.	4	43.8	3	44.1
Centerline Distance	ce to Noise Co	ontour (in feet)									
		-		70 0	dBA	65	dBA		60 dBA	55	5 dBA
			Ldn:	1			2		5		11
		CN	IEL:	1	I		2		5		11

	FHV	VA-RD-77-108	HIGH	I YAWI	NOISE P	REDICT	ION MO	ODEL			
Road Nam	o: OY With Pre e: Pine Av. at: e/o Euclid A	•				Project Job N		MCH 10351			
	SPECIFIC IN	PUT DATA							L INPUT	s	
Highway Data					Site Cor	nditions	(Hard				
Average Daily	Traffic (Adt):	29,889 vehicl	es					Autos:	15		
Peak Hour	Percentage:	10%				edium Tr		,	15		
Peak H	our Volume:	2,989 vehicle	S		He	eavy Tru	cks (3+	Axles):	15		
Vel	hicle Speed:	45 mph		f	Vehicle	Mix					
Near/Far Lar	ne Distance:	76 feet		ŀ	Veh	icleType		Day	Evening	Night	Daily
Site Data							Autos:	66.2%	13.5%	20.3%	93.35%
Ran	rier Height:	0.0 feet			М	edium T	rucks:	77.1%	5.3%	17.6%	4.65%
Barrier Type (0-W		0.0				Heavy T	rucks:	86.3%	1.5%	12.2%	2.00%
Centerline Dis	t. to Barrier:	60.0 feet		f	Noise S	ource E	levatio	ns (in fe	eet)		
Centerline Dist.	to Observer:	60.0 feet		ı		Auto		0.000	,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck	s: 2	.297			
Observer Height (,	5.0 feet			Hear	vy Truck	s: 8	3.004	Grade Ad	justment	0.0
	d Elevation:	0.0 feet		-							
	d Elevation:	0.0 feet		-	Lane Eq				feet)		
F	Road Grade:	0.0%				Auto		5.701			
	Left View:	-90.0 degre				m Truck		6.511			
	Right View:	90.0 degre	es		Hear	vy Truck	s: 46	6.530			
FHWA Noise Mode	el Calculation:	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	snel	Barrier Att	en Ber	m Atten
Autos:	68.46	2.62		0.3		-1.20		-4.69		000	0.00
Medium Trucks:	79.45	-10.40		0.3		-1.20		-4.88		000	0.000
Heavy Trucks:	84.25	-14.08		0.3	37	-1.20		-5.34	0.0	000	0.00
Unmitigated Noise	•		_								
,,	Leq Peak Hou			Leq E	vening	,	Night		Ldn		NEL
Autos:	70.	_	67.6		66.7		63		70.9	-	71.4
Medium Trucks:	68.		66.3		60.7		61		68.		68.7
Heavy Trucks: Vehicle Noise:	69. 74.	-	67.9 72.1		56.3 68.0		60		68.8 74.3		68.8 74.0
Centerline Distance					55.0		30	-		-	
Centernile Distant	e to Noise Co	intour (III leet	,	70	dBA	65	dBA	6	i0 dBA	55	dBA
			Ldn:	1	16	2	51		540	1,	164
			NFI:		21		61		563		

	HWAY	NOISE P	REDICT	TION M	ODEL							
	rio: OY With Pro	oject				.,	t Name					
	ne: Pine Av.					Job I	Vumber	: 10351				
Road Segme	nt: w/o Euclid A	Av.										
SITE	SPECIFIC IN	PUT DATA					NOISE	MODE	L INPUT	s		
Highway Data					Site Cor	nditions	(Hard	= 10, S	oft = 15)			
Average Daily	Traffic (Adt):	8,446 vehicl	es					Autos:	15			
Peak Hour	Percentage:	10%			Me	edium Ti	rucks (2	Axles).	15			
Peak H	Hour Volume:	845 vehicle	:S		He	eavy Tru	icks (3+	Axles).	15			
Ve	ehicle Speed:	45 mph			Vehicle	Miv						
Near/Far La	ne Distance:	76 feet				icleTyp	е	Day	Evening	Night	Daily	
Site Data							Autos:	66.2%	-	20.3%	,	
Ba	rrier Height:	0.0 feet			M	edium 7	rucks:	77.1%	5.3%	17.6%	4.94%	
Barrier Type (0-V		0.0				Heavy 1	rucks:	86.3%	1.5%	12.2%	2.60%	
	ist. to Barrier:	60.0 feet			Noise S	auraa F	lovetio	no (in f	0.041			
Centerline Dist.	to Observer:	60.0 feet			Noise S	Ource E Auto		ns (in 1	eet)			
Barrier Distance	to Observer:	0.0 feet			14	Auto m Truck		2.297				
Observer Height (Above Pad): 5.0 feet						vy Truci		3.004	Grade Ad	iuetmant	. 0.0	
P	Pad Elevation: 0.0 feet					vy Truci	18.	5.004	Orade Au	justinoni	0.0	
Ro	ad Elevation:	0.0 feet			Lane Eq	uivaler	ıt Dista	nce (in	feet)			
	Road Grade:	0.0%			Autos: 46.701							
	Left View:	-90.0 degre	es		Mediu	m Truck	ks: 46	6.511				
	Right View:	90.0 degre	es		Hea	vy Truck	ks: 46	6.530				
FHWA Noise Mod	lel Calculations	3										
VehicleType	REMEL	Traffic Flow	D.	istance	Finite	Road	Fre	snel	Barrier Att	en Bei	m Atten	
Autos:	68.46	-2.91		0.3	34	-1.20		-4.69	0.0	000	0.000	
Medium Trucks:	79.45	-15.64		0.3	37	-1.20		-4.88	0.0	000	0.000	
Heavy Trucks:	84.25	-18.42		0.3	37	-1.20		-5.34	0.0	000	0.000	
Unmitigated Nois	itigated Noise Levels (without Topo and barrier a				nuation)							
VehicleType	Leq Peak Hou	r Leq Day	V	Leq I	Evening	Leg	Night		Ldn	С	NEL	
Autos:	64.	7	62.1		61.2		58	.2	65.4		65.8	
Medium Trucks:	63.	0	61.1		55.5		55		63.3	-	63.5	
Heavy Trucks:	65.	0	63.6		52.0		56	.3	64.4	4	64.5	
Vehicle Noise:	69.	1	67.1		62.6		61	.7	69.2	2	69.5	
Centerline Distan	ce to Noise Co	ntour (in fee	t)									
		70	0 dBA 65 dBA 60 dBA				55	dRA				

Thursday, May 02, 2019

F	HWA-RD-77-108 H	IIGHWAY	NOISE PI	REDICTIO	N MODEL		
Scenario: OY With Road Name: Pine Av. Road Segment: w/o Chin	*				lame: MCH mber: 1035		
SITE SPECIFIC	INPUT DATA			NC	DISE MOD	EL INPUTS	
Highway Data			Site Con	ditions (l	Hard = 10, S	Soft = 15)	
Average Daily Traffic (Adt):	33,928 vehicles	3			Autos	s: 15	
Peak Hour Percentage:	10%		Me	dium Truc	ks (2 Axles): 15	
Peak Hour Volume:	3,393 vehicles		He	avy Truck	s (3+ Axles): 15	
Vehicle Speed:	45 mph		Vehicle	Miv			
Near/Far Lane Distance:	76 feet			icleType	Day	Evening N	light Daily
Site Data			7011		itos: 66.2		20.3% 93.36%
Barrier Height:	0.0 feet		М	edium Tru	cks: 77.1	% 5.3%	17.6% 4.66%
Barrier Type (0-Wall, 1-Berm):			1	Heavy Tru	cks: 86.3	% 1.5%	12.2% 1.98%
Centerline Dist. to Barrier.			M-1 0			f4)	
Centerline Dist. to Observer.	60.0 feet		Noise S	Autos:	vations (in	reet)	
Barrier Distance to Observer.	0.0 feet		A deceller	Autos: m Trucks:			
Observer Height (Above Pad):	5.0 feet			m Trucks: vy Trucks:		Grade Adjus	tmont: 0.0
Pad Elevation.	0.0 feet		пеач	y Trucks.	6.004	Grade Adjus	unent. 0.0
Road Elevation: 0.0 feet			Lane Eq	uivalent l	Distance (ir	ı feet)	
Road Grade: 0.0%				Autos:	46.701		
Left View:	Left View: -90.0 degrees		Mediu	m Trucks:	46.511		
Right View:	Right View: 90.0 degrees		Heav	y Trucks:	46.530		
FHWA Noise Model Calculation	ons						
VehicleType REMEL	Traffic Flow	Distance	Finite	Road	Barrier Atten	Berm Atten	
Autos: 68.4	6 3.17	0.	34	-1.20	-4.69	0.000	0.000
Medium Trucks: 79.4	5 -9.85	0.	37	-1.20	-4.88	0.000	0.000
Heavy Trucks: 84.2	5 -13.56	0.	37	-1.20	-5.34	0.000	0.000
Unmitigated Noise Levels (wi	mitigated Noise Levels (without Topo and barrier a		nuation)				
VehicleType Leq Peak H	our Leq Day	Leq	Evening	Leq N	light	Ldn	CNEL
Autos:			67.3		64.3	71.5	71.9
			61.2		61.7	69.1	69.3
		8.4	56.9		61.2	69.3	69.3
Vehicle Noise: 74.6 72.6			68.6		67.4	74.9	75.1
Centerline Distance to Noise							
			dBA	65 di		60 dBA	55 dBA
	_		27	273		587	1,266
	CNE	EL:	32	284	1	612	1,319

	FH\	WA-RD-77-108	HIGH	HWAY	NOISE P	REDICT	TION MC	DEL			
Road Nar	rio: OY With Pone: Pine Av. ent: w/o W. Pre	•					t Name: Number:				
SITE	SPECIFIC IN	IPUT DATA				- 1	VOISE	MODE	L INPUT	s	
Highway Data					Site Cor	nditions	(Hard =	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	19,546 vehicl	es					Autos:	15		
Peak Hou	r Percentage:	10%			Me	edium Ti	rucks (2	Axles):	15		
Peak I	Hour Volume:	1,955 vehicle	s		He	avy Tru	icks (3+	Axles):	15		
Ve	ehicle Speed:	45 mph			Vehicle	Miv					
Near/Far La	ane Distance:	76 feet				icleTyp		Dav	Evening	Night	Daily
Site Data					101		Autos:	66.2%	-	20.39	,
D.	arrier Height:	0.0 feet			М	edium 7	rucks:	77.1%	5.3%	17.69	
Barrier Type (0-V		0.0 reet				Heavy 7	rucks:	86.3%	1.5%	12.29	6 2.05%
	ist to Barrier:	60.0 feet									
Centerline Dist.		60.0 feet			Noise S				eet)		
Barrier Distance	to Observer:	0.0 feet				Auto		.000			
Observer Height	(Above Pad):	5.0 feet				m Truck		.297			
	Pad Elevation: 0.0 feet				Hear	vy Truck	rs: 8.	.004	Grade Ad	ustmer	nt: 0.0
	oad Elevation:	0.0 feet			Lane Eq	uivalen	t Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 46	.701			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 46	.511			
	Right View:	90.0 degre	es		Hear	vy Truck	s: 46	.530			
FHWA Noise Mod	del Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Be	erm Atten
Autos:		0.77		0.3		-1.20		-4.69		000	0.000
Medium Trucks.		-12.26		0.3		-1.20		-4.88		000	0.000
Heavy Trucks:	84.25	-15.81		0.0	37	-1.20		-5.34	0.0	000	0.000
Unmitigated Nois	se Levels (with	out Topo and	barri	er atte	nuation)						
VehicleType	Leq Peak Hot			Leq E	Evening		Night		Ldn		CNEL
Autos:			65.8		64.9		61.		69.1		69.5
	Medium Trucks: 66.4 64.4			58.8		59.	-	66.7		66.9	
	Heavy Trucks: 67.6 66.2				54.6 58.9 67.0				67.1		
Vehicle Noise: 72.3 70.3				66.2		65.	0	72.5)	72.8	
Centerline Distant	ice to Noise C	ontour (in fee	t)		-/04		-10.4		20 -/D4	_	E -IDA
			I dn:		88		dBA 90	6	60 dBA 409	5	5 dBA 881
		_	Lan: NEL:		88 92				409 426		
		C	IVEL:		92	1	98		420		918

_	FH\	VA-RD-77-108	HIGH	IWAY N	IOISE PI	REDICT	ION MC	DEL			
Scenario Road Name Road Segmen		,					Name: lumber:				
SITE S	SPECIFIC IN	IPUT DATA							L INPUTS	5	
Highway Data					Site Cor	ditions	(Hard =	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	30,426 vehicle	es					Autos:	15		
Peak Hour I	Percentage:	10%				dium Tri					
Peak He	our Volume:	3,043 vehicle	s		He	avy Truc	cks (3+ .	Axles):	15		
Vel	hicle Speed:	45 mph		-	Vehicle	Mix					
Near/Far Lar	ne Distance:	76 feet		F		icleType		Day	Evening	Night	Daily
Site Data							Autos:	66.2%	13.5%	20.3%	93.34%
Rar	rier Height:	0.0 feet			М	edium T	rucks:	77.1%	5.3%	17.6%	4.66%
Barrier Type (0-Wa		0.0			-	Heavy Ti	rucks:	86.3%	1.5%	12.2%	2.00%
Centerline Dis		60.0 feet		-	Noise Source Elevations (in feet)						
Centerline Dist. t	to Observer:	60.0 feet		-	Noise S				eet)		
Barrier Distance t	to Observer:	0.0 feet			A 4 E	Auto: m Truck		.000			
Observer Height (/	Above Pad):	5.0 feet				m Truck vy Truck		.004	Grade Adj	uetmont	. 0.0
Pa	Pad Elevation: 0.0 feet				пеан	ry Truck	s. o.	.004	Grade Auj	usunent	0.0
Roa	Road Elevation: 0.0 feet				Lane Eq	uivalen	t Distan	ice (in i	feet)		
F	Road Grade: 0.0%					Auto	s: 46	.701			
	Left View:	-90.0 degree	es		Medium Trucks: 46.511						
	Right View:	90.0 degree	es		Heav	y Truck	s: 46	.530			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresi		Barrier Atte	en Ber	m Atten
Autos:	68.46	2.70		0.34	4	-1.20		-4.69	0.0	00	0.000
Medium Trucks:	79.45	-10.32		0.37		-1.20		-4.88	0.0		0.000
Heavy Trucks:	84.25	-14.00		0.37	7	-1.20		-5.34	0.0	00	0.000
	nitigated Noise Levels (without Topo and barrier at										
,,,	Leq Peak Hou	.,.,		Leq E			Night		Ldn		NEL
Autos:	70		67.7		66.8		63.	-	71.0		71.4
	Medium Trucks: 68.3 66.4			60.8		61.	_	68.6		68.8	
Heavy Trucks: 69.4 68.0				56.4		60.		68.8		68.9	
	Vehicle Noise: 74.2 72.2				68.1		66.	9	74.4		74.7
			Centerline Distance to Noise Contour (in feet)								
	e to Noise C	ontour (in feet)	70	10.4	0.5	10.4	1 .			10.4
	e to Noise Co	,		70 c			dBA	6	60 dBA		dBA
	e to Noise Co	•	Ldn:	70 c	18	2	dBA 54 64	6	50 dBA 547 570	1,	dBA 178 228

	FHV	/A-RD-77-108 HIG	A YAWHE	NOISE PE	REDICTIO	N MOD	EL			
Scenar	io: OY With Pro	oject			Project N	ame: M	ICH			
Road Nam	e: Pine Av.				Job Nur	nber: 10	0351			
Road Segmen	nt: w/o E. Pres	erve Loop								
SITE	SPECIFIC IN	PUT DATA						NPUTS	3	
Highway Data				Site Con	ditions (H	ard = 1	0, Soft	= 15)		
Average Daily	Traffic (Adt):	30,996 vehicles				A	utos:	15		
Peak Hour	Percentage:	10%		Me	dium Truc	ks (2 Ax	des):	15		
Peak H	lour Volume:	3,100 vehicles		He	avy Trucks	(3+ Ax	des):	15		
Ve	hicle Speed:	45 mph	Ħ	Vehicle I	Mix					
Near/Far La	ne Distance:	76 feet	ŀ		icleType	E	ay E	vening	Night	Daily
Site Data							6.2%	13.5%	20.3%	
Rai	rrier Height:	0.0 feet		Me	edium Truc	ks: 7	7.1%	5.3%	17.6%	4.66%
Barrier Type (0-W	-	0.0		F	leavy Truc	ks: 8	6.3%	1.5%	12.2%	1.99%
Centerline Dis		60.0 feet	_							
Centerline Dist.		60.0 feet		Noise Sc	ource Elev		•)		
Barrier Distance		0.0 feet			Autos:	0.00				
Observer Height ((Above Pad):	5.0 feet			m Trucks:	2.29	_			
	ad Flevation:	0.0 feet		Heav	y Trucks:	8.00)4 Gi	аае Аај	ustment.	0.0
Roa	ad Elevation:	0.0 feet		Lane Eq	uivalent D	istance	e (in fee	t)		
	Road Grade:	0.0%			Autos:	46.70	01	-		
	Left View:	-90.0 degrees		Mediur	m Trucks:	46.5	11			
	Right View:	90.0 degrees		Heav	y Trucks:	46.53				
FHWA Noise Mode	el Calculations	6								
VehicleType	REMEL	Traffic Flow D	Distance	Finite	Road	Fresne	l Ba	rrier Atte	en Ber	m Atten
Autos:	68.46	2.78	0.3	4	-1.20	-4	4.69	0.0	00	0.000
Medium Trucks:	79.45	-10.24	0.3	7	-1.20	-4	4.88	0.0	00	0.000
Heavy Trucks:	84.25	-13.93	0.3	7	-1.20	-4	5.34	0.0	00	0.000
Unmitigated Noise	e Levels (with	out Topo and ban	rier atter	nuation)						
VehicleType	Leq Peak Hou			vening	Leq Ni		Lo			VEL
Autos:	70.		-	66.9		63.9		71.1		71.5
Medium Trucks:	68.			60.9		61.3		68.7		68.9
Heavy Trucks:	69.			56.5		60.8		68.9		69.0
Vehicle Noise:	74.	3 72.3	3	68.2		67.0		74.5	•	74.7
Centerline Distant	ce to Noise Co	ntour (in feet)								
			_	dBA	65 dE		60 c			dBA
		Ldn		19	257		55			193
		CNEL	: 1:	24	268		57	7	1,:	243

Thursday, May 02, 2019

Site Data	FH	WA-RD-77-108 HIGH	HWAY N	OISE PF	REDICTIO	ON M	ODEL			
Mighway Data	Road Name: Schleisman	n Rd.								
Average Daily Traffic (Adt): 32,852 vehicles 10% Medium Trucks (2 Axles): 15	SITE SPECIFIC IN	IPUT DATA							s	
Peak Hour Percentage:	Highway Data		5	Site Con	ditions (l	Hard	= 10, S	oft = 15)		
Peak Hour Volume: 3,285 vehicles Vehicle Speed: 45 mph Vehicle Speed: 45 mph Vehicle Mix Vehicle Mix Vehicle Mix Vehicle Mix Vehicle Mix Vehicle Mix Vehicle Mix Vehicle Mix Vehicle Mix Vehicle Mix Vehicle Mix Vehicle Mix Vehicle Mix Vehicle Mix Vehicle Mix Vehicle Mix Vehicle Type Day Evening Night Dai Vehicle Mix	Average Daily Traffic (Adt):	32,852 vehicles					Autos	15		
Vehicle Speed: Near/Far Lane Distance: 45 mph release (Park Notse Model Calculations) Vehicle Mix Vehicle Mix Vehicle Type Day Evening Night Dail Site Data Autos: 66.2% 13.5% 20.3% 93.3 1.5% 12.2% 12.2% 13.9 12.2% 12.2% 13.9 1.20 20.00 20.00 20.00 20.00 20.00 20.00 2	Peak Hour Percentage:	10%		Me	dium Trud	cks (2	Axles).	15		
Near/Far Lane Distance:	Peak Hour Volume:	3,285 vehicles		He	avy Truck	(3+	Axles).	15		
Near/Far Lane Distance: 78 feet VehicleType Day Evening Night Dai	Vehicle Speed:	45 mph		/ohiolo l	Miv					
Autos: 66.2% 13.5% 20.3% 93.3	Near/Far Lane Distance:	78 feet	F'				Dav	Evenina	Niaht	Daily
Barrier Trype (0-Well, 1-Bern) 0.0 Heavy Trucks: 86.3% 1.5% 12.2% 1.9	Site Data					ıtos:	66.2%			
Barrier Type (O-Wall, 1-Berm):	Barrier Height	0.0 feet		Me	edium Tru	icks:	77.1%	5.3%	17.6%	4.67%
Centerline Dist. to Observer: 76.0 feet Barrier Distance to Observer: 0.0 feet Autos: 0.000	•			F	leavy Tru	icks:	86.3%	1.5%	12.2%	1.99%
Centerline Dist. to Observer: 76.0 feet Barrier Distance (or Distance (or Distance (or Distance) Center (o	** '	76.0 feet	,	laisa Sa	urce Fle	vatio	ne (in f	oot)		
Barrier Distance to Observer: 0.0 feet Distance Pad Elevation: 0.0 feet Pad Elevation: 0.0 feet Road Grade: 0.0% Care Road Grade: 0.0% Care Road Grade: 0.0% Care Road Grade: 0.0% Care Road Grade: 0.0% Care Road Grade: 0.0% Care Road Grade: 0.0% Care Road Grade: 0.0% Care Road Grade: 0.0% Care Road Grade: 0.0% Care Road Grade: 0.0% Care Road Road: 0.0% Care Road Road: 0.0% Care Road: 0.0%	Centerline Dist. to Observer:	76.0 feet	ľ	10/36 00				ccij		
Diserver Height (Above Pad):	Barrier Distance to Observer:	0.0 feet		Mediur						
Pad Elevation: 0.0 feet	Observer Height (Above Pad):	5.0 feet						Grade An	liustment	0.0
Road Grade: 0.0%	Pad Elevation:	0.0 feet			,				juoumom	0.0
Left View: -90.0 degrees Medium Trucks: 65.286 Right View: 90.0 degrees Heavy Trucks: 65.299	Road Elevation:	0.0 feet	I	ane Eq	uivalent i	Dista	nce (in	feet)		
Right View: 90.0 degrees Heavy Trucks: 65.299	Road Grade:	0.0%								
FHWA Noise Model Calculations VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Att		-90.0 degrees								
VehicleType	Right View:	90.0 degrees		Heav	y Trucks:	65	5.299			
Medium Trucks: 68.46 3.03 -1.85 -1.20 -4.73 0.000 0.000 0.00000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00000 0.00000 0.00000		-								
Medium Trucks: 79.45 -9.98 -1.84 -1.20 -4.88 0.000 0.0 Heavy Trucks: 84.25 -13.68 -1.84 -1.20 -5.25 0.000 0.0 Unmitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 68.4 65.9 65.0 62.0 69.1 6 69.1 66.8	,,, .					Fres				
Heavy Trucks: 84.25 -13.68 -1.84 -1.20 -5.25 0.000 0.1										0.000
Unmitigated Noise Levels (without Topo and barrier attenuation) VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 68.4 65.9 65.0 62.0 69.1 6 Medium Trucks: 66.4 64.5 58.9 59.3 66.8 6										0.000
VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL Autos: 68.4 65.9 65.0 62.0 69.1 6 Medium Trucks: 66.4 64.5 58.9 59.3 66.8 6	,				-1.20		-5.25	0.0	000	0.000
Autos: 68.4 65.9 65.0 62.0 69.1 6 Medium Trucks: 66.4 64.5 58.9 59.3 66.8 6						E-l-t		Late	_ ^	VIE1
Medium Trucks: 66.4 64.5 58.9 59.3 66.8 6			Leq E		Leq N		0		-	VEL 69.6
										66.9
Heavy Trucks: 67.5 66.1 54.5 58.9 67.0 6				54.5					-	67.0
	,								-	72.8
Centerline Distance to Noise Contour (in feet)				30.2		- 00		72.	-	72.0
70 dBA 65 dBA 60 dBA 55 dBA	Contenine Distance to Noise C	omour (mileet)	70 c	IBA	65 d	BA		60 dBA	55	dBA
Ldn: 112 241 520 1,120		Ldn:								
CNEL: 117 251 542 1,167			11	7	25	1		542	,	

	FH	WA-RD-77-108	HIGH	HWAY	NOISE P	REDICT	ION MO	DEL			
	io: HY Withou e: Central Av nt: n/o El Prac						t Name: lumber:				
SITE	SPECIFIC IN	NPUT DATA				-	NOISE N	/IODE	L INPUT	S	
Highway Data					Site Cor	ditions	(Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	33,180 vehicl	es					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Ti	ucks (2 /	Axles):	15		
Peak H	lour Volume:	3,318 vehicle	s		He	avy Tru	cks (3+ /	Axles):	15		
Ve	hicle Speed:	45 mph			Vehicle	Miv					
Near/Far La	ne Distance:	76 feet				icleTyp	9	Dav	Evening	Night	Daily
Site Data							Autos:	66.3%		20.39	
Rai	rier Height:	0.0 feet			М	edium 7	rucks:	77.0%	5.3%	17.69	6 4.70%
Barrier Type (0-W		0.0				Heavy 7	rucks:	86.3%	1.5%	12.29	6 1.90%
Centerline Dis		60.0 feet									
Centerline Dist.	to Observer:	60.0 feet			Noise S				eet)		
Barrier Distance	to Observer:	0.0 feet				Auto		000			
Observer Height (Above Pad):	5.0 feet				m Truck		297	Crada Ad	ii rotmor	4 0 0
Pa	ad Elevation:	0.0 feet			Hear	y Truck	s: 8.	004	Grade Ad	jusurier	n. 0.0
Roa	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Distan	ce (in i	feet)		
	Road Grade:	0.0%				Auto	s: 46.	701			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 46.	511			
	Right View:	90.0 degre	es		Hear	y Truck	s: 46.	530			
FHWA Noise Mode	el Calculation	18									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresr	iel	Barrier Att	en Be	erm Atten
Autos:	68.46			0.3		-1.20		-4.69		000	0.000
Medium Trucks:	79.45			0.3		-1.20		-4.88		000	0.000
Heavy Trucks:	84.25	-13.84		0.3	37	-1.20		-5.34	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barri	er atte	nuation)						
VehicleType	Leq Peak Ho			Leq I	vening		Night		Ldn		ONEL
Autos:			68.1		67.2		64.2	-	71.4		71.8
Medium Trucks:			66.8		61.2		61.6		69.0	-	69.2
Heavy Trucks:	69	9.6	68.1		56.6		60.9)	69.0)	69.1
Vehicle Noise:	74	4.5	72.5		68.5		67.3	3	74.7	7	75.0
Centerline Distant	ce to Noise C	ontour (in fee)								
			I		dBA		dBA	6	60 dBA	5	5 dBA
			Ldn:		24		67		575		,240
		C	NEL:	1	29	2	78		600	1	,292

	1.07.145.4					ъ :		14011				
	o: HY Withou e: Fl Prado R					Project		: MCH : 10351				
Road Segmen						JOD I	iumber	10351				
	SPECIFIC IN	IPUT DATA		NOISE MODEL INPUTS								
Highway Data				Site Conditions (Hard = 10, Soft = 15)								
Average Daily	Traffic (Adt):	28,632 vehicle	es	Autos: 15								
Peak Hour	Percentage:	10%		Medium Trucks (2 Axles): 15								
Peak H	our Volume:	2,863 vehicles	3	Heavy Trucks (3+ Axles): 15								
Ve	hicle Speed:	45 mph		Vehicle Mix								
Near/Far Lai	ne Distance:	36 feet		F	VehicleType Day Evening Night							
Site Data					Autos: 66.3% 13.5% 20.3%							
Rai	rier Height:	0.0 feet			Medium Trucks: 77.0% 5.3% 17.6% 4.							
Barrier Type (0-W		0.0			Heavy Trucks: 86.3% 1.5% 12.2% 1.90							
Centerline Dis	st. to Barrier:	44.0 feet		- 1	Noise S	ource E	levatio	ns (in f	eet)			
Centerline Dist.	to Observer:	44.0 feet		F		Auto		0.000	,			
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck		2.297				
Observer Height (Above Pad):	5.0 feet				vy Truck		3.004	Grade Ad	iustment	. 0.0	
Pa	ad Elevation:	0.0 feet		L						,		
Roa	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Dista	nce (in	feet)			
I	Road Grade:	0.0%				Auto	s: 40	0.460				
	Left View:	-90.0 degree	es			m Truck		0.241				
	Right View:	90.0 degree	es		Heav	y Truck	s: 40	0.262				
FHWA Noise Mode												
VehicleType	REMEL	Traffic Flow	Dista			Road	Fres		Barrier Att		m Atter	
Autos:	68.46	2.43		1.2		-1.20		-4.61		000	0.00	
Medium Trucks:	79.45	-10.55		1.3		-1.20		-4.87		000	0.00	
Heavy Trucks:	84.25	-14.48		1.3	-	-1.20		-5.50	0.0	000	0.00	
Unmitigated Noise VehicleType	Leg Peak Hou						N II auda d	_	Ldn		NEL	
Autos:	Tey reak not		38.4	.ey E	vening 67.5	Leq	Night 64	-	71.		VEL 72	
Medium Trucks:	69		58.4 57.1		61.5		61		69.		69	
Heavy Trucks:	69		57.1 58.4		56.9		61		69.		69	
Vehicle Noise:	74		72.8		68.8		67		75.0		75	
Centerline Distanc	e to Noise Co	ontour (in feet)									
		,,		70 (dBA	65	dBA	-	60 dBA	55	dBA	
			l dn:	9	5	2	05		442	q	52	
				_	•	-	-					

Fi	HWA-RD-77-10	B HIGHWA	Y NOISE I	PREDICTION	N MODEL			
Scenario: HY Witho Road Name: Central A Road Segment: s/o El Pra	iV.				ame: MCH aber: 10351			
SITE SPECIFIC	INPUT DATA				ISE MODE			
Highway Data			Site Co	nditions (H	ard = 10, Sc	oft = 15)		
Average Daily Traffic (Adt):	39,805 vehic	les			Autos:	15		
Peak Hour Percentage:	10%		M	ledium Truck	s (2 Axles):	15		
Peak Hour Volume:	3,981 vehicle	es	H	leavy Trucks	(3+ Axles):	15		
Vehicle Speed:	45 mph		Vehicle	Miv				
Near/Far Lane Distance:	78 feet			hicleType	Day	Evening	Night Da	aily
Site Data				Aut	os: 66.3%	13.5%	20.3% 93.	40%
Barrier Height:	0.0 feet		1	Medium Truc	ks: 77.0%	5.3%	17.6% 4.	70%
Barrier Type (0-Wall, 1-Berm):				Heavy Truc	ks: 86.3%	1.5%	12.2% 1.	.90%
Centerline Dist. to Barrier.	60.0 feet		Noiso	Source Elev	ations (in f	not)		
Centerline Dist. to Observer.	60.0 feet		740/36 (Autos:	0.000	,		
Barrier Distance to Observer.	0.0 feet		Modi	um Trucks:	2.297			
Observer Height (Above Pad).	5.0 feet			avy Trucks:	8.004	Grade Adii	stment: 0.0	,
Pad Elevation.	0.0 feet						0.0	_
Road Elevation:	0.0 feet		Lane E	quivalent D		feet)		
Road Grade:	0.070			Autos:	45.869			
Left View:	oo.o dog.c	es		um Trucks:	45.676			
Right View:	90.0 degre	ees	Hea	avy Trucks:	45.695			
FHWA Noise Model Calculation	ons							
VehicleType REMEL	Traffic Flow	Distanc	e Finit	e Road	Fresnel	Barrier Atte	n Berm At	tten
Autos: 68.4	6 3.87		0.46	-1.20	-4.69	0.00	00 0	0.000
Medium Trucks: 79.4	5 -9.12		0.49	-1.20	-4.88	0.00	00 0	0.000
Heavy Trucks: 84.2	25 -13.05		0.48	-1.20	-5.34	0.00	00 0	0.000
Unmitigated Noise Levels (wi	thout Topo and	l barrier at	tenuation)				
VehicleType Leq Peak H			g Evening	Leq Nig		Ldn	CNEL	
	71.6	69.0	68.		65.1	72.3		72.7
	69.6	67.7	62.	•	62.5	69.9		70.1
,	70.5	69.1	57.	-	61.8	69.9		70.0
Vehicle Noise:	75.4	73.4	69.	4	68.2	75.6		75.9
Centerline Distance to Noise	Contour (in fee	t)						
			70 dBA	65 dB.	Α 6	60 dBA	55 dBA	1
		Ldn:	143	307		661	1,425	
	C	NEL:	149	320		689	1,485	

Thursday, May 02, 2019

FH	WA-RD-77-108 HIGI	HWAY NOISE F	REDICTION	MODEL								
Scenario: HY Withou	t Project		Project Nar	me: MCH								
Road Name: Euclid Av.			Job Numb	ber: 10351								
Road Segment: n/o Walnut	Av.											
SITE SPECIFIC IN	IPUT DATA				L INPUTS	S						
Highway Data		Site Co	Site Conditions (Hard = 10, Soft = 15)									
Average Daily Traffic (Adt):	52,793 vehicles			Autos.	: 15							
Peak Hour Percentage:	10%		edium Trucks									
Peak Hour Volume:	5,279 vehicles	H	eavy Trucks	(3+ Axles)	: 15							
Vehicle Speed:	55 mph	Vehicle	Mix									
Near/Far Lane Distance:	154 feet		hicleType	Day	Evening	Night Daily						
Site Data			Auto	s: 66.39	6 13.5%	20.3% 93.40%						
Barrier Height:	0.0 feet	٨	Medium Truck	s: 77.0%	6 5.3%	17.6% 4.70%						
Barrier Type (0-Wall, 1-Berm):	0.0		Heavy Truck	s: 86.3%	6 1.5%	12.2% 1.90%						
Centerline Dist. to Barrier:	84.0 feet	Noise S	Source Eleva	tions (in t	eet)							
Centerline Dist. to Observer:	84.0 feet		Autos:	0.000	,							
Barrier Distance to Observer:	0.0 feet	Medi	ım Trucks:	2.297								
Observer Height (Above Pad):	5.0 feet	Hea	vv Trucks:	8.004	Grade Adi	iustment: 0.0						
Pad Elevation:	0.0 feet		,									
Road Elevation:	0.0 feet	Lane E	quivalent Dis		feet)							
Road Grade:	0.0%		Autos:	33.941								
Left View:	-90.0 degrees		um Trucks:	33.679								
Right View:	90.0 degrees	Hea	vy Trucks:	33.705								
FHWA Noise Model Calculation	-											
VehicleType REMEL	Traffic Flow Di	stance Finit		resnel	Barrier Atte	en Berm Atten						
Autos: 71.78	4.22	2.42	-1.20	-4.75	0.0	0.000						
Medium Trucks: 82.40	-8.76	2.47	-1.20	-4.88	0.0							
Heavy Trucks: 86.40	-12.70	2.47	-1.20	-5.21	0.0	0.000						
Unmitigated Noise Levels (with												
VehicleType Leq Peak Hot		Leq Evening	Leq Nigl		Ldn	CNEL						
Autos: 77		73.		70.8	77.9							
Medium Trucks: 74		67.		67.8	75.2							
Heavy Trucks: 75		62.	-	66.3	74.4							
Vehicle Noise: 80		74.	9	73.5	80.9	81.2						
Centerline Distance to Noise C	ontour (in feet)											
		70 dBA	65 dBA	١	60 dBA	55 dBA						
	I dn:	447				4.474						
	CNFI:	447	964 1.007		2,077	4,474						

	FH\	WA-RD-77-108	HIGHW	/AY NO	DISE PE	REDICTIO	ON MO	DEL					
	o: HY Withou e: Euclid Av. nt: n/o Riversi	•				Project N Job Nu							
	SPECIFIC IN	IPUT DATA							L INPUT	S			
Highway Data				S	ite Con	ditions (i	Hard =	10, S	oft = 15)				
Average Daily	Traffic (Adt):	45,572 vehicl	es					Autos:	15				
Peak Hour	Percentage:	10%			Me	dium Truc	cks (2 A	Axles):	15				
Peak H	our Volume:	4,557 vehicle	S		He	avy Truck	is (3+ A	Axles):	15				
Vel	hicle Speed:	55 mph		V	Vehicle Mix								
Near/Far Lar	ne Distance:	154 feet				icleType		Dav	Evening	Night	Daily		
Site Data						AL	ıtos:	66.3%	13.5%	20.3%	93.40%		
Rar	rier Height:	0.0 feet			Me	edium Tru	icks:	77.0%	5.3%	17.69	4.70%		
Barrier Type (0-W	all, 1-Berm):	0.0			F	leavy Tru	icks:	86.3%	1.5%	12.29	1.90%		
Centerline Dis		84.0 feet		N	oise Sc	ource Ele	vation	s (in f	eet)				
Centerline Dist.		84.0 feet				Autos:	0.0	000					
Barrier Distance		0.0 feet			Mediui	n Trucks:	2.2	297					
Observer Height (5.0 feet			Heav	y Trucks:	8.0	004	Grade Adj	ustmen	t: 0.0		
	d Elevation:	0.0 feet					D/	/!	f4)				
	ad Elevation:	0.0 feet		L	ane Eq	uivalent l Autos:			reet)				
,	Road Grade:	0.0%			A 4 E	n Trucks:							
	Left View:	-90.0 degre				n Trucks: v Trucks:		679					
	Right View:	90.0 degre	es		пеач	y Trucks.	33.	705					
FHWA Noise Mode													
VehicleType	REMEL	Traffic Flow	Dista		Finite	Road	Fresn		Barrier Atte		rm Atten		
Autos:	71.78	3.58		2.42		-1.20		-4.75	0.0		0.000		
Medium Trucks:	82.40	-9.40		2.47		-1.20		-4.88	0.0		0.000		
Heavy Trucks:	86.40	-13.33		2.47		-1.20		-5.21	0.0	100	0.000		
Unmitigated Noise			_										
VehicleType Autos:	Leq Peak Hou		/ L 74.0	.eq Eve	73.1	Leq N	<i>light</i> 70.1		Ldn 77.3		77.7		
Medium Trucks:	76		74.0		66.7		67.2		74.6		74.8		
Heavy Trucks:	74		72.9		61.3		65.6	-	74.0		73.8		
Vehicle Noise:	80		77.9		74.2		72.8		80.3		80.5		
Centerline Distance	e to Noise Co	ontour (in fee)										
				70 dE	BA	65 d	BA	- (60 dBA	5	5 dBA		
			Ldn:	406	6	874	4		1,883	4	,056		
		C	NEL:	424	l	913	3		1,967	4	,237		

F	HWA	-RD-77-108 H	IIGH\	WAY N	IOISE PI	REDICTI	ON MO	DEL					
Scenario: HY With Road Name: Euclid A Road Segment: n/o Scha	/.	•					Name: umber:						
SITE SPECIFIC	INPL	JT DATA				N	OISE N	/IODE	L INPUTS	3			
Highway Data					Site Conditions (Hard = 10, Soft = 15)								
Average Daily Traffic (Adt)	: 49	,457 vehicles						Autos:	15				
Peak Hour Percentage	:	10%			Me	dium Tru	icks (2 A	(xles	15				
Peak Hour Volume	4,9	946 vehicles			He	avy Truc	ks (3+ A	Axles):	15				
Vehicle Speed	:	55 mph		Η,	Vehicle Mix								
Near/Far Lane Distance		154 feet		Ε'		icleType		Dav	Evening	Night	Daily		
Site Data					Autos: 66.3% 13.5% 20.3%								
Barrier Height		0.0 feet			Autos: 66.3% 13.5% 20.3% Medium Trucks: 77.0% 5.3% 17.6%								
Barrier Type (0-Wall, 1-Berm)		0.0			Medium Trucks: 77.0% 5.3% 17.6% 4.70 Heavy Trucks: 86.3% 1.5% 12.2% 1.90								
Centerline Dist. to Barrier		84.0 feet		_	,								
Centerline Dist. to Observer: 84.0 feet					Noise Source Elevations (in feet)								
Barrier Distance to Observer: 0.0 feet					Autos: 0.000 Medium Trucks: 2.297								
Observer Height (Above Pad): 5.0 feet													
Pad Elevation		0.0 feet			Heav	y Trucks	s: 8.0	004	Grade Adj	ustment	0.0		
Road Elevation		0.0 feet		I	Lane Eq	uivalent	Distan	ce (in t	feet)				
Road Grade		0.0%			Autos: 33.941								
Left View	: -	90.0 degrees			Medium Trucks: 33.679								
Right View		90.0 degrees			Heav	y Truck	33.	705					
FHWA Noise Model Calculati	ons												
VehicleType REMEL		raffic Flow	Dist	ance		Road	Fresn		Barrier Atte	en Ber	m Atten		
Autos: 71.	78	3.94		2.42	2	-1.20		-4.75	0.0	00	0.000		
Medium Trucks: 82.4	10	-9.05		2.47	7	-1.20		-4.88	0.0	00	0.000		
Heavy Trucks: 86.4	10	-12.98		2.47	7	-1.20		-5.21	0.0	00	0.000		
Unmitigated Noise Levels (w.	ithou	t Topo and b	arriei	r atten	uation)								
VehicleType Leq Peak F	lour	Leq Day		Leg E		Leq	Night		Ldn		VEL		
Autos:	76.9	-	1.4		73.5		70.5		77.7		78.1		
Medium Trucks: 74.6 72.7					67.1		67.5		74.9		75.1		
			Heavy Trucks: 74.7 73.3				61.7 66.0 74.1						
Heavy Trucks:	74.7												
Heavy Trucks: Vehicle Noise:	74.7	7	3.3		74.6		73.2		80.6				
Heavy Trucks:	74.7	7		70.0	74.6	65		2	80.6		74.2 80.9 dBA		
Heavy Trucks: Vehicle Noise:	74.7	our (in feet)		70 c	74.6 dBA		73.2	6		55			

Scenario: HY Without Project Project Name: MC									
	Project Name: MCH Job Number: 10351								
	DEL INPUTS								
	Site Conditions (Hard = 10, Soft = 15)								
	Autos: 15								
,	Medium Trucks (2 Axles): 15								
	Heavy Trucks (3+ Axles): 15								
Vehicle Speed: 55 mph Vehicle Mix	Vehicle Mix								
Near/Far Lane Distance: 154 feet VehicleType De									
Site Data Autos: 66	.3% 13.5% 20.3	% 93.40%							
Barrier Height: 0.0 feet Medium Trucks: 77	.0% 5.3% 17.6	% 4.70%							
	.3% 1.5% 12.2	% 1.90%							
Centerline Dist. to Barrier: 84.0 feet Noise Source Elevations (n feet)								
Centerline Dist. to Observer: 84.0 feet Autos: 0.000									
Barrier Distance to Observer: 0.0 feet Medium Trucks: 2.297									
Observer Height (Above Pad): 5.0 feet Heavy Trucks: 8.004		ent: 0.0							
Pad Elevation: 0.0 feet	•								
Road Elevation: 0.0 feet Lane Equivalent Distance	,								
Road Grade: 0.0% Autos: 33.94									
Left View: -90.0 degrees Medium Trucks: 33.679									
Right View: 90.0 degrees Heavy Trucks: 33.70	5								
FHWA Noise Model Calculations									
VehicleType REMEL Traffic Flow Distance Finite Road Fresnel	Barrier Atten E	Berm Atten							
Autos: 71.78 3.90 2.42 -1.20 -4.		0.000							
	88 0.000	0.000							
Heavy Trucks: 86.40 -13.01 2.47 -1.20 -5.	21 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: 76.9 74.3 73.4 70.4	77.6	78.0							
Medium Trucks: 74.6 72.7 67.1 67.5	74.9	75.1							
Heavy Trucks: 74.6 73.2 61.6 66.0	74.1	74.1							
Vehicle Noise: 80.3 78.2 74.6 73.1	80.6	80.9							
Centerline Distance to Noise Contour (in feet)	00 -ID4	CC -(D.4							
70 dBA 65 dBA	60 dBA :	55 dBA							
		4.260							
<i>Ldn</i> : 426 918 <i>CNEL</i> : 445 959	2.066	4.450							

Thursday, May 02, 2019

	FHV	VA-RD-77-108	HIGHWAY	NOISE P	REDICTIO	N MODEL							
Scenario Road Name Road Segment		,				lame: MCF mber: 1035							
SITE S	PECIFIC IN	PUT DATA		NOISE MODEL INPUTS									
Highway Data				Site Conditions (Hard = 10, Soft = 15)									
Average Daily Ti Peak Hour P		52,051 vehicle	es	Me	dium Truc	Auto							
	ur Volume:	5.205 vehicles	3			s (3+ Axles	,						
Vehi	icle Speed:	55 mph											
Near/Far Lane		154 feet		Vehicle		1 5	1 1						
				ven	icleType	Day		Night Daily					
Site Data						itos: 66.3		20.3% 93.40%					
	ier Height:	0.0 feet			edium Tru			17.6% 4.70%					
Barrier Type (0-Wa		0.0		,	Heavy Tru	cks: 86.3	% 1.5%	12.2% 1.90%					
Centerline Dist		84.0 feet		Noise S	ource Ele	vations (in	feet)						
Centerline Dist. to		84.0 feet			Autos:	0.000							
Barrier Distance to	Observer:	0.0 feet		Mediu	m Trucks:	2.297							
	Observer Height (Above Pad): 5.0 feet				y Trucks:	8.004	Grade Adj	ustment: 0.0					
	d Elevation:	0.0 feet											
	d Elevation:	0.0 feet		Lane Eq		Distance (i	n teet)						
Re	oad Grade:	0.0%			Autos:								
	Left View:	-90.0 degree			m Trucks:								
,	Right View:	90.0 degree	es	Heav	y Trucks:	33.705							
FHWA Noise Model	Calculation	s		•									
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Atte	en Berm Atten					
Autos:	71.78	4.16		42	-1.20	-4.7							
Medium Trucks:	82.40	-8.82		47	-1.20	-4.8							
Heavy Trucks:	86.40	-12.76		47	-1.20	-5.2	1 0.0	0.000					
Unmitigated Noise													
,,	.eq Peak Hou			Evening	Leq N	•	Ldn	CNEL					
Autos:	77	-	74.6	73.7		70.7	77.9	78.3					
Medium Trucks:	74		72.9	67.3		67.8	75.2						
Heavy Trucks:	74		73.5	61.9		66.2	74.3	74.4					
Vehicle Noise:	80	.5	78.5	74.8		73.4	80.8	81.1					
Centerline Distance	to Noise Co	ontour (in feet)			05			55 104					
) dBA	65 dl		60 dBA	55 dBA					
				443 955 2,057			4,432						
	CNEL:					463 998 2,149 4,6							

Thursday, May 02, 2019

	FH	WA-RD-77-10	B HIGI	HWAY	NOI	ISE PR	EDICTIC	ON MC	DDEL				
Road Nam	io: HY Withou ne: Euclid Av. nt: n/o Eucaly	,					Project N Job Nu						
	SPECIFIC IN	NPUT DATA								L INPU	TS		
Highway Data					Sit	e Cond	ditions (l	Hard =	= 10, S	oft = 15)			
Average Daily	Traffic (Adt):	47,542 vehic	les						Autos	15			
Peak Hour	Percentage:	10%					lium Truc						
Peak F	lour Volume:	4,754 vehicle	es		Heavy Trucks (3+ Axles): 15								
-	hicle Speed:	55 mph			Vehicle Mix								
Near/Far La	ne Distance:	154 feet			VehicleType Day Evening Night								Daily
Site Data							AL	ıtos:	66.39	6 13.59	6 20	0.3%	93.40%
Ra	rrier Height:	0.0 feet				Me	dium Tru	icks:	77.09	6 5.39	6 17	7.6%	4.70%
Barrier Type (0-W	/all, 1-Berm):	0.0				Н	eavy Tru	icks:	86.39	6 1.59	6 12	2.2%	1.90%
Centerline Di		84.0 feet			No	ise So	urce Ele	vatio	ns (in i	eet)			
Centerline Dist.		84.0 feet					Autos:		.000	,			
Barrier Distance		0.0 feet			1	Mediun	Trucks:	2	.297				
Observer Height		5.0 feet				Heav	/ Trucks:	8	.004	Grade A	Adjusti	ment:	0.0
	ad Elevation:	0.0 feet											
	ad Elevation:	0.0 feet			La	ne Equ	ivalent l			teet)			
	Road Grade:	0.0%			١.		Autos:		.941				
	Left View: Right View:	-90.0 degre			,		n Trucks: / Trucks:		.679 .705				
FHWA Noise Mod													
VehicleType	REMEL	Traffic Flow	Di	stance	_	Finite I	Pond	Fres	nol	Barrier A	1#on	Por	n Atten
Autos:	71.78				42	i iiiic i	-1.20	1103	-4.75		0.000	DOI	0.000
Medium Trucks:					47		-1.20		-4.88		0.000		0.000
Heavy Trucks:	86.40	-13.15	5	2.	47		-1.20		-5.21	(0.000		0.000
Unmitigated Nois	e Levels (with	out Topo and	l barri	ier atte	nua	tion)							
VehicleType	Leq Peak Ho			Leq I	Ever		Leq N			Ldn		CI	IEL
Autos:		8.8	74.2			73.3		70.	-		7.5		77.9
Medium Trucks:	-	1.5	72.5			66.9		67.			4.8		75.0
Heavy Trucks:	74	1.5	73.1			61.5		65.	8	73	3.9		74.0
Vehicle Noise:	80).2	78.1			74.4		73.	0	80	0.4		80.7
Centerline Distan	ce to Noise C	ontour (in fee	t)										
					dB,	A	65 dl			60 dBA			dBA
		_	Ldn:		417		899			1,937		,	172
		C	:NEL:	4	436		939	9		2,023		4,3	359

Thursday, May 02, 2019

	FHW	A-RD-77-108	HIGH	WAY	NOISE P	REDICT	ION MC	DEL					
Road Nam	io: HY Without F e: Euclid Av. nt: s/o Merrill Av	•					Name: lumber:						
SITE	SPECIFIC INF	UT DATA				N	IOISE	MODE	L INPUT	S			
Highway Data					Site Conditions (Hard = 10, Soft = 15)								
Average Daily	Traffic (Adt): 4	9,987 vehicle	es					Autos:	15				
Peak Hour	Percentage:	10%			Medium Trucks (2 Axles): 15								
Peak H	our Volume: 4	,999 vehicle:	S		Heavy Trucks (3+ Axles): 15								
Ve	hicle Speed:	55 mph		ł	Vehicle	Miv							
Near/Far La	ne Distance:	154 feet			VehicleType Day Evening Night						Daily		
Site Data					Autos: 66.3% 13.5% 20.3								
Par	rier Height:	0.0 feet			Medium Trucks: 77.0% 5.3% 17.6%								
Barrier Type (0-W	-	0.0			Heavy Trucks: 86.3% 1.5% 12.2% 1.								
,, ,	Centerline Dist. to Barrier: 84.0 feet				,								
Centerline Dist. to Observer: 84.0 feet				-	Noise Source Elevations (in feet) Autos: 0.000								
Barrier Distance to Observer: 0.0 feet													
Observer Height (Above Pad): 5.0 feet						m Truck		297	0				
	ad Elevation:	0.0 feet			Hear	vy Truck	s: 8.	004	Grade Ad	ustment	0.0		
Roa	ad Elevation:	0.0 feet		Ī	Lane Eq	uivalen	t Distan	ce (in	feet)				
	Road Grade:	0.0%		ĺ		Auto	s: 33.	.941					
	Left View:	-90.0 degree	es		Medium Trucks: 33.679								
	Right View:	90.0 degree	es		Heavy Trucks: 33.705								
FHWA Noise Mode	el Calculations												
VehicleType		Traffic Flow	Dis	tance		Road	Fresi	-	Barrier Att	en Ber	m Atten		
Autos:	71.78	3.98		2.4	12	-1.20		-4.75	0.0	000	0.00		
Medium Trucks:	82.40	-9.00		2.4	17	-1.20		-4.88	0.0	000	0.000		
Heavy Trucks:	86.40	-12.93		2.4	17	-1.20		-5.21	0.0	000	0.000		
Unmitigated Noise	Levels (withou	ut Topo and	barrie	er atte	nuation)								
VehicleType	Leq Peak Hour	Leq Day	,	Leq E	vening	Leq	Night		Ldn	C	NEL		
Autos:	77.0		74.4		73.5		70.	-	77.7		78.		
Medium Trucks:	74.7		72.7		67.1		67.	-	75.0		75.2		
Heavy Trucks:	74.7		73.3		61.7		66.		74.1		74.2		
	Vehicle Noise: 80.4 78.3				74.6		73.	2	80.7	′	80.9		
Centerline Distant	ce to Noise Cor	ntour (in feet)	70	10.4	0.5	10.4				10.4		
			L -1		dBA		dBA		60 dBA		dBA		
			Ldn:		431 929 2,003		,	4,314 4,507					
	CNEL:				451 971 2,092 4,					20/			

FH	WA-RD-77-108 HI	GHWAY N	OISE PR	EDICTION	N MOD	EL					
Scenario: HY Withou Road Name: Euclid Av. Road Segment: n/o Merrill	•		Project Name: MCH Job Number: 10351								
SITE SPECIFIC II	NPUT DATA					ODEL IN					
Highway Data		S	Site Conditions (Hard = 10, Soft = 15)								
Average Daily Traffic (Adt):	47,149 vehicles					utos: 15					
Peak Hour Percentage:	10%			lium Truck		,					
Peak Hour Volume:	4,715 vehicles		Hea	vy Trucks	(3+ Ax	les): 15	5				
Vehicle Speed:	55 mph	ν	Vehicle Mix								
Near/Far Lane Distance:	154 feet		Vehic	leType	D	ay Ever	ning Ni	ght	Daily		
Site Data				Aut	os: 6	6.3% 13	.5% 20	0.3%	93.40%		
Barrier Height:	0.0 feet		Me	dium Truc			.3% 17	7.6%	4.70%		
Barrier Type (0-Wall, 1-Berm):	0.0		Н	eavy Truc	ks: 8	6.3% 1	.5% 12	2.2%	1.90%		
Centerline Dist. to Barrier:	84.0 feet	^	loise So	urce Elev	ations	(in feet)					
Centerline Dist. to Observer:	84.0 feet	F.	.0.00 00.	Autos:	0.00	. ,					
Barrier Distance to Observer:	0.0 feet		Medium	Trucks:	2.29						
Observer Height (Above Pad):	5.0 feet		Heavy	Trucks:	8.00	4 Grad	le Adjusti	ment:	0.0		
Pad Elevation:	0.0 feet	-									
Road Elevation:	0.0 feet	L	ane Equ	ivalent Di		. ,					
Road Grade:	0.0%			Autos:	33.94						
Left View: Right View:	-90.0 degrees 90.0 degrees			Trucks: Trucks:	33.67						
Ÿ			ricary	Trucks.	33.70	,,,					
VehicleType REMEL		Distance	Finite F	Pond	Fresne	I Porrie	er Atten	Porm	Atten		
Autos: 71.78		2.42		-1.20		1.75	0.000	Denn	0.000		
Medium Trucks: 82.40		2.47		-1.20		1.88	0.000		0.000		
Heavy Trucks: 86.40	-13.19	2.47		-1.20		5.21	0.000		0.000		
Unmitigated Noise Levels (with	out Topo and ba	rrier attenu	ıation)								
VehicleType Leq Peak Ho	ur Leq Day	Leg Ev	ening	Leq Nig	ght	Ldn		CNI	EL		
Autos: 7	6.7 74.	2	73.3		70.3		77.4		77.9		
Medium Trucks: 74	1.4 72.	5	66.9		67.3		74.7		74.9		
Heavy Trucks: 7-	4.5 73.	0	61.5		65.8		73.9		74.0		
Vehicle Noise: 8	0.1 78.	1	74.4		73.0		80.4		80.7		
Centerline Distance to Noise C	ontour (in feet)										
		70 d	_	65 dB	Α	60 dB/	_	55 d			
	Ldr			894		1,926		4,14			
	CNEL	.: 43:	3	934		2,012		4,33	35		

Thursday, May 02, 2019

	FH\	WA-RD-77-108	HIGH	HWAY	NOISE PI	REDICT	ION M	ODEL						
Road Nam	io: HY Withou ne: Euclid Av. nt: n/o Kimball	,				Project Job N		: MCH : 10351						
SITE	SPECIFIC IN	IPUT DATA				N	IOISE	MODE	L INPUT	s				
Highway Data					Site Con	ditions	(Hard	= 10, S	oft = 15)					
Average Daily	Traffic (Adt):	49,377 vehicle	es		Autos: 15									
Peak Hour	Percentage:	10%			Medium Trucks (2 Axles): 15									
Peak H	lour Volume:	4,938 vehicle	s		Heavy Trucks (3+ Axles): 15									
Ve	hicle Speed:	55 mph			Vehicle Mix									
Near/Far La	ne Distance:	154 feet				icleType	. 1	Day	Evening	Night	Daily			
Site Data					VCII		Autos:	66.3%	-	20.3%	,			
	la u Haladat	0.0 feet			М	edium T		77.0%		17.6%				
Barrier Type (0-W	rrier Height:	0.0 reet 0.0				Heavy T		86.3%		12.2%				
Centerline Di		84.0 feet												
Centerline Dist.		84.0 feet			Noise S				eet)					
Barrier Distance		0.0 feet				Auto.		0.000						
Observer Height		5.0 feet				m Truck		2.297						
	ad Flevation:	0.0 feet			Heav	y Truck	s: 8	3.004	Grade Ad	ljustment	: 0.0			
Ro	ad Flevation:	0.0 feet			Lane Eq	uivalen	Dista	nce (in	feet)					
	Road Grade:	0.0%				Auto.	s: 3:	3.941						
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 3	3.679						
	Right View:	90.0 degree	es		Heav	y Truck	s: 3	3.705						
FHWA Noise Mod	el Calculation	ıs												
VehicleType	REMEL	Traffic Flow	Dis	stance		Road	Fre	snel	Barrier Att		m Atten			
Autos:	71.78	3.93		2.4	-	-1.20		-4.75		000	0.000			
Medium Trucks:	82.40			2.4		-1.20		-4.88		000	0.000			
Heavy Trucks:	86.40	-12.99		2.4	17	-1.20		-5.21	0.0	000	0.000			
Unmitigated Nois			barri	er atte	nuation)									
VehicleType	Leq Peak Hou			Leq E	vening	Leq	Night		Ldn		NEL			
Autos:	76		74.4		73.5		70		77.6	-	78.1			
Medium Trucks:	74		72.7		67.1 61.7		67		74.9	-	75.1			
	Heavy Trucks: 74.7 73.2						66		74.		74.2			
Vehicle Noise:	80		78.3		74.6		73	.2	80.6	6	80.9			
Centerline Distan	ce to Noise C	ontour (in feet)	70		0.5	10.4				10.4			
			Later						60 dBA		dBA			
			Ldn:		28 47	922 963					279			
		Ci	VEL:	4	41	9	03		2,075	4,	470			

	FHW	/A-RD-77-108	HIGHW	/AY I	NOISE PI	REDICT	ION MO	DEL					
Road Nam	io: HY Without ne: Euclid Av. nt: n/o Bickmor	•					Name: lumber:		ı				
SITE	SPECIFIC IN	PUT DATA				ı	IOISE N	ИODE	EL INPUTS	5			
Highway Data					Site Conditions (Hard = 10, Soft = 15)								
Average Daily	Traffic (Adt):	36,945 vehicle	es					Autos	: 15				
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2 A	Axles)	: 15				
Peak H	lour Volume:	3,695 vehicle	S		He	avy Tru	cks (3+ A	Axles)	: 15				
Ve	hicle Speed:	55 mph		H	Vehicle Mix								
Near/Far La	ne Distance:	154 feet		-	1011010								
Site Data					*011			66.39		20.3%	Daily 93,40%		
	rrier Height:	0.0 feet			M	edium T		77.09		17.6%			
Barrier Type (0-W		0.0			F	Heavy T	rucks:	86.39	6 1.5%	12.2%	1.90%		
Centerline Di		84.0 feet		-									
Centerline Dist.	to Observer:	84.0 feet		-	Noise So			_	feet)				
Barrier Distance	to Observer:	0.0 feet				Auto		000					
Observer Height	(Above Pad):	5.0 feet				m Truck		297	0		4. 0.0		
	ad Elevation:	0.0 feet			Heav	y Truck	s: 8.0	004	Grade Adj	ustmen	t: 0.0		
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Distan	ce (in	feet)				
	Road Grade:	0.0%				Auto	s: 33.	941					
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 33.	679					
	Right View:	90.0 degree	es		Heav	y Truck	s: 33.	705					
FHWA Noise Mod	el Calculations	5											
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresn		Barrier Atte	en Be	rm Atten		
Autos:	71.78	2.67		2.4	2	-1.20		-4.75	0.0	00	0.000		
Medium Trucks:		-10.31		2.4		-1.20		-4.88			0.000		
Heavy Trucks:	86.40	-14.25		2.4	7	-1.20		-5.21	0.0	00	0.000		
Unmitigated Nois	e Levels (with	out Topo and	barrier	atter	nuation)								
VehicleType	Leq Peak Hou	r Leq Day	L	.eq E	vening	Leq	Night		Ldn	С	NEL		
Autos:	75.		73.1		72.2		69.2		76.4		76.8		
Medium Trucks:	73.	-	71.4		65.8		66.3		73.7		73.9		
Heavy Trucks:	Heavy Trucks: 73.4 72.0				60.4 64.7 72.8					72.9			
Vehicle Noise:	Vehicle Noise: 79.1 77.0				73.3		71.9	9	79.3		79.6		
Centerline Distan	ce to Noise Co	ntour (in feet)										
					dBA		dBA		60 dBA		5 dBA		
			Ldn:	353 760 1,637		3,527							
		CI	VEL:	3	68	7	94		1,710	3	,684		

	FH\	WA-RD-77-108	HIGH	IWAY N	OISE P	REDICT	ION MC	DEL			
	o: HY Withou e: Archibald A nt: s/o Limonit	۸v.					t Name: lumber:				
SITE S	SPECIFIC IN	IPUT DATA				ľ	NOISE	MODE	L INPUT	S	
Highway Data				5	Site Cor	ditions	(Hard =	: 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	36,298 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2 .	Axles):	15		
Peak H	our Volume:	3,630 vehicle	S		He	avy Tru	cks (3+ .	Axles):	15		
Vei	hicle Speed:	45 mph		-	/ehicle	Miv					
Near/Far Lar	ne Distance:	78 feet		F.		icleType	9	Dav	Evening	Night	Daily
Site Data							Autos:	66.3%		20.3%	
Par	rier Heiaht:	0.0 feet			М	edium T	rucks:	77.0%	5.3%	17.6%	4.70%
Barrier Type (0-W		0.0			- 1	Heavy T	rucks:	86.3%	1.5%	12.2%	1.90%
Centerline Dis	. ,	76.0 feet		١.	v-: 0			- /! #	4)		
Centerline Dist.	to Observer:	76.0 feet			voise S	Auto	levation	000	eet)		
Barrier Distance	to Observer:	0.0 feet			Modiu	Auto m Truck		297			
Observer Height (Above Pad):	5.0 feet				vy Truck		004	Grade Ad	iustmont	. 0.0
Pa	ad Elevation:	0.0 feet			пеач	ry Truck	.s. o.	004	Grade Auj	usunem	. 0.0
Roa	ad Elevation:	0.0 feet		L	Lane Eq	uivalen	t Distan	ce (in i	feet)		
F	Road Grade:	0.0%				Auto	s: 65	422			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 65	.286			
	Right View:	90.0 degre	es		Heav	ry Truck	s: 65	.299			
FHWA Noise Mode	el Calculation										
VehicleType	REMEL	Traffic Flow	Dis	tance		Road	Fresi		Barrier Atte		m Atten
Autos:	68.46	3.46		-1.85		-1.20		-4.73	0.0		0.00
Medium Trucks:	79.45			-1.84		-1.20		-4.88	0.0		0.00
Heavy Trucks:	84.25	-13.45		-1.84	1	-1.20		-5.25	0.0	100	0.000
Unmitigated Noise											
,,	Leq Peak Hou			Leq Ev		Leq	Night		Ldn		NEL
Autos:			66.3		65.4		62.		69.6		70.0
Medium Trucks:			65.0		59.4		59.	-	67.2	-	67.4
Heavy Trucks:			66.3		54.7		59.		67.2		67.2
Vehicle Noise:			70.7		66.7		65.4	4	72.9)	73.2
Centerline Distanc	e to Noise C	ontour (in feet)	70 c	ID A	65	dBA		60 dBA	55	dBA
			Ldn:	11			156		552		189
			NEL:	12	-	_	67		575		239
		C		12					010	١,	

	FH\	WA-RD-77-108	HIGH	WAY N	OISE PF	REDICTIC	OM MO	DEL			
	: HY Withou					Project N					
	: Archibald A					Job Nui	mber:	10351			
Road Segmen	t: n/o Limonit	e Av.									
SITE S	PECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data				S	ite Con	ditions (F	Hard =	10, Sc	oft = 15)		
Average Daily T	raffic (Adt):	46,489 vehicl	es					Autos:	15		
Peak Hour F	Percentage:	10%				dium Truc			15		
Peak Ho	our Volume:	4,649 vehicle	:S		He	avy Truck	s (3+ A	(xles	15		
Veh	icle Speed:	55 mph		ν	ehicle l	Mix					
Near/Far Lan	e Distance:	154 feet		F	Vehi	icleType		Dav	Evening	Night	Daily
Site Data						AL	ıtos:	66.3%	13.5%	20.3%	93.40%
Ran	ier Height:	0.0 feet			Me	edium Tru	cks:	77.0%	5.3%	17.6%	4.70%
Barrier Type (0-Wa	all, 1-Berm):	0.0			F	leavy Tru	cks:	86.3%	1.5%	12.2%	1.90%
Centerline Dis		84.0 feet		۸	loise Sc	urce Ele	vation	s (in fe	eet)		
Centerline Dist. to		84.0 feet				Autos:	0.0	000			
Barrier Distance to		0.0 feet			Mediur	n Trucks:	2.2	297			
Observer Height (A	,	5.0 feet			Heav	y Trucks:	8.0	004	Grade Ad	justment	!: 0.0
	d Elevation:	0.0 feet		,	ono Fa	uivalent L	Dioton	na (in i	fo.o.4)		
	d Elevation:	0.0 feet		-	ane Eq	Autos:			eet)		
K	load Grade:	0.0%			Modium	n Trucks:					
	Right View:	-90.0 degre 90.0 degre				y Trucks:					
FHWA Noise Mode											
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresn	iel .	Barrier Att	en Re	rm Atten
Autos:	71.78	3.67		2.42		-1.20		-4.75		000	0.00
Medium Trucks:	82.40	-9.31		2.47		-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	86.40	-13.25		2.47		-1.20		-5.21	0.0	000	0.00
Unmitigated Noise	Levels (with	out Topo and	barrie	r attenu	ıation)						
	Leq Peak Hou			Leq Ev		Leq N			Ldn		NEL
Autos:	76		74.1		73.2		70.2		77.4		77.
Medium Trucks:	74		72.4		66.8		67.3		74.7		74.
Heavy Trucks:	74		73.0		61.4		65.7		73.8		73.
Vehicle Noise:	80		78.0		74.3		72.9)	80.3	3	80.
Centerline Distance	e to Noise C	ontour (in fee	t)	70 d	DA I	65 dl	D.A	-	i0 dBA		i dBA
			Ldn:	70 d		65 at			1.908		.111
		_	Lan: NFI:	41		925			1,908		,111
		C	IVLL.	42	7	920	,		1,330	4,	234

Thursday, May 02, 2019

FH	WA-RD-77-108 HIG	HWAY NOIS	E PREDICTIO	ON MODEL		
Scenario: HY Withou	t Project		Project N	lame: MCH		
Road Name: Archibald A	Av.		Job Nu	mber: 10351	I	
Road Segment: s/o Schleis	man Rd.					
SITE SPECIFIC IN	IPUT DATA				L INPUTS	
Highway Data		Site	Conditions (Hard = 10, S	oft = 15)	
Average Daily Traffic (Adt):	27,702 vehicles			Autos		
Peak Hour Percentage:	10%		Medium Truc			
Peak Hour Volume:	2,770 vehicles		Heavy Truck	is (3+ Axles)	: 15	
Vehicle Speed:	45 mph	Vehi	cle Mix			
Near/Far Lane Distance:	78 feet	-	VehicleType	Day	Evening	Night Daily
Site Data			A	utos: 66.39	6 13.5%	20.3% 93.40%
Barrier Height:	0.0 feet		Medium Tru	icks: 77.09	6 5.3%	17.6% 4.70%
Barrier Type (0-Wall, 1-Berm):	0.0		Heavy Tru	icks: 86.39	6 1.5%	12.2% 1.90%
Centerline Dist. to Barrier:	76.0 feet	Nois	e Source Ele	vations (in	feet)	
Centerline Dist. to Observer:	76.0 feet		Autos	•	,	
Barrier Distance to Observer:	0.0 feet	Me	edium Trucks			
Observer Height (Above Pad):	5.0 feet	, , , , , , , , , , , , , , , , , , ,	leavv Trucks:	8.004	Grade Adiu	stment: 0.0
Pad Elevation:	0.0 feet					
Road Elevation:	0.0 feet	Lane	Equivalent I		feet)	
Road Grade:	0.0%		Autos:			
Left View:	-90.0 degrees		edium Trucks:			
Right View:	90.0 degrees	<i>F</i>	leavy Trucks:	65.299		
FHWA Noise Model Calculation	-					
VehicleType REMEL			nite Road	Fresnel	Barrier Atte	
Autos: 68.46	2.29	-1.85	-1.20	-4.73	0.00	
Medium Trucks: 79.45		-1.84	-1.20	-4.88	0.00	
Heavy Trucks: 84.25		-1.84	-1.20	-5.25	0.00	0.000
Unmitigated Noise Levels (with						
VehicleType Leq Peak Ho		Leq Evenir	,	•	Ldn	CNEL
Autos: 67		-	64.2	61.2	68.4	68.8
Medium Trucks: 65			8.2	58.6	66.0	66.2
Heavy Trucks: 66			3.6	57.9	66.0	66.1
Vehicle Noise: 71			65.5	64.3	71.7	72.0
Centerline Distance to Noise C	ontour (in feet)	70 104	05.1		00 104	55 104
		70 dBA	65 d	BA	60 dBA	55 dBA
			0.1			
	Ldn: CNFI:	99 103	214		461 480	993 1.035

	FHW	A-RD-77-108	HIGHW	ΔYN	IOISE PE	EDICT	ON MO	DEL			
Road Nam	rio: HY Without ne: Kimball Av. nt: w/o Mountai	Project			.0.02.1.	Project	Name: umber:	MCH			
SITE	SPECIFIC IN	PUT DATA				N	OISE N	ИODE	L INPUTS	5	
Highway Data					Site Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	22,744 vehicle	es.					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tru	icks (2 /	Axles):	15		
Peak F	lour Volume:	2,274 vehicles	5		He	avy Truc	cks (3+ A	Axles):	15		
Ve	hicle Speed:	50 mph		-	Vehicle I	Aire					
Near/Far La	ne Distance:	36 feet		H		riix cleType		Dav	Evening	Night	Dailv
Site Data				-	VCIII			66.3%		20.3%	. ,
	rrier Height:	0.0 feet			Me	dium Ti		77.0%		17.6%	
Barrier Type (0-W		0.0 1001			F	leavy Ti	ucks:	86.3%	1.5%	12.2%	1.90%
Centerline Di		44.0 feet		L							
Centerline Dist.		44.0 feet		1	Noise Sc				eet)		
Barrier Distance		0.0 feet				Autos		000			
Observer Height		5.0 feet				n Truck		297			
	ad Elevation:	0.0 feet			Heav	y Trucks	s: 8.	004	Grade Adj	ustmen	t: 0.0
	ad Elevation:	0.0 feet		1	Lane Equ	ıivalent	Distan	ce (in	feet)		
	Road Grade:	0.0%				Autos	s: 40.	460			
	Left View:	-90.0 degree	is.		Mediur	n Truck	s: 40.	241			
	Right View:	90.0 degree			Heav	y Trucks	s: 40.	262			
FHWA Noise Mod	el Calculations	;									
VehicleType	REMEL	Traffic Flow	Distar	nce	Finite	Road	Fresr	nel	Barrier Atte	en Be	rm Atten
Autos:	70.20	0.98		1.28	8	-1.20		-4.61	0.0	00	0.000
Medium Trucks:	81.00	-12.01		1.3	1	-1.20		-4.87	0.0	00	0.000
Heavy Trucks:	85.38	-15.94		1.3	1	-1.20		-5.50	0.0	00	0.000
Unmitigated Nois	e Levels (witho	ut Topo and	barrier a	atten	uation)						
VehicleType	Leq Peak Hour	Leq Day	L	eq E	vening	Leq	Night		Ldn	С	NEL
Autos:	71.3	3 (68.7		67.8		64.8	3	72.0	i	72.4
Medium Trucks:	69.	1 (37.2		61.6		62.0)	69.4		69.6
Heavy Trucks:	69.	5 (8.1		56.5		60.9)	69.0	1	69.0
Vehicle Noise:	74.	8	72.8		69.0		67.7	7	75.1		75.4
Centerline Distan	ce to Noise Co	ntour (in feet,									
				70 c	dBA	65	dBA	-	60 dBA	55	5 dBA
			Ldn:	9	6	20	07		447	-	963
		CI	IEL:	10	00	2	16		466	1	,005

Thursday, May 02, 2019

		/A-RD-77-108	HIGH	HWAY N	OISE P							
	o: HY Without	Project			Project Name: MCH Job Number: 10351							
	e: Kimball Av.					Job N	lumber:	10351				
	nt: e/o Euclid A											
SITE S Highway Data	SPECIFIC IN	PUT DATA			Cito Cor				L INPUT: oft = 15)	S		
· ·					site Con	aiuons	(naru :					
Average Daily	. ,	24,348 vehicle	es					Autos.				
	Percentage:	10%				dium Tr						
		2,435 vehicles	S		He	avy Tru	cks (3+	Axles).	15			
	hicle Speed:	50 mph		- 1	/ehicle	Mix						
Near/Far Lar	ne Distance:	51 feet			Veh	icleType	•	Day	Evening	Night	Daily	
Site Data						,	Autos:	66.3%	13.5%	20.3%	93.40%	
Bar	rier Height:	0.0 feet			М	edium T	rucks:	77.0%	5.3%	17.6%	4.70%	
Barrier Type (0-W		0.0			- 1	Heavy T	rucks:	86.3%	1.5%	12.2%	1.90%	
Centerline Dis		49.0 feet			Voise S	E	lovotio	no (in t	0.041			
Centerline Dist.	to Observer:	49.0 feet			voise 3				eet)			
Barrier Distance	to Observer:	0.0 feet			A 4 E	Auto m Truck		.000				
Observer Height (Above Pad): 5.0 feet								.004	Crada Ad	iuotmon		
Pa	nd Elevation:	0.0 feet			Heat	y Truck	s: 8	.004	Grade Ad	usunem	. 0.0	
Roa	ad Elevation:	0.0 feet		1	Lane Eq	uivalen	t Distar	nce (in	feet)			
F	Road Grade:	0.0%				Auto	s: 42	.140				
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 41	.929				
	Right View:	90.0 degree	es		Heav	y Truck	s: 41	.950				
FHWA Noise Mode	el Calculations											
VehicleType	REMEL	Traffic Flow	Dis	stance		Road	Fres		Barrier Att		rm Atten	
Autos:	70.20	1.27		1.01		-1.20		-4.64	0.0		0.00	
Medium Trucks:	81.00	-11.71		1.04		-1.20		-4.87	0.0		0.000	
Heavy Trucks:	85.38	-15.64		1.04	1	-1.20		-5.44	0.0	000	0.000	
Unmitigated Noise	•		_							,		
,,	Leq Peak Hou			Leq E		Leq	Night		Ldn		NEL	
Autos:	71.	-	68.7		67.8		64.	-	72.0		72.4	
Medium Trucks:	69.	-	67.2		61.6		62.	-	69.5		69.6	
Heavy Trucks:	69.	-	68.1		56.6		60.	-	69.0		69.1	
Vehicle Noise:	74.	9	72.8		69.0		67.	.7	75.1		75.4	
Centerline Distanc	e to Noise Co	ntour (in feet)	70			10.4				10.4	
			, L	70 c			dBA		60 dBA		dBA	
			Ldn:	10	18	2	32		500	1	,077	
		01	VFI:	11	0		42		522		124	

Road Nam	io: HY Without ie: Kimball Av. int: w/o Euclid i	•				Project Job No	Name: umber:				
	SPECIFIC IN	PUT DATA							L INPUT	s	
Highway Data					Site Con	ditions (Hard =	: 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	29,863 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tru	cks (2	Axles):	15		
Peak H	lour Volume:	2,986 vehicle	S		He	avy Truc	ks (3+	Axles):	15		
Ve	hicle Speed:	50 mph		1	Vehicle	Mix					
Near/Far Lai	ne Distance:	36 feet		F		icleType		Day	Evening	Night	Daily
Site Data						Α	utos:	66.3%	13.5%	20.39	6 93.40%
Bai	rrier Heiaht:	0.0 feet			M	edium Tr	ucks:	77.0%	5.3%	17.69	6 4.70%
Barrier Type (0-W		0.0			I	Heavy Tr	ucks:	86.3%	1.5%	12.29	6 1.90%
Centerline Dis		44.0 feet		1	Voise S	ource Ele	evation	ıs (in f	eet)		
Centerline Dist.		44.0 feet				Autos		000	,		
Barrier Distance		0.0 feet			Mediu	m Trucks		297			
Observer Height (Above Pad):	5.0 feet			Heav	vy Trucks	. 8	004	Grade Ad	iustmer	nt: 0.0
	ad Elevation:	0.0 feet		L.		•					
	ad Elevation:	0.0 feet		1	Lane Eq	uivalent			feet)		
/	Road Grade:	0.0%				Autos		.460			
	Left View:	-90.0 degree				m Trucks		.241			
	Right View:	90.0 degree	es		Heav	ry Trucks	: 40	.262			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en B	erm Atten
Autos:	70.20	2.16		1.28	3	-1.20		-4.61	0.0	000	0.000
Medium Trucks:	81.00	-10.82		1.31		-1.20		-4.87		000	0.000
Heavy Trucks:	85.38	-14.76		1.31	I	-1.20		-5.50	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barri	er atten	uation)						
	Leq Peak Hou			Leq Ev		Leq I			Ldn		CNEL
Autos:	72		69.9		69.0		66.		73.2		73.6
Medium Trucks:	70		68.4		62.8		63.		70.6		70.8
Heavy Trucks:	70		69.3		57.7		62.		70.1		70.2
Vehicle Noise:	76		74.0		70.2		68.	8	76.3	3	76.6
Centerline Distance	ce to Noise Co	ntour (in feet)								
			L	70 c		65 0		(60 dBA		5 dBA
			Ldn:	11		24			536		1,155
		CI	NEL:	12	20	26	0		559		1,205

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Thursday, May 02, 2019

	FHV	VA-RD-77-108 I	HIGHWA'	NOISE P	REDICTIO	N MODEL		
	: HY Without : Kimball Av. : w/o Rincon	,				lame: MCH mber: 1035	1	
SITE S	PECIFIC IN	PUT DATA			NC	ISE MODI	EL INPUTS	
Highway Data				Site Cor	nditions (F	lard = 10, S	oft = 15)	
Average Daily To Peak Hour P		22,356 vehicle:	S	Mc	dium Truc	Autos		
	ur Volume:	2.236 vehicles				s (3+ Axles)		
	icle Speed:	50 mph		770	avy much	3 (0+ 74,103)	. 13	
Near/Far Lane		50 mpn 51 feet		Vehicle				
Near/Far Lane	e Distance:	51 feet		Veh	icleType	Day	Evening Ni	ght Daily
Site Data						itos: 66.39		0.3% 93.40%
Barr	ier Height:	0.0 feet		М	edium Tru	cks: 77.09	6 5.3% 17	7.6% 4.70%
Barrier Type (0-Wa	II, 1-Berm):	0.0		1	Heavy Tru	cks: 86.39	6 1.5% 12	2.2% 1.90%
Centerline Dist	. to Barrier:	49.0 feet		Noise S	ource Fle	vations (in	feet)	
Centerline Dist. to	Observer:	49.0 feet		110100 0	Autos:	•		
Barrier Distance to	Observer:	0.0 feet		Mediu	m Trucks:			
Observer Height (A	bove Pad):	5.0 feet			vy Trucks:		Grade Adjusti	ment: 0.0
Pad	d Elevation:	0.0 feet			-			
Road	d Elevation:	0.0 feet		Lane Eq	uivalent E	Distance (in	feet)	
Re	oad Grade:	0.0%			Autos:	42.140		
	Left View:	-90.0 degrees	S	Mediu	m Trucks:	41.929		
,	Right View:	90.0 degrees	S	Heav	y Trucks:	41.950		
FHWA Noise Model	Calculation							
VehicleType	REMEL	Traffic Flow	Distanc	e Finite	Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	0.90		.01	-1.20	-4.64		0.000
Medium Trucks:	81.00	-12.08		.04	-1.20	-4.87		0.000
Heavy Trucks:	85.38	-16.01		.04	-1.20	-5.44	0.000	0.000
Unmitigated Noise								,
	.eq Peak Hou			Evening	Leg N	•	Ldn	CNEL
Autos:	70		8.3	67.4		64.4	71.6	72.1
Medium Trucks:	68		6.8	61.2		61.7	69.1	69.3
Heavy Trucks:	69		7.8	56.2		60.5	68.6	68.7
Vehicle Noise:	74	.5 7	2.5	68.6		67.3	74.8	75.0
Centerline Distance	to Noise Co	ontour (in feet)			05.15		00 104	55 104
				0 dBA	65 dE		60 dBA	55 dBA
		_	dn:	102	219		472	1,018
		CN	EL:	106	229	,	493	1,062

	FH	WA-RD-77-108	HIGH	WAY	NOISE P	REDICT	ION MO	DEL				
Road Nam	io: HY Withou ne: Kimball Av nt: e/o Rincon	. ,			Project Name: MCH Job Number: 10351							
SITE	SPECIFIC IN	IPUT DATA							L INPUT	s		
Highway Data					Site Cor	ditions	(Hard =	= 10, S	oft = 15)			
Average Daily	Traffic (Adt):	21,454 vehicle	es					Autos.	15			
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2	Axles).	: 15			
Peak F	lour Volume:	2,145 vehicles	3		He	avy Tru	cks (3+	Axles).	: 15			
Ve	hicle Speed:	50 mph		ŀ	Vehicle	Mix						
Near/Far La	ne Distance:	51 feet		-		icleType	,	Day	Evening	Night	Daily	
Site Data							Autos:	66.39		20.39		
Ra	rrier Height:	0.0 feet			M	edium T	rucks:	77.0%	6 5.3%	17.69	% 4.70%	
Barrier Type (0-W	-	0.0			- 1	Heavy T	rucks:	86.3%	6 1.5%	12.29	% 1.90%	
Centerline Di		49.0 feet										
Centerline Dist.	to Observer:	49.0 feet		H	Noise S			٠,	eet)			
Barrier Distance	to Observer:	0.0 feet				Auto		.000				
Observer Height		5.0 feet				m Truck		.297				
	ad Elevation:	0.0 feet			Heav	y Truck	s: 8	.004	Grade Ad	justmei	nt: 0.0	
	ad Flevation:	0.0 feet		Ī	Lane Eq	uivalen	t Distar	ce (in	feet)			
	Road Grade:	0.0%				Auto	s: 42	.140				
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 41	.929				
	Right View:	90.0 degree			Heav	y Truck	s: 41	.950				
FHWA Noise Mod	el Calculation	ıs										
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fres	nel	Barrier Att	en B	erm Atten	
Autos:	70.20	0.72		1.0)1	-1.20		-4.64	0.0	000	0.000	
Medium Trucks:	81.00	-12.26		1.0)4	-1.20		-4.87	0.0	000	0.000	
Heavy Trucks:	85.38	-16.19		1.0)4	-1.20		-5.44	0.0	000	0.000	
Unmitigated Nois	e Levels (with	out Topo and	barrie	er atte	nuation)							
VehicleType	Leq Peak Ho	ır Leq Day		Leq E	vening	Leq	Night		Ldn	(CNEL	
Autos:	70	.7	68.2		67.3		64.	3	71.5	5	71.9	
Medium Trucks:	68	3.6	66.7		61.1		61.	5	68.9	9	69.1	
Heavy Trucks:	69	0.0	67.6		56.0		60.	3	68.4	4	68.5	
Vehicle Noise:	74	1.3	72.3		68.5		67.	1	74.6	6	74.9	
Centerline Distan	ce to Noise C	ontour (in feet)									
				70	dBA	65	dBA		60 dBA	5	5 dBA	
			Ldn:	9	99	2	13		460		990	
		CI	VEL:	1	03	2	23		480		1,033	

		VA-RD-77-108	HIG	HWAT	NUISE P						
	io: HY Without					Project					
	e: Kimball Av.					JOD N	umber:	10351			
	nt: e/o Main St										
	SPECIFIC IN	IPUT DATA			Site Con				L INPUT	S	
Highway Data					Site Con	iaitions	(Hara =				
Average Daily	. ,	18,365 vehicl	es					Autos:			
	Percentage:	10%				edium Tri					
	lour Volume:	1,837 vehicle	S		He	eavy Truc	cks (3+	Axles):	15		
Ve	hicle Speed:	50 mph			Vehicle	Mix					
Near/Far La	ne Distance:	51 feet			Veh	icleType		Day	Evening	Night	Daily
Site Data						,	lutos:	66.3%	13.5%	20.3%	93.40%
Bai	rrier Height:	0.0 feet			M	edium T	ucks:	77.0%	5.3%	17.6%	4.70%
Barrier Type (0-W		0.0				Heavy Ti	ucks:	86.3%	1.5%	12.2%	1.90%
Centerline Dis		49.0 feet			Noise S	ouroo E	la ratio	an (in f	0.041		
Centerline Dist.	to Observer:	49.0 feet			Noise 3	Auto:		.000	eet)		
Barrier Distance	to Observer:	0.0 feet			A 4 E	Auto: m Truck		.000			
Observer Height (Above Pad): 5.0 feet									Crada Ad	ii rotmon	4 0 0
Pa	ad Elevation:	0.0 feet			Heat	vy Truck	s: 8	.004	Grade Ad	jusunen	. 0.0
Roa	ad Elevation:	0.0 feet			Lane Eq	uivalen	Distar	ice (in	feet)		
	Road Grade:	0.0%				Auto	s: 42	.140			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 41	.929			
	Right View:	90.0 degre	es		Heav	vy Truck	s: 41	.950			
FHWA Noise Mode	el Calculation										
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres		Barrier Att	en Be	rm Atten
Autos:	70.20	0.05		1.0	01	-1.20		-4.64	0.0	000	0.000
Medium Trucks:	81.00	-12.93		1.0)4	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	85.38	-16.87		1.0	04	-1.20		-5.44	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barri	ier atte	nuation)						
VehicleType	Leq Peak Hou	ır Leq Daj	/	Leq E	vening	Leq	Night		Ldn		NEL
Autos:	70	.1	67.5		66.6		63.	6	70.8	3	71.2
Medium Trucks:	67		66.0		60.4		60.	-	68.2	_	68.4
Heavy Trucks:	68	•	66.9		55.3		59.		67.8		67.8
Vehicle Noise:	73	.6	71.6		67.8		66.	5	73.9	9	74.2
Centerline Distand	ce to Noise Co	ontour (in fee)								
			L		dBA		dBA		60 dBA		dBA
			89 192 414		893						
		C	NEL:		93		01		432		931

	FHV	VA-RD-77-108	HIG	I YAWH	NOISE PI	REDICTION	ON MOI	DEL			
Road Nan	io: HY Without ne: Kimball Av. nt: e/o Mill Cre	,				Project i Job Nu	Name: I ımber: '				
	SPECIFIC IN	PUT DATA							L INPUT	s	
Highway Data					Site Con	ditions (Hard =	10, Sc			
Average Daily	Traffic (Adt):	19,521 vehicle	es					Autos:	15		
	Percentage:	10%				dium Tru	,	,			
Peak F	lour Volume:	1,952 vehicles	3		He	avy Truc	ks (3+ A	(xles	15		
	hicle Speed:	50 mph		ı	Vehicle	Mix					
Near/Far La	ne Distance:	51 feet		ŀ	Veh	icleType		Day	Evening	Night	Daily
Site Data						Α	utos:	66.3%	13.5%	20.3	% 93.40%
Ba	rrier Heiaht:	0.0 feet			M	edium Tr	ucks:	77.0%	5.3%	17.6	% 4.70%
Barrier Type (0-W		0.0			I	Heavy Tri	ucks:	86.3%	1.5%	12.2	% 1.90%
Centerline Di	st. to Barrier:	49.0 feet			Noise So	ourco Ek	wation	c (in f	not)		
Centerline Dist.	to Observer:	49.0 feet		ŀ	NOISE S	Autos		000	ei)		
Barrier Distance	to Observer:	0.0 feet			Modius	m Trucks		297			
Observer Height	(Above Pad):	5.0 feet				vy Trucks		004	Grade Ad	iustme	nt. 0 0
P	ad Elevation:	0.0 feet		L						,	0.0
Ro	ad Elevation:	0.0 feet		L	Lane Eq	uivalent	Distanc	ce (in :	feet)		
	Road Grade:	0.0%				Autos		140			
	Left View:	-90.0 degree	es		Mediu	m Trucks	: 41.9	929			
	Right View:	90.0 degree	es		Heav	y Trucks	: 41.9	950			
FHWA Noise Mod	el Calculation:	S									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fresn	el	Barrier Att	en B	erm Atten
Autos:	70.20	0.31		1.0	11	-1.20		-4.64	0.0	000	0.000
Medium Trucks:	81.00	-12.67		1.0	14	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	85.38	-16.60		1.0	14	-1.20		-5.44	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barr	ier atter	nuation)						
VehicleType	Leq Peak Hou	ır Leq Day	,	Leq E	vening	Leq 1	Vight		Ldn		CNEL
Autos:	70.		67.8		66.9		63.9		71.0	-	71.5
Medium Trucks:	68.	-	66.2		60.6		61.1		68.	-	68.7
Heavy Trucks:	68.	.6	67.2		55.6		59.9	1	68.0)	68.1
Vehicle Noise:	73		71.9		68.0		66.7		74.2	2	74.4
Centerline Distan	ce to Noise Co	ontour (in feet)							,	
				70	dRA	65 c	IHA	1 6	SO dRA	1 5	55 dRA

Ldn: CNEL:

Thursday, May 02, 2019

	FH\	WA-RD-77-108 HIG	HWAY	NOISE P	REDICTION	ON MODEL		
	rio: HY Withou			·		Vame: MCH		•
	ne: Kimball Av.				Job Nu	mber: 103	51	
Road Segme	nt: e/o Flight A	IV.						
SITE	SPECIFIC IN	IPUT DATA			N	DISE MOD	EL INPUT	S
Highway Data				Site Con	ditions (Hard = 10,	Soft = 15)	
Average Daily	Traffic (Adt):	15,529 vehicles				Auto	s: 15	
Peak Hour	Percentage:	10%		Me	dium Tru	cks (2 Axles	s): 15	
Peak F	lour Volume:	1,553 vehicles		He	avy Truci	ks (3+ Axles	s): 15	
	ehicle Speed:	50 mph		Vehicle I	Wix			
Near/Far La	ne Distance:	51 feet			icleType	Day	Evening	Night Daily
Site Data					A	utos: 66.3	% 13.5%	20.3% 93.40%
Ra	rrier Heiaht:	0.0 feet		Me	edium Tru	icks: 77.0	5.3%	17.6% 4.70%
Barrier Type (0-W		0.0		F	leavy Tru	icks: 86.3	1.5%	12.2% 1.90%
Centerline Di	ist. to Barrier:	49.0 feet		Noise Sc	ource Fle	vations (in	feet)	
Centerline Dist.	to Observer:	49.0 feet		710700 00	Autos		1001)	
Barrier Distance	to Observer:	0.0 feet		Mediu	n Trucks			
Observer Height	(Above Pad):	5.0 feet			v Trucks		Grade Ad	ljustment: 0.0
	ad Elevation:	0.0 feet			,			,
	ad Elevation:	0.0 feet		Lane Eq		Distance (i	n feet)	
	Road Grade:	0.0%			Autos			
	Left View:	-90.0 degrees			m Trucks			
	Right View:	90.0 degrees		Heav	y Trucks	41.950		
FHWA Noise Mod		-						
VehicleType	REMEL		Distance		Road	Fresnel	Barrier Att	
Autos:		-0.68	1.0		-1.20	-4.6		0.000
Medium Trucks:		-13.66	1.0		-1.20	-4.8		0.000
Heavy Trucks:		-17.60	1.0		-1.20	-5.4	4 0.0	0.000
		out Topo and ban	_			tit- t	Late	ONE
VehicleType Autos:	Leq Peak Hou			vening 65.9	Leq N	62.9	Ldn 70.0	CNEL 0 70.5
Medium Trucks:				59.7		60.1	67.5	
Heavy Trucks:				59.7 54.6		58.9	67.0	
Vehicle Noise:				67.1		65.7	73.3	
			,	07.1		00.7	/3	
Centerline Distan	ce to Noise C	ontour (in feet)	70	dBA	65 o	RΔ	60 dBA	55 dBA
		I dn		30 30	17		370	798
		CNFL		33	17	_	387	833
		OIVEE	. ,		.,	•		555

	FH\	WA-RD-77-108	HIGH	1 YAW	NOISE PF	REDICT	ION M	ODEL			
Road Nam	io: HY Withou ne: Limonite A nt: w/o Archiba	v.				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	t Name: lumber:				
	SPECIFIC IN	IPUT DATA							L INPUT	s	
Highway Data					Site Con	ditions	(Hard	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	27,217 vehicle	es					Autos	: 15		
Peak Hour	Percentage:	10%					ucks (2				
Peak H	lour Volume:	2,722 vehicle	S		He	avy Tru	cks (3+	Axles)	: 15		
Ve	hicle Speed:	50 mph		H	Vehicle I	/lix					
Near/Far La	ne Distance:	78 feet		-		cleType	9	Day	Evening	Night	Daily
Site Data							Autos:	66.39	Ü	20.3	
Rai	rrier Height:	0.0 feet			Me	dium T	rucks:	77.09	6 5.3%	17.6	% 4.70%
Barrier Type (0-W	-	0.0			F	leavy T	rucks:	86.39	6 1.5%	12.2	% 1.90%
Centerline Dis		76.0 feet		-	M-1 0-			/	F 4)		
Centerline Dist.	to Observer:	76.0 feet		-	Noise Sc				eet)		
Barrier Distance	to Observer:	0.0 feet				Auto		0.000			
Observer Height (Above Pad):	5.0 feet				n Truck		2.297	Grade Ad	iuctmo	nt: 0.0
Pa	ad Elevation:	0.0 feet			Heav	y Truck	is: e	3.004	Grade Ad	Jusuiie	n. 0.0
Ros	ad Elevation:	0.0 feet			Lane Equ	ıivalen	t Dista	nce (in	feet)		
ı	Road Grade:	0.0%				Auto	s: 65	5.422			
	Left View:	-90.0 degree	es		Mediur	n Truck	s: 65	5.286			
	Right View:	90.0 degree	es		Heav	y Truck	s: 65	5.299			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fres	snel	Barrier Att	en B	erm Atten
Autos:	70.20	1.76		-1.8	5	-1.20		-4.73	0.0	000	0.000
Medium Trucks:	81.00	-11.23		-1.8	4	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	85.38	-15.16		-1.8	4	-1.20		-5.25	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrie	r atter	nuation)						
VehicleType	Leq Peak Hou			Leq E	vening	Leq	Night		Ldn		CNEL
Autos:	68	.9	66.3		65.4		62	.4	69.	3	70.0
Medium Trucks:	66		64.8		59.2		59		67.		67.2
Heavy Trucks:	67	.2	65.7		54.2		58	.5	66.0	6	66.7
Vehicle Noise:	72	5	70.4		66.6		65	.3	72.	7	73.0
Centerline Distant	ce to Noise Co	ontour (in feet)							,	
					dBA		dBA		60 dBA		55 dBA
			Ldn:		16	_	49		537		1,158
		CI	VEL:	1:	21	2	60		561		1,208

	FHV	VA-RD-77-108	HIGH	I YAWI	NOISE P	REDICT	ION MO	DDEL			
Road Nan	rio: HY Without ne: Pine Av. ent: w/o El Prad	,					t Name: lumber:				
	SPECIFIC IN	PUT DATA							L INPUT	s	
Highway Data					Site Cor	nditions	(Hard				
Average Daily	Traffic (Adt):	27,780 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10%				edium Tr		,			
Peak F	Hour Volume:	2,778 vehicle	S		He	eavy Tru	cks (3+	Axles):	15		
Ve	ehicle Speed:	45 mph		f	Vehicle	Mix					
Near/Far La	ane Distance:	76 feet		ŀ	Veh	icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	66.3%	13.5%	20.3%	93.40%
Ba	rrier Height:	0.0 feet			М	edium T	rucks:	77.0%	5.3%	17.6%	4.70%
Barrier Type (0-V		0.0				Heavy T	rucks:	86.3%	1.5%	12.2%	1.90%
Centerline Di	ist. to Barrier:	60.0 feet		H	Noise S	ource F	levatio	ns (in fe	net)		
Centerline Dist.	to Observer:	60.0 feet		H	710,00	Auto		.000	,,,,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck		.297			
Observer Height	(Above Pad):	5.0 feet				vy Truck		.004	Grade Ad	iustment	. 0.0
P	ad Elevation:	0.0 feet								douriorit	. 0.0
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Distai	nce (in 1	feet)		
	Road Grade:	0.0%				Auto	s: 46	5.701			
	Left View:	-90.0 degree	es		Mediu	m Truck	rs: 46	5.511			
	Right View:	90.0 degree	es		Hear	vy Truck	s: 46	5.530			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	inel	Barrier Att	en Ber	m Atten
Autos:		2.30		0.3		-1.20		-4.69		000	0.00
Medium Trucks:		-10.68		0.3		-1.20		-4.88		000	0.00
Heavy Trucks:	84.25	-14.61		0.3	7	-1.20		-5.34	0.0	000	0.00
Unmitigated Nois											
VehicleType	Leq Peak Hou			Leq E	vening		Night		Ldn		NEL
Autos:			67.3		66.4		63.		70.6		71.
Medium Trucks:			66.0		60.4		60		68.3		68.
Heavy Trucks: Vehicle Noise:			67.4 71.7		55.8 67.7		60		68.2 74.0		68. 74.
Centerline Distan					0		30	-	. 4.0	-	,
cemeriine Distan	CE IO NOISE CO	nnour (in feet		70	dBA	65	dBA	6	0 dBA	55	dBA
			Ldn:	1	10	2	:37		511	1,	101
		CI	VEL:	1	15	2	47		533	1,	148

	FNV	VA-KD-//-106	піч	WATN	UISE F	KEDIC I	ION IVIC	JUEL			
Scenario	o: HY Without	Project				Project	Name:	MCH			
Road Name	e: Limonite Av	<i>'</i> .				Job ∧	lumber:	10351			
Road Segmen	t: e/o Archiba	ld Av.									
SITE S	SPECIFIC IN	PUT DATA				r	IOISE	MODE	L INPUT	s	
Highway Data				S	Site Cor	nditions	(Hard:	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	43,320 vehicle	s					Autos:	15		
Peak Hour I	Percentage:	10%				dium Tr					
Peak Ho	our Volume:	4,332 vehicles	3		He	avy Tru	cks (3+	Axles):	15		
Vet	nicle Speed:	50 mph		ı	/ehicle	Mix					
Near/Far Lar	ne Distance:	78 feet		F		icleType	,	Day	Evening	Night	Daily
Site Data							Autos:	66.3%	13.5%	20.3%	93.40%
Ban	rier Height:	0.0 feet			М	edium T	rucks:	77.0%	5.3%	17.6%	4.70%
Barrier Type (0-Wa		0.0				Heavy T	rucks:	86.3%	1.5%	12.2%	1.90%
Centerline Dis		76.0 feet			Inisa S	ource E	lovatio	ne (in f	oot)		
Centerline Dist. t	o Observer:	76.0 feet		-	10/30 0	Auto		.000	JUL)		
Barrier Distance t	o Observer:	0.0 feet			Modiu	m Truck		.297			
Observer Height (/	Above Pad):	5.0 feet				n Truck v Truck		.004	Grade Ad	iuetmant	0.0
Pa	d Elevation:	0.0 feet			пеан	у писк	s. o	.004	Orado Ad,	usunon.	0.0
Roa	d Elevation:	0.0 feet		L	.ane Eq	uivalen	t Distai	nce (in	feet)		
F	Road Grade:	0.0%				Auto	s: 65	.422			
	Left View:	-90.0 degree	s		Mediu	m Truck	s: 65	.286			
	Right View:	90.0 degree	s		Heav	/y Truck	s: 65	.299			
FHWA Noise Mode	l Calculation:	s									
VehicleType	REMEL	Traffic Flow	Dist	tance	Finite	Road	Fres	nel	Barrier Att	en Ber	m Atten
Autos:	70.20	3.78		-1.85	;	-1.20		-4.73	0.0	000	0.000
Medium Trucks:	81.00	-9.21		-1.84	ļ	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	85.38	-13.14		-1.84		-1.20		-5.25	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and	barrie	er atteni	uation)						
	Leq Peak Hou			Leg Ev		Leq	Night		Ldn		VEL
Autos:	70.		68.3		67.5		64.	-	71.6		72.1
Medium Trucks:	68.		6.8		61.2		61.		69.1		69.3
Heavy Trucks:	69.		67.8		56.2		60.		68.6		68.7
Vehicle Noise:	74.	.5	72.5		68.6		67.	.3	74.8	3	75.0
Centerline Distanc	e to Noise Co	ntour (in feet))								
					70 dBA 65 dBA		(60 dBA		dBA	
			Ldn:		158 340 732 1,578						
		CN	IEL:	16	165 355 764 1,6				647		

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Thursday, May 02, 2019

FH\	WA-RD-77-108 HIG	SHWAY I	NOISE PI	REDICTIO	ON MOI	DEL								
Scenario: HY Withou Road Name: Pine Av. Road Segment: w/o Euclid	,			Project I Job Nu	Name: N mber: 1									
SITE SPECIFIC IN	IPUT DATA			N	DISE N	10DE	L INPUT	S						
Highway Data			Site Con	ditions (Hard =	10, S	oft = 15)							
Average Daily Traffic (Adt):	25,288 vehicles				-	Autos:	15							
Peak Hour Percentage:	10%		Me	dium Tru	cks (2 A	(xles	15							
Peak Hour Volume:	2,529 vehicles		He	avy Truck	ks (3+ A	xles):	15							
Vehicle Speed:	45 mph	ŀ	Vehicle	Miv										
Near/Far Lane Distance:	76 feet	ŀ		icleType		Dav	Evening	Night	Daily					
Site Data						66.3%		20.3%						
Barrier Height:	0.0 feet		М	edium Tru	icks:	77.0%	5.3%	17.6%	4.70%					
Barrier Type (0-Wall, 1-Berm):	0.0		1	Heavy Tru	icks:	86.3%	1.5%	12.2%	1.90%					
Centerline Dist. to Barrier:	60.0 feet	ŀ	M-1 0			- /! 6	4							
Centerline Dist. to Observer:	60.0 feet	ŀ	Noise S	Autos		5 (IN 16 000	eet)							
Barrier Distance to Observer:	0.0 feet		14											
Observer Height (Above Pad):							Medium Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.0							
Pad Elevation:	0.0 feet		пеач	ry Trucks.	0.0	JU4	Grade Ad,	justinent	0.0					
Road Elevation:	0.0 feet		Lane Eq	uivalent	Distanc	e (in	feet)							
Road Grade:	0.0%			Autos.	46.7	701								
Left View:	-90.0 degrees		Mediu	m Trucks.	46.5	511								
Right View:	90.0 degrees		Heav	y Trucks.	46.5	530								
FHWA Noise Model Calculation	s													
VehicleType REMEL	Traffic Flow E	Distance	Finite	Road	Fresn	el	Barrier Att	en Ber	m Atten					
Autos: 68.46	1.90	0.3	4	-1.20		-4.69	0.0	000	0.000					
Medium Trucks: 79.45	-11.09	0.3	7	-1.20		-4.88	0.0	000	0.000					
Heavy Trucks: 84.25	-15.02	0.3	7	-1.20		-5.34	0.0	000	0.000					
Unmitigated Noise Levels (with	out Topo and bar	rier attei	nuation)											
VehicleType Leq Peak Hou	ır Leq Day	Leq E	vening	Leq N	light		Ldn	C	VEL					
Autos: 69	.5 66.9	9	66.0		63.0		70.2	2	70.6					
Medium Trucks: 67			60.0		60.4		67.8	-	68.0					
Heavy Trucks: 68			55.4		59.7		67.8		67.9					
Vehicle Noise: 73	.3 71.3	3	67.3		66.1		73.5	5	73.8					
Centerline Distance to Noise Co	ontour (in feet)													
			dBA	65 d		- (60 dBA		dBA					
Ldn:			103 223 480 1,034			034								
	Ldn: CNFL:				108 232 500 1,07									

	FHV	WA-RD-77-108	HIGHV	NAY I	NOISE P	REDICT	ION MC	DEL			
Road Nam	io: HY Without ne: Pine Av. nt: e/o Euclid A	,					t Name: lumber:				
	SPECIFIC IN	IPUT DATA							L INPUT	s	
Highway Data					Site Cor	nditions	(Hard =	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	37,279 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10%			Me	edium Tr	ucks (2	Axles):	15		
Peak F	lour Volume:	3,728 vehicle	S		He	eavy Tru	cks (3+	Axles):	15		
Ve	hicle Speed:	45 mph		ŀ	Vehicle	Mix					
Near/Far La	ne Distance:	76 feet		H		icleType	9	Day	Evening	Night	Daily
Site Data							Autos:	66.3%	-	20.39	,
Ra	rrier Height:	0.0 feet			М	edium T	rucks:	77.0%	5.3%	17.69	4.70%
Barrier Type (0-W		0.0				Heavy T	rucks:	86.3%	1.5%	12.29	1.90%
Centerline Di		60.0 feet		-	M-1 0			/! 6	41		
Centerline Dist.	to Observer:	60.0 feet		ŀ	Noise S				eet)		
Barrier Distance	to Observer:	0.0 feet			14	Auto m Truck		.000			
Observer Height	(Above Pad):	5.0 feet						.004	Grade Ad	iuetmon	+ 00
P	ad Elevation:	0.0 feet			Heat	vy Truck	S: 8	.004	Grade Au	Jusunen	L. U.U
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Distar	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 46	.701			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 46	.511			
	Right View:	90.0 degre	es		Heav	vy Truck	s: 46	.530			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	ance		Road	Fres		Barrier Att	_	rm Atten
Autos:	68.46	3.58		0.3		-1.20		-4.69		000	0.000
Medium Trucks:		-9.40		0.3		-1.20		-4.88		000	0.000
Heavy Trucks:	84.25	-13.34		0.3	7	-1.20		-5.34	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	r attei	nuation)						
VehicleType	Leq Peak Hou			Leq E	vening		Night		Ldn		NEL
Autos:	71		68.6		67.7		64.		71.9		72.3
Medium Trucks:	69	-	67.3		61.7		62.		69.5	-	69.7
Heavy Trucks: Vehicle Noise:	70 75		68.7 73.0		57.1 69.0		61. 67.		69.5 75.2		69.6 75.5
					69.0		67.	8	/5.4		75.5
Centerline Distan	ce to Noise Co	ontour (in feet	,	70	dBA	65	dBA		SO dBA	5	5 dBA
			l dn:		34		89	1 ,	622	-	.340
			VEL:		40		01		648		.396
		O.							0.0		,000

	HWA	-RD-77-108 H	HIGH	WAY N	IOISE PI	REDICTI	ON M	DDEL			
Scenario: HY With Road Name: Pine Av Road Segment: w/o W.		•				Project Job N		MCH 10351			
SITE SPECIFIC	INP	UT DATA							L INPUT	S	
Highway Data					Site Cor	ditions	(Hard:	= 10, S	oft = 15)		
Average Daily Traffic (Adt	: 19	9,507 vehicles	3					Autos:	15		
Peak Hour Percentage	ď	10%			Me	dium Tru	ıcks (2	Axles):	15		
Peak Hour Volume	: 1,	951 vehicles			He	avy Truc	cks (3+	Axles):	15		
Vehicle Speed	t:	45 mph		-	Vehicle	Mix					
Near/Far Lane Distance		76 feet		-	VehicleType Day Evening Nig.						Daily
Site Data							lutos:	66.3%	13.5%	20.3%	93.409
Barrier Heigh		0.0 feet			М	edium Ti	ucks:	77.0%	5.3%	17.6%	4.70%
Barrier Type (0-Wall, 1-Berm		0.0				Heavy Tr	ucks:	86.3%	1.5%	12.2%	1.90%
Centerline Dist. to Barrie		60.0 feet		-	Noise S	ouroo El	ovetie	no (in f	004)		
Centerline Dist. to Observe		60.0 feet		Ľ	Noise 3	Auto:		.000	eet)		
Barrier Distance to Observe		0.0 feet			Modiu	m Truck:		.297			
Observer Height (Above Pad):	5.0 feet			Heavy Trucks: 8,004 Grade Adjustment: 0.0						
Pad Elevation).:	0.0 feet		L	rical	ry Trucks	s. u	.004	Orauc Auj	asancin	. 0.0
Road Elevation):	0.0 feet			Lane Eq	uivalent	Dista	nce (in	feet)		
Road Grade	e:	0.0%				Autos		5.701			
Left View		-90.0 degrees	S			m Truck		5.511			
Right View	r:	90.0 degrees	8		Heav	y Trucks	s: 46	5.530			
FHWA Noise Model Calculat	ons										
VehicleType REMEL	7	raffic Flow	Dist	tance	Finite	Road	Fres		Barrier Atte	en Ber	m Atten
Autos: 68.		0.77		0.3		-1.20		-4.69	0.0		0.00
Medium Trucks: 79.		-12.21		0.3		-1.20		-4.88	0.0		0.00
Heavy Trucks: 84.	25	-16.15		0.3	7	-1.20		-5.34	0.0	000	0.00
Inmitigated Noise Levels (w			arrie							_	
VehicleType Leq Peak I		Leq Day	- 0	Leq E	vening		Night		Ldn	-	NEL
Autos:	68.4	-	5.8		64.9		61	-	69.1		69.
Medium Trucks:	66.4 67.3	-	4.5 5.8		58.9 54.3		59 58	-	66.7 66.7		66. 66.
Heavy Trucks: Vehicle Noise:	72.2		0.2		66.2		65		72.4		72.
	_	taur (in foot)									
Centerline Distance to Noise											
Centerline Distance to Noise	Con	tour (III leet)		70 (dBA	65	dBA	- (60 dBA	55	dBA
Centerline Distance to Noise	Con	, ,	dn:		dBA 7		dBA 37		60 dBA 404		dBA 370

	FHV	VA-RD-77-108	HIG	HWAY	NOISE P	REDICT	ION M	ODEL			
Road Nan	rio: HY Without ne: Pine Av. nt: w/o Chino (,						: MCH :: 10351			
	SPECIFIC IN	PUT DATA							L INPUT	s	
Highway Data					Site Cor	nditions	(Hard				
Average Daily	. ,	36,277 vehicle	es					Autos:	15		
	Percentage:	10%						2 Axles):	15		
	lour Volume:	3,628 vehicle	s		He	eavy Tru	cks (3	+ Axles):	15		
	ehicle Speed:	45 mph			Vehicle	Mix					
Near/Far La	ne Distance:	76 feet			Vel	icleType	э	Day	Evening	Night	Daily
Site Data							Autos:	66.3%	13.5%	20.3%	93.40%
Ra	rrier Height:	0.0 feet			M	edium T	rucks:	77.0%	5.3%	17.6%	4.70%
Barrier Type (0-W		0.0				Heavy T	rucks:	86.3%	1.5%	12.2%	1.90%
Centerline Di		60.0 feet			Noise S			(! 6-	4)		
Centerline Dist.	to Observer:	60.0 feet			Noise S	Auto		0.000	eet)		
Barrier Distance	to Observer:	0.0 feet			14	Auto m Truck		2.297			
Observer Height	(Above Pad):	5.0 feet						2.297 8.004	Grade Ad	iuctmont	
P	ad Elevation:	0.0 feet			неа	vy Truck	is:	8.004	Grade Au,	usunem	0.0
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Dista	nce (in i	feet)		
	Road Grade:	0.0%				Auto	s: 4	6.701			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 4	6.511			
	Right View:	90.0 degree	es		Hea	vy Truck	s: 4	6.530			
FHWA Noise Mod	lel Calculation	s									
VehicleType	REMEL	Traffic Flow	Di	istance	Finite	Road	Fre	snel	Barrier Att	en Ber	m Atten
Autos:	68.46	3.46		0.3	34	-1.20		-4.69	0.0	000	0.000
Medium Trucks:	79.45	-9.52		0.3	37	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	84.25	-13.45		0.3	37	-1.20		-5.34	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barr	ier atte	nuation)						
VehicleType	Leq Peak Hou	- 1 - 7		Leg I	Evening		Night		Ldn		NEL
Autos:			68.5		67.6		-	1.6	71.8		72.2
Medium Trucks:			67.2		61.6			2.0	69.4		69.6
Heavy Trucks:	70		68.5		57.0		61	1.3	69.4	1	69.4
Vehicle Noise:	74	.9	72.9		68.9		67	7.6	75.1	I	75.4
Centerline Distan	ce to Noise Co	ontour (in feet)								
				70	dRA	1 65	dRA	1 6	SO dRA	1 55	dRA

Ldn: CNEL: 55 dBA 1,316 1,371

Thursday, May 02, 2019

Scenario: HY Without	out Project				Project	Name	MCH			
Road Name: Pine Av.	out i rojoot						10351			
Road Segment: w/o E. Pi	eserve Loc	p								
SITE SPECIFIC	V. Preserve Loop C INPUT DATA ### 10% 13.15.19 vehicles 10% 12.15.19 vehicles 10% 13.15.2 vehicles 10% 14.5 mph 10.0 feet 10.0 feet 10.0 feet 10.0 feet 10.0 feet 10.0 feet 10.0 feet 10.0 feet 10.0 feet 10.0 feet 10.0 feet 10.1 feet 10.1 feet 10.2 feet 10.3 feet 10.4 feet 10.5 feet 10.6 feet 10.6 feet 10.7 feet 10.8 feet 10.9 feet 10.						L INPU	TS		
Highway Data			,	Site Con	ditions	(Hard	= 10, S	oft = 15)		
Average Daily Traffic (Adt).	31,519	vehicles					Autos	15		
Peak Hour Percentage.	10%				dium Tru		,			
Peak Hour Volume.	3,152 v	ehicles		He	avy Truc	ks (3+	Axles)	15		
Vehicle Speed:	45 n	nph		Vehicle I	Mix					
Near/Far Lane Distance.	76 fe	eet	F		icleType		Day	Evening	Nigh	nt Daily
Site Data						lutos:	66.39	13.5%	20.3	3% 93.40
Barrier Height.	0.0	feet		Me	edium Tr	ucks:	77.0%	5.3%	17.6	6% 4.70
Barrier Type (0-Wall, 1-Berm).	0.0			F	leavy Tr	ucks:	86.39	6 1.5%	12.2	2% 1.90
Centerline Dist. to Barrier			1	Noise So	urce El	evatio	ns (in t	eet)		
Centerline Dist. to Observer					Autos	s: C	0.000			
Barrier Distance to Observer				Mediu	n Trucks	s: 2	2.297			
Observer Height (Above Pad)				Heav	y Trucks	s: 8	3.004	Grade A	djustme	ent: 0.0
Pad Elevation			L			D!-1-	/!	f4\		
Road Elevation			-	Lane Eq				reet)		
Road Grade					Autos		3.701			
Left View					n Trucks		6.511 6.530			
Right View	90.0	degrees		Heav	y Trucks	s: 4t	5.530			
FHWA Noise Model Calculation										
VehicleType REMEL			stance	Finite		Fres		Barrier A		Berm Atter
	-		0.3		-1.20		-4.69	-	0.000	0.00
	-		0.3		-1.20		-4.88	-	0.000	0.00
			0.3		-1.20		-5.34	C	0.000	0.00
VehicleType Leg Peak H					Lon	Night	_	I dn	_	CNFI
			Ley E	vening 67.0	Leq	64	0	71	2	71
				61.0		61		68		69
				56.3		60		68		68
				68.2		67		74		74
Centerline Distance to Noise	Contour (i	n feet)								
			70 c	dBA	65	dBA		60 dBA		55 dBA
		Ldn:	12	20	25	58		556		1,198

	FHV	VA-RD-77-108	HIGHW	AY N	IOISE PE	EDICT	ION MC	DEL		_	
Road Nam	io: HY Without e: Pine Av. nt: w/o Hellma	Project				Project	Name: lumber:	MCH			
SITE	SPECIFIC IN	PUT DATA				N	IOISE	MODE	L INPUT	s	
Highway Data					Site Con	ditions	(Hard =	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	30,920 vehicle	s					Autos.	15		
Peak Hour	Percentage:	10%			Med	dium Tr	ucks (2	Axles).	: 15		
Peak H	our Volume:	3,092 vehicles			Hea	avy Tru	cks (3+	Axles).	: 15		
Ve	hicle Speed:	45 mph		-	Vehicle I	/liv					
Near/Far La	ne Distance:	76 feet		-		cleType	,	Dav	Evening	Night	Daily
Site Data					*0///		Autos:	66.39		20.3%	-
Par	rier Height:	0.0 feet		_	Ме	dium T	rucks:	77.0%	6 5.3%	17.6%	4.70%
Barrier Type (0-W	-	0.0 feet			H	leavy T	rucks:	86.39	6 1.5%	12.2%	1.90%
Centerline Dis		60.0 feet									
Centerline Dist.		60.0 feet		4	Noise So				eet)		
Barrier Distance		0.0 feet				Auto		.000			
Observer Height (Above Pad):	5.0 feet				n Truck		.297			
	ad Elevation:	0.0 feet			Heav	y Truck	s: 8.	.004	Grade Ad	ustmen	t: 0.0
	ad Elevation:	0.0 feet		1	Lane Equ	ıivalen	t Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 46	.701			
	Left View:	-90.0 degree	s		Mediur	n Truck	s: 46	.511			
	Right View:	90.0 degree			Heav	y Truck	s: 46	.530			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar	се	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten
Autos:	68.46	2.77		0.34	4	-1.20		-4.69	0.0	000	0.000
Medium Trucks:	79.45	-10.21		0.3	7	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	84.25	-14.15		0.3	7	-1.20		-5.34	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and I	barrier a	atten	uation)						
VehicleType	Leq Peak Hou		Le	eq Eı	vening	Leq	Night		Ldn		NEL
Autos:	70	.4 6	7.8		66.9		63.	9	71.	I	71.5
Medium Trucks:	68	.4 6	6.5		60.9		61.	3	68.7	7	68.9
Heavy Trucks:	69	.3 6	7.8		56.3		60.	6	68.7	7	68.8
Vehicle Noise:	74	.2 7	2.2		68.2		67.	0	74.4	1	74.7
Centerline Distance	ce to Noise Co	ontour (in feet)									
				70 c	dBA	65	dBA		60 dBA	55	5 dBA
		L	.dn:	11	18	2	55		549	1	,183
		CN	IEL:	12	23	2	66		572	1	,233

	FH\	WA-RD-77-108	B HIG	HWAY I	NOISE P	REDICT	ION MO	DDEL					
	o: HY With Pi					Project							
	e: Central Av.					Job N	umber:	10351					
Road Segmer	nt: n/o El Prad	lo Rd.											
	SPECIFIC IN	IPUT DATA							L INPUT	S			
Highway Data					Site Cor	ditions	(Hard:	= 10, S	oft = 15)				
Average Daily	Traffic (Adt):	33,535 vehic	les					Autos.	15				
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2	Axles).	15				
Peak H	our Volume:	3,354 vehicle	es		He	avy Tru	cks (3+	Axles).	: 15				
Ve	hicle Speed:	45 mph		ŀ	Vehicle	Wix							
Near/Far Lai	ne Distance:	76 feet		-		icleType		Day	Evening	Night	Daily		
Site Data					Autos: 66.2% 13.5% 20.3% 93.4								
Rat	rier Height:	0.0 feet			Medium Trucks: 77.1% 5.3% 17.6% 4.6								
Barrier Type (0-W		0.0			1	leavy T	rucks:	86.3%	6 1.5%	12.29	6 1.88%		
Centerline Dis	st. to Barrier:	60.0 feet		ŀ	Noise S	urco E	lovatio	ne (in t	inat)				
Centerline Dist.	to Observer:	60.0 feet		ŀ	NOISE SI	Auto		.000	eei)				
Barrier Distance	to Observer:	0.0 feet			Modiu	n Truck		.297					
Observer Height (.	Above Pad):	5.0 feet			Heavy Trucks: 8.004 Grade Adjustment: 0.0								
Pa	ad Elevation:	0.0 feet								Justinon	1. 0.0		
Roa	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Distai	nce (in	feet)				
I	Road Grade:	0.0%				Auto	s: 46	3.701					
	Left View:	-90.0 degre	ees			n Truck		5.511					
	Right View:	90.0 degre	ees		Heav	y Truck	s: 46	5.530					
FHWA Noise Mode	el Calculation	ıs											
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres	nel	Barrier Att	en Be	erm Atten		
Autos:	68.46	3.12	2	0.3	14	-1.20		-4.69	0.0	000	0.00		
Medium Trucks:	79.45	-9.91		0.3	7	-1.20		-4.88	0.0	000	0.00		
Heavy Trucks:	84.25	-13.84	1	0.3	7	-1.20		-5.34	0.0	000	0.00		
Unmitigated Noise													
VehicleType	Leq Peak Hou		,	Leq E	vening	Leq	Night		Ldn		CNEL		
Autos:).7	68.1		67.3		64	-	71.4	-	71.9		
Medium Trucks:		3.7	66.8		61.2		61.		69.		69.2		
Heavy Trucks:		1.6	68.1 72.5		56.6		60		69.0		69.		
Vehicle Noise:		1.5			68.5		67	.ى	74.	'	75.0		
Centerline Distanc	e to Noise C	ontour (in fee	t)	70	dBA	65	dBA	1	60 dBA	5	5 dBA		
			I dn:		24		68		577		.244		
	Lan: CNFL:					124 268 577 1,244 130 279 602 1,296							

	FHV	VA-RD-77-108	HIG	HWAY N	OISE P	REDICTI	ON MO	DEL			
Road Nan	io: HY Without ne: Schleisman nt: w/o Archiba	Rd.				Project of Job No	Name: I umber:				
	SPECIFIC IN	PUT DATA							L INPUT	s	
Highway Data					Site Con	ditions (Hard =	10, Sc			
Average Daily	Traffic (Adt):	38,337 vehicle	es					Autos:	15		
	Percentage:	10%				dium Tru	,	,			
Peak F	lour Volume:	3,834 vehicles	S		He	avy Truc	ks (3+ A	Axles):	15		
Ve	hicle Speed:	45 mph		1	Vehicle I	Wix					
Near/Far La	ne Distance:	78 feet		F		icleType		Day	Evening	Night	Daily
Site Data						A	utos:	66.3%	13.5%	20.39	6 93.40%
Ra	rrier Heiaht:	0.0 feet			Me	edium Tr	ucks:	77.0%	5.3%	17.69	6 4.70%
Barrier Type (0-W		0.0			F	Heavy Tr	ucks:	86.3%	1.5%	12.29	6 1.90%
Centerline Di		76.0 feet		١,	Vaisa Ca	ource Ele	overtie n	o (in fe	2041		
Centerline Dist.	to Observer:	76.0 feet		<u>'</u>	voise sc	Autos		5 (III IE 000	ei)		
Barrier Distance	to Observer:	0.0 feet			14	n Trucks		297			
Observer Height	(Above Pad):	5.0 feet				v Trucks		297	Grade Ad	iiiietmar	t: 0.0
P	ad Elevation:	0.0 feet			пеач	y Trucks	. 0.0	JU4	Orade Ad	justinoi	1. 0.0
Ro	ad Elevation:	0.0 feet		I	Lane Eq	uivalent	Distan	ce (in i	feet)		
	Road Grade:	0.0%				Autos	: 65.	422			
	Left View:	-90.0 degree	es		Mediui	m Trucks	65.	286			
	Right View:	90.0 degree	es		Heav	y Trucks	65.	299			
FHWA Noise Mod	el Calculation:	s									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fresn	nel	Barrier Att	en Be	erm Atten
Autos:	68.46	3.70		-1.85	5	-1.20		-4.73	0.0	000	0.000
Medium Trucks:	79.45	-9.28		-1.84	1	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	84.25	-13.21		-1.84	1	-1.20		-5.25	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barr	ier atten	uation)						
VehicleType	Leq Peak Hou	ır Leq Day	,	Leg Ev	ening/	Leq I	Vight		Ldn	(CNEL
Autos:	69.	.1	66.5		65.6		62.6	6	69.8	3	70.2
Medium Trucks:	67.		65.2		59.6		60.0		67.4		67.6
Heavy Trucks:	68.		66.6		55.0		59.3	3	67.4	4	67.5
Vehicle Noise:	72	.9	70.9		66.9		65.7	,	73.2	2	73.4
Centerline Distan	ce to Noise Co	ontour (in feet)					,			
				70 c	1HA	65.0	1HA	1 6	SO dRA	1 5	5 dRA

Ldn: CNEL: 55 dBA 1,233 1,285

Thursday, May 02, 2019

	FH\	WA-RD-77-1	08 HIG	HWAY	NOISE PI	REDICTION	ом м	ODEL			
Road Nan	rio: HY With Pone: Central Avant: s/o El Prad					Project i Job Nu		: MCH : 10351			
	SPECIFIC IN					N	OISE	MODE	L INPUT	c	
Highway Data	JECIFIC II	VFOI DAIA	1		Site Con					3	
Average Daily	Traffic (Adt):	40.021 veh	icles					Autos:	15		
,	Percentage:	10%			Me	dium Tru	cks (2	Axles):	15		
Peak F	Hour Volume:	4,002 vehic	les		He	avy Truc	ks (3+	Axles):	15		
Ve	ehicle Speed:	45 mph			Vehicle						
Near/Far La	ne Distance:	78 feet				icleType		Dav	Evening	Night	Daily
Site Data					Veri		utos:	66.2%	-	20.3%	
					M	edium Tn		77.1%		17.6%	4.67%
Barrier Type (0-V	rrier Height:	0.0 feet 0.0				leavy Tri		86.3%		12.2%	1.89%
	ist. to Barrier:	60.0 feet									
Centerline Dist.		60.0 feet			Noise S				eet)		
Barrier Distance		0.0 feet				Autos		0.000			
Observer Height		5.0 feet				m Trucks		2.297			
	ad Flevation:	0.0 feet			Heav	y Trucks	: 8	3.004	Grade Ad	ljustment	0.0
	ad Elevation:	0.0 feet			Lane Eq	uivalent	Dista	nce (in	feet)		
	Road Grade:	0.0%				Autos	: 4	5.869			
	Left View:	-90.0 dea	rees		Mediu	m Trucks	: 4	5.676			
	Right View:	90.0 deg	rees		Heav	y Trucks	: 4	5.695			
FHWA Noise Mod	lel Calculation	ıs									
VehicleType	REMEL	Traffic Flov	v Di	istance	Finite	Road	Fre	snel	Barrier At	ten Ber	m Atten
Autos:		3.8	39	0.4	16	-1.20		-4.69	0.0	000	0.000
Medium Trucks:				0.4		-1.20		-4.88		000	0.000
Heavy Trucks:	84.25	-13.0)5	0.4	18	-1.20		-5.34	0.0	000	0.000
Unmitigated Nois			id barr	ier atte	nuation)						
VehicleType	Leq Peak Ho		,	Leq E	vening	Leq I			Ldn		VEL
Autos:		1.6	69.0		68.1		65		72.	-	72.7
Medium Trucks:		9.6	67.7		62.1		62		69.	-	70.1
Heavy Trucks:).5	69.1		57.5		61		69.		70.0
Vehicle Noise:		5.4	73.4		69.4		68	.2	75.	6	75.9
Centerline Distan	ce to Noise C	ontour (in fe	et)								
					dBA	65 c		(60 dBA		dBA
			Ldn:		43	30			662	,	427
			CNEL:	1	49	32	0		690	1,	487

	FH\	WA-RD-77-108	HIGHW	AY N	IOISE PR	EDICT	ION MC	DEL			
Road Nam	io: HY With Pr e: El Prado R nt: n/o Kimball	roject d.				Project	Name: umber:	MCH			
SITE	SPECIFIC IN	IPUT DATA				N	IOISE	MODE	L INPUT	s	
Highway Data					Site Con	ditions	(Hard =	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	29,164 vehicle	es					Autos.	15		
Peak Hour	Percentage:	10%			Med	dium Tru	ucks (2	Axles).	: 15		
Peak H	our Volume:	2,916 vehicles	3		Hea	avy Truc	cks (3+ .	Axles).	15		
Ve	hicle Speed:	45 mph		H	Vehicle I	Aire					
Near/Far La	ne Distance:	36 feet		H		u x cleType		Dav	Evening	Night	Daily
Site Data				\dashv	VCIII		Autos:	66.29		20.3%	,
	rier Height:	0.0 feet		-	Ме	dium Ti		77.19		17.6%	
Barrier Type (0-W	-	0.0 1661			H	leavy Ti	rucks:	86.39	6 1.5%	12.2%	1.87%
Centerline Dis		44.0 feet		L							
Centerline Dist.		44.0 feet		1	Noise So				eet)		
Barrier Distance		0.0 feet				Autos		.000			
Observer Height (5.0 feet				n Truck		.297			
	ad Elevation:	0.0 feet			Heav	y Trucks	s: 8.	.004	Grade Ad	justmen	t: 0.0
	ad Elevation:	0.0 feet			Lane Equ	iivalent	t Distan	ce (in	feet)		
	Road Grade:	0.0%		F		Autos		.460			
	I eft View:	-90.0 degree	20		Mediur	n Truck	s: 40	241			
	Right View:	90.0 degree			Heav	y Trucks	s: 40	.262			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Distar	псе	Finite	Road	Fresi	nel	Barrier Att	en Be	rm Atten
Autos:	68.46	2.52		1.2	8	-1.20		-4.61	0.0	000	0.000
Medium Trucks:	79.45	-10.55		1.3	1	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-14.48		1.3	1	-1.20		-5.50	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier a	atten	uation)						
VehicleType	Leq Peak Hou	ır Leq Day	Le	eq E	vening	Leq	Night		Ldn	(NEL
Autos:	71	.1 (68.5		67.6		64.	6	71.8	3	72.2
Medium Trucks:	69		67.1		61.5		61.9	9	69.3	3	69.5
Heavy Trucks:	69	.9 (68.4		56.9		61.:	2	69.3	3	69.4
Vehicle Noise:	74	.8	72.8		68.8		67.	6	75.	1	75.3
Centerline Distance	ce to Noise Co	ontour (in feet))								
				70 (dBA	65	dBA		60 dBA	55	5 dBA
			Ldn:	9	6	20	06		444		957
		CI	VEL:	10	00	2	15		463		998

FHV	VA-RD-77-108	HIGHWA	Y NOISE P	REDICTI	ON MO	DEL			
e: Euclid Av.	•								
SPECIFIC IN	PUT DATA			N	OISE N	/IODE	L INPUT	s	
			Site Cor	nditions	(Hard =	10, Sc	oft = 15)		
Traffic (Adt):	46,231 vehicle	es			,	Autos:	15		
Percentage:	10%		Me	edium Tru	icks (2 A	(xles	15		
lour Volume:	4,623 vehicles	3	He	avy Truc	ks (3+ A	(xles	15		
hicle Speed:	55 mph		Vohiclo	Miv					
ne Distance:	154 feet					Dav	Evenina	Niaht	Dailv
						- /			. ,
rrior Hojaht:	0.0 foot		М	edium Tr	ucks:	77.1%	5.3%	17.6%	4.939
				Heavy Tr	ucks:	86.3%	1.5%	12.2%	2.299
			Noise S				eet)		
to Observer:	0.0 feet								
(Above Pad):	5.0 feet								
,	0.0 feet		Hear	vy Trucks	8: 8.0)04	Grade Ad	ustmen	0.0
ad Elevation:	0.0 feet		Lane Eq	uivalent	Distanc	ce (in i	feet)		
Road Grade:	0.0%			Autos	33.9	941			
Left View:	-90.0 degree	es	Mediu	m Trucks	33.6	679			
Right View:	90.0 degree	es	Hear	vy Trucks	33.7	705			
el Calculation:	S								
REMEL	Traffic Flow	Distant	ce Finite	Road	Fresn	el	Barrier Att	en Be	rm Atten
71.78	3.62		2.42	-1.20		-4.75	0.0	100	0.00
82.40	-9.13		2.47	-1.20		-4.88	0.0	000	0.00
			2.47	-1.20		-5.21	0.0	100	0.00
86.40	-12.47		2.41	-1.20		-5.21	0.0		
86.40 e Levels (with				-1.20		-5.21	0.0		
e Levels (with Leq Peak Hou	out Topo and r Leq Day	barrier at	ttenuation) q Evening	Leq	Night		Ldn	_	NEL
e Levels (with Leq Peak Hou 76.	out Topo and r Leq Day	barrier at Le	ttenuation) q Evening 73.1	Leq	Night 70.1		Ldn 77.3	3	77.
e Levels (without Leq Peak Hou 76.	out Topo and Leq Day 6	barrier at Le 74.0 72.6	ttenuation) q Evening 73.1 67.0	Leq	Night 70.1 67.5		Ldn 77.3	3	77. 75.
e Levels (witho Leq Peak Hou 76. 74.	out Topo and r Leq Day 6 5	te 74.0 72.6 73.8	ttenuation) q Evening 73.1 67.0 62.2	Leq	Night 70.1 67.5 66.5		Ldn 77.3 74.9 74.6	3	77. 75. 74.
e Levels (without Leq Peak Hou 76. 74. 75. 80.	pout Topo and r Leq Day 6 5 2	Lea 74.0 72.6 73.8 78.3	ttenuation) q Evening 73.1 67.0	Leq	Night 70.1 67.5		Ldn 77.3	3	77. 75. 74.
e Levels (witho Leq Peak Hou 76. 74.	pout Topo and r Leq Day 6 5 2	74.0 72.6 73.8 78.3	rtenuation) q Evening 73.1 67.0 62.2 74.4	Leq	Night 70.1 67.5 66.5 73.1		77.3 74.9 74.6 80.6	3	77. 75. 74. 80.
e Levels (without Leq Peak Hou 76. 74. 75. 80.	Leq Day 6 5 2 3 ontour (in feet	74.0 72.6 73.8 78.3	ttenuation) q Evening 73.1 67.0 62.2	Leq i	Night 70.1 67.5 66.5	6	Ldn 77.3 74.9 74.6	55	77. 75. 74.
	io: HY With Pne: Euclid Av, nt: n/o Riversic SPECIFIC IN Traffic (Adt): Percentage: elour Volume: hicle Speed: ne Distance: elour Volume: hicle Speed: ne Distance: elour Volume: hicle Speed: ne Distance: elour Volume: hicle Speed: ne Distance: elour Height: elour Heig	io: HY With Project ie: Euclid Av. nt: n/o Riverside Dr. SPECIFIC INPUT DATA Traffic (Adt): 46,231 vehicle 10% iour Volume: 4,623 vehicles incle Speed: 55 mph ne Distance: 154 feet rrier Height: 0.0 feet fall, 1-Berm): 0.0 st to Barrier: 84.0 feet to Observer: 84.0 feet to Observer: 0.0 feet Above Pad): 5.0 feet ad Elevation: 0.0 feet ad Elevation: 0.0 feet Right View: 90.0 degree left View: -90.0 degree left View: 90.0 degree let actualtaions REMEL Traffic Flow 71.78 3.562	io: HY With Project ie: Euclid Av. if: No Riverside Dr. SPECIFIC INPUT DATA Traffic (Adt): 46,231 vehicles Percentage: 10% four Volume: 4,623 vehicles hicle Speed: 55 mph ne Distance: 154 feet Trier Helght: 0.0 feet fall, 1-Berm): 0.0 set to Observer: 84.0 feet to Observer: 84.0 feet to Observer: 0.0 feet ad Elevation: 0.0 feet ad Elevation: 0.0 feet del Elevat				Note Note Note		Noise Noise Noise Noise Noise Noise

	FH	WA-RD-77-108	HIGH	WAY NO	ISE PF	REDICTIO	N MODI	EL			
	o: HY With Po e: Euclid Av. t: n/o Walnut	,				Project No Job Nur					
	SPECIFIC IN	NPUT DATA							INPUTS	;	
Highway Data				S	te Con	ditions (H	lard = 1	0, Soft	= 15)		
Average Daily T Peak Hour I Peak Ho	. ,	53,422 vehicle 10% 5,342 vehicle				dium Truck avy Trucks	ks (2 Ax	,	15 15 15		
Vet	nicle Speed:	55 mph		1/	ehicle l	Miss					
Near/Far Lar	e Distance:	154 feet		V		icleType	D	av E	vening	Night	Dailv
Site Data					* 0111			6.2%	13.5%	20.3%	. ,
Ran	rier Heiaht:	0.0 feet			Me	edium Truc	cks: 7	7.1%	5.3%	17.6%	4.90%
Barrier Type (0-Wa	all, 1-Berm):	0.0			F	leavy Truc	cks: 86	6.3%	1.5%	12.2%	2.24%
Centerline Dis		84.0 feet		N	oise Sc	ource Elev	ations	(in feet	t)		
Centerline Dist. t		84.0 feet				Autos:	0.00	00	,		
Barrier Distance t		0.0 feet			Mediur	m Trucks:	2.29	7			
Observer Height (/	,	5.0 feet			Heav	y Trucks:	8.00		rade Adji	ustment	0.0
	d Elevation:	0.0 feet			no Fa	uivalent D	liotonoo	/in for	241		
	d Elevation:	0.0 feet		L	ine Eq	Autos:	33.94	•	<i>=()</i>		
r	Road Grade:	0.0%			Modium	m Trucks:	33.67				
	Right View:	-90.0 degre 90.0 degre				y Trucks:	33.70	-			
FHWA Noise Mode	l Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresne	I Ba	arrier Atte	en Ber	m Atten
Autos:	71.78	4.25		2.42		-1.20	-4	1.75	0.0	00	0.000
Medium Trucks:	82.40	-8.53		2.47		-1.20	-4	1.88	0.0	00	0.000
Heavy Trucks:	86.40	-11.94		2.47		-1.20	-5	5.21	0.0	00	0.000
Unmitigated Noise	Levels (with	out Topo and	barrie	er attenu	ation)						
	Leq Peak Ho			Leq Eve		Leq Ni		L	dn		NEL
Autos:		7.2	74.7		73.8		70.8		78.0		78.4
Medium Trucks:	75		73.2		67.6		68.1		75.5		75.7
Heavy Trucks:	75		74.3		62.7		67.0		75.1		75.2
Vehicle Noise:).9	78.9		75.0		73.7		81.2		81.4
Centerline Distanc	e to Noise C	ontour (in fee)	70 -11	o	65 dF		60	dD A		dBA
			I dn:	70 dE					dBA		
		^	Lan: NFI:	465 485		1,002		,	159	,	652 952
		C	VEL:	480		1,04)	2,2	252	4,	852

Thursday, May 02, 2019

FH\	WA-RD-77-108 HIC	SHWAY	NOISE P	REDICTION	OM MO	DEL			
Scenario: HY With Pr Road Name: Euclid Av. Road Segment: n/o Chino A	,			Project I Job Nu					
SITE SPECIFIC IN	IPUT DATA			N	OISE N	ЛODE	L INPUT	S	
Highway Data			Site Cor	nditions (Hard =	10, Sc	oft = 15)		
Average Daily Traffic (Adt):	49,822 vehicles				,	Autos:	15		
Peak Hour Percentage:	10%		Me	dium Tru	cks (2 A	Axles):	15		
Peak Hour Volume:	4,982 vehicles		He	avy Truci	ks (3+ A	Axles):	15		
Vehicle Speed:	55 mph	-	Vehicle	Miv					
Near/Far Lane Distance:	154 feet			icleType		Dav	Evening	Night	Daily
Site Data						66.2%		20.3%	,
Barrier Height:	0.0 feet		М	edium Tru	ıcks:	77.1%	5.3%	17.6%	4.90%
Barrier Type (0-Wall, 1-Berm):	0.0			Heavy Tru	ıcks:	86.3%	1.5%	12.2%	2.25%
Centerline Dist. to Barrier:	84.0 feet	-	M-1 0			- /! 6	4)		
Centerline Dist. to Observer:	84.0 feet		Noise S	ource Ele Autos		S (III 10 000	eet)		
Barrier Distance to Observer:	0.0 feet		14	Autos m Trucks		297			
Observer Height (Above Pad):	5.0 feet			m Trucks vy Trucks		297 004	Grade Ad	liustmont	. 0.0
Pad Elevation:	0.0 feet		пеа	y Trucks	. 0.0	004	Grade Au	jusuneni	. 0.0
Road Elevation:	0.0 feet	[Lane Eq	uivalent	Distan	ce (in	feet)		
Road Grade:	0.0%			Autos	33.9	941			
Left View:	-90.0 degrees		Mediu	m Trucks	33.0	679			
Right View:	90.0 degrees		Hear	y Trucks	33.	705			
FHWA Noise Model Calculation	s								
VehicleType REMEL	Traffic Flow [Distance	Finite	Road	Fresn	nel	Barrier Att	ten Bei	m Atten
Autos: 71.78	3.94	2.4	2	-1.20		-4.75	0.0	000	0.000
Medium Trucks: 82.40	-8.83	2.4	7	-1.20		-4.88	0.0	000	0.000
Heavy Trucks: 86.40	-12.21	2.4	7	-1.20		-5.21	0.0	000	0.000
Unmitigated Noise Levels (with	out Topo and bar	rier atte	nuation)						
VehicleType Leq Peak Hou	ır Leq Day	Leq E	vening	Leq N	light		Ldn	С	NEL
Autos: 76	.9 74.4	1	73.5		70.5	5	77.	7	78.1
Medium Trucks: 74			67.3		67.8		75.2	_	75.4
Heavy Trucks: 75			62.4		66.8		74.9		74.9
Vehicle Noise: 80	.6 78.6	3	74.7		73.4	1	80.9	9	81.1
Centerline Distance to Noise Co	ontour (in feet)								
			dBA	65 a			60 dBA	55	dBA
	Ldn	: 4	45	95	8		2,064	4,	447
	CNFI		64	99			2,153		638

	FH\	WA-RD-77-108	HIGH	WAY NO	DISE PE	REDICTIO	N MO	DEL			
	o: HY With Pre: Euclid Av. et: n/o Schaef	•				Project N Job Nu					
	SPECIFIC IN	IPUT DATA				NC	DISE I	/ODE	L INPUT	S	
Highway Data				S	ite Con	ditions (l	Hard =	10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	50,264 vehicle	es					Autos:	15		
Peak Hour I	Percentage:	10%			Me	dium Truc	ks (2 /	(xles	15		
Peak He	our Volume:	5,026 vehicle	S		He	avy Truck	s (3+ A	Axles):	15		
Vel	nicle Speed:	55 mph		V	ehicle l	Vix					
Near/Far Lar	ne Distance:	154 feet				cleType		Day	Evening	Night	Daily
Site Data						AL	ıtos:	66.2%	13.5%	20.3%	92.86%
Rar	rier Height:	0.0 feet			Me	edium Tru	cks:	77.1%	5.3%	17.6%	4.89%
Barrier Type (0-Wa	all, 1-Berm):	0.0			F	łeavy Tru	cks:	86.3%	1.5%	12.2%	2.25%
Centerline Dis		84.0 feet		N	oise Sc	urce Ele	vation	s (in fe	eet)		
Centerline Dist. t		84.0 feet				Autos:	0.	000			
Barrier Distance t		0.0 feet			Mediui	n Trucks:	2.:	297			
Observer Height (5.0 feet			Heav	y Trucks:	8.	004	Grade Adj	ustmen	t: 0.0
	d Elevation:	0.0 feet					N-4	/!	E4)		
	d Elevation:	0.0 feet		L	ane Eq	uivalent I Autos:			reet)		
-	Road Grade:	0.0%			A 4 E	: Autos n Trucks					
	Left View:	-90.0 degre						679			
	Right View:	90.0 degre	es		Heav	y Trucks:	33.	705			
FHWA Noise Mode											
VehicleType	REMEL	Traffic Flow	Dist	ance	Finite	Road	Fresr		Barrier Atte		rm Atten
Autos:	71.78			2.42		-1.20		-4.75	0.0		0.000
Medium Trucks:	82.40			2.47		-1.20		-4.88	0.0		0.000
Heavy Trucks:	86.40			2.47		-1.20		-5.21	0.0	100	0.000
Unmitigated Noise											
	Leq Peak Ho			Leq Eve		Leq N			Ldn		NEL
Autos:	77		74.4		73.5		70.5		77.7		78.1
Medium Trucks:	74		73.0		67.4		67.8		75.2		75.4
Heavy Trucks:	75		74.1		62.5		66.8		74.9		75.0
Vehicle Noise:	80		78.6		74.7		73.4		80.9)	81.2
Centerline Distance	e to Noise C	ontour (in feet)	70 dl	34 T	65 di	D.A		60 dBA		5 dBA
			I dn:	70 at		65 al			2.075	1	
			Lan: NFI:	447		1.00	-		2,075 2.164		,471 .663
		Ci	VCL.	400	,	1,00	J		۷, ۱۵4	4	,003

Thursday, May 02, 2019

	FH\	WA-RD-77-108	HIGH	A YAWI	IOISE P	REDICT	ION M	ODEL			
	o: HY With Pr e: Euclid Av. nt: n/o Eucalyp	,				Project Job N		MCH 10351			
SITE S	SPECIFIC IN	IPUT DATA				N	IOISE	MODE	L INPUT	S	
Highway Data					Site Cor	ditions	(Hard	= 10, Sc	oft = 15)		
Average Daily 1	Traffic (Adt):	48,456 vehicl	es					Autos:	15		
Peak Hour I	Percentage:	10%			Me	dium Tr	ucks (2	Axles):	15		
Peak Ho	our Volume:	4,846 vehicle	:S		He	avy Tru	cks (3+	Axles):	15		
Veh	nicle Speed:	55 mph			Vehicle	Mix					
Near/Far Lar	ne Distance:	154 feet				icleType	,	Day	Evening	Night	Daily
Site Data							Autos:	66.2%	13.5%	20.3%	92.85%
Ran	rier Height:	0.0 feet			М	edium T	rucks:	77.1%	5.3%	17.6%	4.89%
Barrier Type (0-Wa		0.0			-	Heavy T	rucks:	86.3%	1.5%	12.2%	2.26%
Centerline Dis		84.0 feet			Noise S	ourco E	lovatio	ne (in fe	not)		
Centerline Dist. t	o Observer:	84.0 feet		H'	WOISE SI	Auto		0.000	et)		
Barrier Distance t	o Observer:	0.0 feet			Madiu	m Truck		2.297			
Observer Height (A	Above Pad):	5.0 feet				y Truck		3.004	Grade Ad	iustment	0.0
Pa	d Elevation:	0.0 feet								doumone	0.0
Roa	d Elevation:	0.0 feet		1	Lane Eq	uivalen	t Dista	nce (in t	feet)		
F	Road Grade:	0.0%				Auto		3.941			
	Left View:	-90.0 degre	es			m Truck		3.679			
	Right View:	90.0 degre	es		Heav	y Truck	s: 33	3.705			
FHWA Noise Mode	l Calculation	s									
VehicleType	REMEL	Traffic Flow		stance		Road	Fres		Barrier Att		m Atten
Autos:	71.78	3.82		2.42	_	-1.20		-4.75		000	0.00
Medium Trucks:	82.40	-8.96		2.47		-1.20		-4.88		000	0.000
Heavy Trucks:	86.40	-12.32		2.47	7	-1.20		-5.21	0.0	000	0.000
Unmitigated Noise	Levels (with	out Topo and	barri	er atten	uation)						
,,	Leq Peak Hou	.,.,		Leq E			Night		Ldn		VEL
Autos:	76		74.2		73.4		70		77.5		78.0
Medium Trucks:	74		72.8		67.2		67		75.0		75.2
Heavy Trucks:	75		73.9		62.3		66		74.8		74.8
Vehicle Noise:	80	1.5	78.5		74.6		73	.3	80.7	′	81.0
		antaur (in fac	t)								
Centerline Distanc	e to Noise Co	ontour (in ree	_ _	70	-ID 4	0.5	-10.4		0 -10 4		-10.4
Centerline Distanc	e to Noise Co	ontour (in ree			dBA		dBA		0 dBA		dBA
Centerline Distanc	e to Noise C		Ldn: NEL:	70 d 43	37	9	dBA 40 81		0 dBA 2,026 2,113	4,	dBA 365 553

	FH	WA-RD-77-108	HIGH	IWAY N	IOISE PF	REDICTIO	N MO	DEL			
	: HY With Port Euclid Av. : n/o Edison	,				Project N Job Nur					
	PECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data					Site Con	ditions (F					
Average Daily T	. ,	52,860 vehicl	es					Autos:	15		
Peak Hour F		10%				dium Truc		,	15		
	ur Volume:	5,286 vehicle	S		He	avy Truck	s (3+ /	Axles):	15		
	icle Speed:	55 mph		1	Vehicle I	Mix					
Near/Far Lan	e Distance:	154 feet			Vehi	icleType		Day	Evening	Night	Daily
Site Data						Au	tos:	66.2%	13.5%	20.3%	92.889
Rarr	ier Height:	0.0 feet			Me	edium Tru	cks:	77.1%	5.3%	17.6%	4.889
Barrier Type (0-Wa	II, 1-Berm):	0.0			F	leavy Tru	cks:	86.3%	1.5%	12.2%	2.239
Centerline Dist		84.0 feet		1	Noise Sc	urce Ele	vation	s (in fe	eet)		
Centerline Dist. to		84.0 feet				Autos:	0.	000			
Barrier Distance to		0.0 feet			Mediur	n Trucks:	2.	297			
Observer Height (A	,	5.0 feet			Heav	y Trucks:	8.	004	Grade Ad	justment	0.0
	d Elevation:	0.0 feet		H				/! /	F41		
	d Elevation:	0.0 feet		H	Lane Eq	uivalent L			eet)		
R	oad Grade:	0.0%				Autos:		941			
	Left View: Right View:	-90.0 degre 90.0 degre				n Trucks: y Trucks:		679 705			
FHWA Noise Model	Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fresi	nel	Barrier Att	en Ber	m Atten
Autos:	71.78	4.20		2.42	2	-1.20		-4.75	0.0	000	0.00
Medium Trucks:	82.40	-8.59		2.47	7	-1.20		-4.88	0.0	000	0.00
Heavy Trucks:	86.40	-11.99		2.47	7	-1.20		-5.21	0.0	000	0.00
Unmitigated Noise	•		barrie	er atten	uation)						
	eq Peak Ho			Leq E		Leq N			Ldn		NEL
Autos:		.2	74.6		73.7		70.7		77.9		78.
Medium Trucks:		5.1	73.2		67.6		68.0		75.4		75.
Heavy Trucks:		5.7	74.2		62.7		67.0		75.		75.:
Vehicle Noise:).9	78.8		74.9		73.6	3	81.	1	81.
Centerline Distance	to Noise C	ontour (in fee)	70 -	JD A	6E -II	3.4		o dBA		dD A
			I dn:	70 c		65 dE			0 dBA		dBA
		0	Lan: NFI:	46	-				2,143 2.235	,	616
		C	VEL:	48)4	1,03	/		∠,∠35	4,	815

Thursday, May 02, 2019

	FH\	WA-RD-77-108	HIGH	WAY I	NOISE PI	REDICTI	ON M	ODEL			
Road Nam	io: HY With Proper Euclid Av.	•				Project Job N		: MCH : 10351			
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data					Site Con	ditions	(Hard	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	48,135 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tru	icks (2	Axles):	15		
Peak H	lour Volume:	4,814 vehicles	3		He	avy Truc	ks (3+	Axles):	15		
Ve	hicle Speed:	55 mph			Vehicle	Misc					
Near/Far La	ne Distance:	154 feet		ł		icleType		Dav	Evening	Night	Daily
Site Data							utos:	66.2%	-	20.3%	,
	rrier Heiaht:	0.0 feet			М	edium Tr		77.1%		17.6%	
Barrier Type (0-W		0.0 feet			1	leavy Tr	ucks:	86.3%	1.5%	12.2%	2.26%
Centerline Di		84.0 feet									
Centerline Dist.		84.0 feet			Noise S				eet)		
Barrier Distance		0.0 feet				Autos		0.000			
Observer Height		5.0 feet				m Trucks		2.297			
	ad Flevation:	0.0 feet			Heav	y Trucks	:: 8	3.004	Grade Ad	justment	: 0.0
	ad Elevation:	0.0 feet		ı	Lane Eq	uivalent	Dista	nce (in	feet)		
	Road Grade:	0.0%		İ		Autos	: 3	3.941			
	Left View:	-90.0 degree	es		Mediu	m Trucks	3: 3:	3.679			
	Right View:	90.0 degree			Heav	y Trucks	: 3	3.705			
FHWA Noise Mod											
VehicleType	REMEL	Traffic Flow	Dis	stance		Road	Fre.	snel	Barrier Att		m Atten
Autos:	71.78	3.79		2.4	-	-1.20		-4.75		000	0.000
Medium Trucks:	82.40	-9.00		2.4		-1.20		-4.88		000	0.000
Heavy Trucks:	86.40	-12.35		2.4	17	-1.20		-5.21	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barri	er atte	nuation)						
VehicleType	Leq Peak Hou	ır Leq Day		Leq E	vening	Leq	Vight		Ldn		NEL
Autos:	76	.8	74.2		73.3		70	.3	77.	5	77.9
Medium Trucks:	74	.7	72.8		67.2		67	.6	75.0)	75.2
Heavy Trucks:	75	.3	73.9		62.3		66	.6	74.7	7	74.8
Vehicle Noise:	80	1.5	78.4		74.5		73	.2	80.7	7	81.0
Centerline Distan	ce to Noise C	ontour (in feet,)								
					dBA	65 ((60 dBA		dBA
			Ldn:		34	93			2,017		345
		CI	VEL:	4	53	97	76		2,104	4,	532

	FHW	/A-RD-77-108	HIGH	WAY I	NOISE PE	REDICT	ION MO	DEL			-
Road Nam	io: HY With Prone: Euclid Av. nt: s/o Merrill A	•					Name: lumber:				
SITE	SPECIFIC IN	PUT DATA				N	IOISE N	/IODE	L INPUTS	5	
Highway Data					Site Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	51,048 vehicle	es					Autos.	15		
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2 A	Axles).	: 15		
Peak H	lour Volume:	5,105 vehicle	S		He	avy Tru	cks (3+ A	Axles).	: 15		
Ve	hicle Speed:	55 mph		ŀ	Vehicle I	Wiv					
Near/Far La	ne Distance:	154 feet		F		icleType	,	Dav	Evening	Night	Daily
Site Data								66.29		20.3%	
Ra	rrier Height:	0.0 feet			Me	edium T	rucks:	77.19	6 5.3%	17.6%	4.87%
Barrier Type (0-W		0.0			F	leavy T	rucks:	86.3%	6 1.5%	12.2%	2.23%
Centerline Di		84.0 feet		ŀ	Noise So	voo E	lovotion	o (in t	io o 4 l		
Centerline Dist.	to Observer:	84.0 feet			Noise Sc	Auto		_	eet)		
Barrier Distance	to Observer:	0.0 feet			A 4 E	Auto n Truck		000			
Observer Height ((Above Pad):	5.0 feet						297	Grade Adj	uetmon	
Pa	ad Elevation:	0.0 feet			Heav	y Truck	S: 8.0	004	Grade Auj	usunem	- 0.0
Roa	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 33.	941			
	Left View:	-90.0 degree	es		Mediur	n Truck	s: 33.	679			
	Right View:	90.0 degree	es		Heav	y Truck	s: 33.	705			
FHWA Noise Mod	el Calculations	;									
VehicleType	REMEL	Traffic Flow	Dist	tance	Finite	Road	Fresn	nel .	Barrier Atte	en Be	rm Atten
Autos:	71.78	4.05		2.4	12	-1.20		-4.75	0.0	00	0.000
Medium Trucks:	82.40	-8.76		2.4	17	-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	86.40	-12.14		2.4	17	-1.20		-5.21	0.0	00	0.000
Unmitigated Noise	e Levels (witho	out Topo and	barrie	er attei	nuation)						
VehicleType	Leq Peak Hou			Leq E	vening	Leq	Night		Ldn	С	NEL
Autos:	77.		74.5		73.6		70.6		77.8		78.2
Medium Trucks:	74.	-	73.0		67.4		67.8		75.2		75.4
Heavy Trucks:	75.		74.1		62.5		66.8		74.9		75.0
Vehicle Noise:	80.	7	78.7		74.8		73.5	5	80.9		81.2
Centerline Distant	ce to Noise Co	ntour (in feet)								
			L		dBA		dBA		60 dBA		dBA
			Ldn:		51	-	71		2,093		508
		CI	VEL:	4	70	1,	013		2,183	4	,703

	FHV	VA-RD-77-108	HIGI	1 YAWH	NOISE P	REDICT	ION MO	DDEL			
Road Nam	io: HY With Pro e: Euclid Av. nt: n/o Bickmon	•				,,	Name: lumber:				
SITE S	SPECIFIC IN	PUT DATA				I.	IOISE	MODE	L INPUT	S	
Highway Data					Site Cor	nditions	(Hard:	= 10, S	oft = 15)		
Average Daily	Traffic (Adt):	38,833 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10%			Me	edium Tr	ucks (2	Axles):	15		
Peak H	lour Volume:	3,883 vehicle	s		He	avy Tru	cks (3+	Axles):	15		
Ve	hicle Speed:	55 mph		-	Vehicle	Miv					
Near/Far Lai	ne Distance:	154 feet		-		iviix nicleType		Dav	Evening	Night	Daily
Site Data					V C /		Autos:	66.2%		20.3%	
					М	edium T		77.1%		17.6%	4.87%
Barrier Type (0-W	rier Height:	0.0 feet 0.0				Heavy T	rucks:	86.3%	1.5%	12.2%	2.36%
Centerline Dis	. ,	84.0 feet									
Centerline Dist.		84.0 feet			Noise S	ource E	levatio	ns (in f	eet)		
Barrier Distance		0.0 feet				Auto		.000			
Observer Height (5.0 feet				m Truck		.297			
	ad Elevation:	0.0 feet			Hear	vy Truck	s: 8	.004	Grade Adj	ustment	0.0
	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Distar	nce (in	feet)		
	Road Grade:	0.0%		<u> </u>		Auto	s: 33	.941			
	Left View:	-90.0 degree	20		Mediu	m Truck	s: 33	679			
	Right View:	90.0 degree			Hear	vy Truck	s: 33	3.705			
FHWA Noise Mode	el Calculation:	s									
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fres	inel	Barrier Atte	en Ber	m Atten
Autos:	71.78	2.86		2.4	2	-1.20		-4.75	0.0	00	0.00
Medium Trucks:	82.40	-9.94		2.4	7	-1.20		-4.88	0.0	00	0.00
Heavy Trucks:	86.40	-13.09		2.4	7	-1.20		-5.21	0.0	000	0.00
Unmitigated Noise	e Levels (with	out Topo and	barri	ier atter	nuation)						
VehicleType	Leq Peak Hou	r Leq Day	′	Leq E	vening	Leq	Night		Ldn	C	VEL
Autos:	75.		73.3		72.4		69.		76.6		77.0
Medium Trucks:	73.		71.8		66.2		66.	-	74.1		74.2
Heavy Trucks:	74.	-	73.1		61.6		65.		74.0		74.1
Vehicle Noise:	79.	.6	77.6		73.6		72.	.4	79.8	3	80.1
Centerline Distand	ce to Noise Co	ntour (in feet)								
			L		dBA		dBA		60 dBA		dBA
			Ldn:	-	79	-	17		1,760	- /	791
		CI	VEL:	39	95	8	52		1,835	3,	953

	FH\	VA-RD-77-108	HIGH	IWAY NO	ISE PF	REDICTIO	N MOI	DEL			
Scenario	o: HY With Pr	oject				Project N	lame: I	исн			
Road Name	e: Euclid Av.					Job Nu	mber: '	10351			
Road Segmen	t: n/o Kimball	Av.									
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data				S	te Con	ditions (I	Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	50,437 vehicl	es					Autos:	15		
Peak Hour		10%				dium Truc					
Peak H	our Volume:	5,044 vehicle	S		He	avy Truck	is (3+ A	(xles	15		
	nicle Speed:	55 mph		V	ehicle l	Wix					
Near/Far Lar	ne Distance:	154 feet			Vehi	icleType		Day	Evening	Night	Daily
Site Data						Αι	ıtos:	66.2%	13.5%	20.39	6 92.89%
Bar	rier Heiaht:	0.0 feet			Me	edium Tru	cks:	77.1%	5.3%	17.69	6 4.87%
Barrier Type (0-W		0.0			F	leavy Tru	cks:	86.3%	1.5%	12.29	6 2.24%
Centerline Dis		84.0 feet		N	oise Sc	ource Ele	vations	s (in fe	eet)		
Centerline Dist. t		84.0 feet				Autos:	0.0	000			
Barrier Distance t		0.0 feet			Mediur	m Trucks:	2.2	297			
Observer Height (,	5.0 feet			Heav	y Trucks:	8.0	004	Grade Ad	ljustmer	t: 0.0
	d Elevation:	0.0 feet				-				-	
	d Elevation:	0.0 feet		Li	ne Eq	uivalent l		_	reet)		
F	Road Grade:	0.0%				Autos:					
	Left View:	-90.0 degre				m Trucks:					
	Right View:	90.0 degre	es		Heav	y Trucks:	33.7	705			
FHWA Noise Mode											
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite		Fresn		Barrier At		erm Atten
Autos:	71.78	4.00		2.42		-1.20		-4.75		000	0.00
Medium Trucks:	82.40	-8.81		2.47		-1.20		-4.88		000	0.000
Heavy Trucks:	86.40	-12.18		2.47		-1.20		-5.21	0.0	000	0.00
Unmitigated Noise	•										
	Leq Peak Hou		74.4	Leq Eve		Leq N	ight 70.5		Ldn 77.		CNEL 78.
Autos: Medium Trucks:	74		72.9		73.5 67.3		67.8		77. 75.:	-	78. 75.
	74 75		72.9 74.0		62.5		66.8		75.	_	75.4 75.4
Heavy Trucks: Vehicle Noise:	75		74.0 78.6		74.7		73.4		80.	_	75.i 81.:
Centerline Distance							. 0. 1			-	01
Contenine Distant	e to Noise Co	anoui (iii leel		70 dE	3A	65 di	BA	(60 dBA	5	5 dBA
			Ldn:	447		964	1		2,077	. 4	1,474
		C	NEL:	467		1,00	15		2,166		,667

Thursday, May 02, 2019

FHWA-RD-77-10	IIGHWAY NOISE PREDICTION MODEL	
Scenario: HY With Project Road Name: Archibald Av. Road Segment: n/o Limonite Av.	Project Name: MCH Job Number: 10351	
SITE SPECIFIC INPUT DATA	NOISE MODEL INPUTS	
Highway Data	Site Conditions (Hard = 10, Soft = 15)	
Average Daily Traffic (Adt): 46,675 vehic	Autos: 15	
Peak Hour Percentage: 10%	Medium Trucks (2 Axles): 15	
Peak Hour Volume: 4,668 vehicle	Heavy Trucks (3+ Axles): 15	
Vehicle Speed: 55 mph	Vehicle Mix	
Near/Far Lane Distance: 154 feet		ght Daily
Site Data		0.3% 93.43%
Barrier Height: 0.0 feet	Medium Trucks: 77.1% 5.3% 1	7.6% 4.68%
Barrier Type (0-Wall, 1-Berm): 0.0	Heavy Trucks: 86.3% 1.5% 12	2.2% 1.89%
Centerline Dist. to Barrier: 84.0 feet	Noise Source Elevations (in feet)	
Centerline Dist. to Observer: 84.0 feet	Autos: 0.000	
Barrier Distance to Observer: 0.0 feet	Medium Trucks: 2.297	
Observer Height (Above Pad): 5.0 feet	Heavy Trucks: 8.004 Grade Adjust	ment: 0.0
Pad Elevation: 0.0 feet	,	
Road Elevation: 0.0 feet	Lane Equivalent Distance (in feet)	
Road Grade: 0.0%	Autos: 33.941	
Left View: -90.0 degre		
Right View: 90.0 degre	Heavy Trucks: 33.705	
FHWA Noise Model Calculations		
VehicleType REMEL Traffic Flow	Distance Finite Road Fresnel Barrier Atten	Berm Atten
Autos: 71.78 3.69	2.42 -1.20 -4.75 0.000	0.000
Medium Trucks: 82.40 -9.32 Heavy Trucks: 86.40 -13.25	2.47 -1.20 -4.88 0.000 2.47 -1.20 -5.21 0.000	0.000
		0.000
Unmitigated Noise Levels (without Topo and VehicleType Leg Peak Hour Leg Da	Leg Evening Leg Night Ldn	CNFI
Autos: 76.7	1.1 73.2 70.2 77.4	77.8
Medium Trucks: 74.4	2.4 66.8 67.3 74.7	74.9
Heavy Trucks: 74.4	3.0 61.4 65.7 73.8	73.9
Vehicle Noise: 80.1	3.0 74.3 72.9 80.4	80.6
Centerline Distance to Noise Contour (in fee		
	70 dBA 65 dBA 60 dBA	55 dBA
	dn: 412 887 1.910	4.115
	III. 412 007 1,910	7,110

Thursday, May 02, 2019

	FHW	/A-RD-77-108	HIGH	1 YAW	NOISE PE	REDICT	ION MOI	DEL			
Road Nam	io: HY With Prone: Archibald Avnt: s/o Limonite	i.					Name: I lumber:				
	SPECIFIC IN	PUT DATA							L INPUTS	;	
Highway Data					Site Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	36,347 vehicle	es				,	Autos.	15		
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2 A	(xles	15		
Peak F	lour Volume:	3,635 vehicle	S		He	avy Tru	cks (3+ A	(xles	15		
Ve	hicle Speed:	45 mph		-	Vehicle I	Wix					
Near/Far La	ne Distance:	78 feet				icleType	,	Dav	Evening	Night	Daily
Site Data								66.29		20.3%	
Ra	rrier Height:	0.0 feet			Me	edium T	rucks:	77.19	6 5.3%	17.6%	4.71%
Barrier Type (0-W		0.0			F	leavy T	rucks:	86.3%	6 1.5%	12.2%	1.92%
Centerline Di		76.0 feet		-	Noise So			- /! /	41		
Centerline Dist.	to Observer:	76.0 feet		-	Noise Sc	Auto		_	eet)		
Barrier Distance	to Observer:	0.0 feet			1.4 m of 5 m	Auto n Truck		000			
Observer Height	(Above Pad):	5.0 feet						297 104	Grade Adj	uetmon	+ 00
P	ad Elevation:	0.0 feet			Heav	y Truck	S: 8.0	JU4	Grade Auj	usunem	. 0.0
Ro	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Distand	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 65.4	122			
	Left View:	-90.0 degree	es		Mediur	n Truck	s: 65.2	286			
	Right View:	90.0 degree	es		Heav	y Truck	s: 65.2	299			
FHWA Noise Mod	el Calculations	;									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fresn	el	Barrier Atte	en Be	rm Atten
Autos:	68.46	3.47		-1.8	5	-1.20		-4.73	0.0	00	0.000
Medium Trucks:	79.45	-9.50		-1.8	4	-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	84.25	-13.39		-1.8	4	-1.20		-5.25	0.0	00	0.000
Unmitigated Nois	e Levels (witho	out Topo and	barrie	er atter	nuation)						
VehicleType	Leq Peak Hou			Leq E	vening	Leq	Night		Ldn	_	NEL
Autos:	68.		66.3		65.4		62.4		69.6		70.0
Medium Trucks:	66.	-	65.0		59.4		59.8		67.2		67.4
Heavy Trucks:	67.		66.4		54.8		59.1		67.2		67.3
Vehicle Noise:	72.	-	70.7		66.7		65.5	i	72.9		73.2
Centerline Distan	ce to Noise Co	ntour (in feet)	70			10.4		00 104		
			L		dBA		dBA	L '	60 dBA		dBA
			Ldn:		19	_	57		554		,193
		CI	VEL:	1:	24	2	68		577	1	,243

Thursday, May 02, 2019

	FHV	VA-RD-77-108	HIG	HWAY	NOISE P	REDICT	ION MO	DEL			
Road Nam	no: HY With Prone: Kimball Av. nt: w/o Mounta	•					Name: lumber:				
SITE	SPECIFIC IN	PUT DATA				N	IOISE I	MODE	L INPUT	S	
Highway Data					Site Cor	ditions	(Hard =	: 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	23,271 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2)	Axles):	15		
Peak H	lour Volume:	2,327 vehicle	s		He	avy Tru	cks (3+)	Axles):	15		
Ve	hicle Speed:	50 mph			Vehicle	Miv					
Near/Far La	ne Distance:	36 feet				icleType		Dav	Evening	Night	Daily
Site Data					1011		Autos:	66.2%		20.3%	
Do.	rrier Height:	0.0 feet			М	edium T	rucks:	77.1%		17.6%	4.59%
Barrier Type (0-W		0.0			,	Heavy T	rucks:	86.3%	1.5%	12.2%	1.86%
Centerline Di		44.0 feet									
Centerline Dist.		44.0 feet			Noise S				eet)		
Barrier Distance		0.0 feet				Auto		000			
Observer Height		5.0 feet				m Truck		297			
	ad Elevation:	0.0 feet			Heav	y Truck	s: 8.	004	Grade Ad	iustment	: 0.0
	ad Elevation:	0.0 feet			Lane Eq	uivalen	t Distan	ce (in t	feet)		
	Road Grade:	0.0%			-	Auto	s: 40.	460			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 40.	.241			
	Right View:	90.0 degre			Heav	y Truck	s: 40.	.262			
FHWA Noise Mod	el Calculation:										
VehicleType	REMEL	Traffic Flow	Di	stance	Finite	Road	Fresi		Barrier Att	en Ber	m Atten
Autos:	70.20	1.08		1.2		-1.20		-4.61	0.0		0.000
Medium Trucks:	81.00	-12.01		1.3	31	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	85.38	-15.94		1.3	31	-1.20		-5.50	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barri	ier atte	nuation)						
VehicleType	Leq Peak Hou			Leq E	Evening		Night		Ldn		NEL
Autos:	71.		68.8		67.9		64.9	-	72.1		72.5
Medium Trucks:	69.		67.2		61.6		62.0	-	69.4		69.6
Heavy Trucks: Vehicle Noise:			68.1 72.8		56.5		60.9	_	69.0 75.2		69.0 75.4
					69.1		67.7	′	75.2	<u>-</u>	75.4
Centerline Distan	ce to Noise Co	ontour (in feet)	70	dBA	65	dBA	6	O dBA	55	dBA
	I dn:							450		70	
			NEL:		101	_	18		450 970 470 1.013		
		0.				_			470 1,013		

97 209 450 970 : 101 218 470 1,013

	FH\	WA-RD-77-108	HIG	HWAY I	NOISE PF	REDICT	ION M	ODEL			
Road Nam	io: HY With Pr ne: Archibald A nt: s/o Schleis	iV.				Project Job N		: MCH : 10351			
SITE	SPECIFIC IN	IPUT DATA				r	NOISE	MODE	L INPUT	S	
Highway Data					Site Con	ditions	(Hard	= 10, Sc	oft = 15)		
Average Daily	. ,	27,859 vehicle	s					Autos:	15 15		
	Percentage: four Volume:	10% 2,786 vehicles						Axles):			
Ve	hicle Speed:	45 mph		ŀ	Vehicle I	Mix					
Near/Far La	ne Distance:	78 feet		ŀ		cleType	9	Dav	Evening	Night	Daily
Site Data							Autos:	66.2%	Ü	20.3%	,
Ra	rrier Height:	0.0 feet			Me	edium T	rucks:	77.1%	5.3%	17.6%	4.70%
Barrier Type (0-W		0.0			H	leavy T	rucks:	86.3%	1.5%	12.2%	1.94%
Centerline Di	st. to Barrier:	76.0 feet		ŀ	Noise So	urco F	lovatio	ne (in f	oof)		
Centerline Dist.	to Observer:	76.0 feet		ŀ	NOISE SU	Auto		0.000	eei)		
Barrier Distance	to Observer:	0.0 feet			Modium	n Truck		2.297			
Observer Height ((Above Pad):	5.0 feet				y Truck		3.004	Grade Ad	iustment	. 0 0
Pa	ad Elevation:	0.0 feet		L	i icav	y Truck	J. (J.004		,	0.0
Ro	ad Elevation:	0.0 feet		L	Lane Equ	uivalen	t Dista	nce (in	feet)		
	Road Grade:	0.0%				Auto	s: 6	5.422			
	Left View:	-90.0 degree	S			n Truck		5.286			
	Right View:	90.0 degree	S		Heav	y Truck	s: 6	5.299			
FHWA Noise Mod				1							
VehicleType	REMEL	Traffic Flow	Di	stance	Finite		Fre	snel	Barrier At		m Atten
Autos:	68.46	2.31		-1.8	-	-1.20		-4.73		000	0.00
Medium Trucks:		-10.66		-1.8		-1.20		-4.88		000	0.00
Heavy Trucks:		-14.51		-1.8		-1.20		-5.25	0.0	000	0.00
Unmitigated Nois			$\overline{}$							T	
VehicleType	Leq Peak Hou	- 1 - 7		Leq E	vening	Leq	Night		Ldn		NEL
Autos:	67		55.1		64.2		61		68.		68.
Medium Trucks:	65		3.8		58.2		58		66.		66.
Heavy Trucks:	66		35.3		53.7		58		66.		66.:
Vehicle Noise:	71		9.6		65.5		64	.3	71.	3	72.
Centerline Distant	ce to Noise Co	ontour (in feet)		70	dBA	65	dBA	-	60 dBA	55	dBA
		,	dn:		00		15		464		000

Thursday, May 02, 2019

	FH	WA-RD-77-108	HIGHWA	Y NOISE P	REDICTIO	ON MC	DDEL			
Road Nan	io: HY With Pone: Kimball Av nt: w/o Euclid				Project I Job Nu					
	SPECIFIC IN	IPUT DATA						L INPUT	S	
Highway Data				Site Cor	nditions (Hard =				
Average Daily	Traffic (Adt):	29,889 vehicle	es				Autos:	15		
	Percentage:	10%			edium Tru					
Peak F	lour Volume:	2,989 vehicles	S	He	eavy Truck	ks (3+	Axles):	15		
	hicle Speed:	50 mph		Vehicle	Mix					
Near/Far La	ne Distance:	36 feet		Vel	icleType		Day	Evening	Night	Daily
Site Data					A	utos:	66.2%	13.5%	20.3%	93.41%
Ra	rrier Height:	0.0 feet		M	edium Tru	icks:	77.1%	5.3%	17.6%	4.69%
Barrier Type (0-W		0.0 1661			Heavy Tru	icks:	86.3%	1.5%	12.2%	1.90%
Centerline Di	. ,	44.0 feet								
Centerline Dist.	to Observer:	44.0 feet		Noise S	ource Ele			eet)		
Barrier Distance	to Observer:	0.0 feet			Autos.	-	.000			
Observer Height	(Above Pad):	5.0 feet			m Trucks.	_	.297	Crada As	livotmont	
P	ad Elevation:	0.0 feet		Hea	vy Trucks.	8	.004	Grade Ad	jusimeni.	0.0
Ro	ad Elevation:	0.0 feet		Lane Eq	uivalent	Distar	ice (in i	feet)		
	Road Grade:	0.0%			Autos.	40	.460			
	Left View:	-90.0 degree	es	Mediu	m Trucks.	40	.241			
	Right View:	90.0 degree	es	Hea	vy Trucks.	40	.262			
FHWA Noise Mod									1	
VehicleType	REMEL	Traffic Flow	Distanc		Road	Fres		Barrier At		m Atten
Autos:	70.20	2.16		1.28	-1.20		-4.61		000	0.000
Medium Trucks:	81.00			1.31	-1.20 -1.20		-4.87 -5.50		000	0.000
Heavy Trucks:	85.38			1.31	-1.20		-5.50	0.0	000	0.000
Unmitigated Nois									1 0	
VehicleType Autos:	Leq Peak Hot		69.9	g Evening	Leq N	lignt 66.	^	Ldn 73.:		VEL 70.0
Medium Trucks:	72		68.4	69.0 62.8		63.	-	73		73.6 70.8
			69.3	57.7		62.	_	70.	-	70.8
Heavy Trucks: Vehicle Noise:	76		74.0	70.2		68.	•	76.		76.6
Centerline Distan)					-		-
				70 dBA	65 d	BA	6	60 dBA	55	dBA
			Ldn:	115	249			536	1,	155
		Ldn: CNEL:						559	1,	205

	FH\	WA-RD-77-108	HIGH	WAY	NOISE P	REDICT	ION M	ODEL			
Road Nam	io: HY With Prine: Kimball Avint: e/o Euclid					.,	t Name: lumber:				
	SPECIFIC IN	IPUT DATA							L INPUT	S	
Highway Data					Site Cor	nditions	(Hard	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	25,135 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10%				edium Ti			15		
Peak H	lour Volume:	2,513 vehicle	S		He	eavy Tru	icks (3+	Axles):	15		
Ve	hicle Speed:	50 mph		ŀ	Vehicle	Mix					
Near/Far La	ne Distance:	51 feet				icleTyp	е	Dav	Evening	Night	Daily
Site Data							Autos:	66.2%	13.5%	20.3%	93.45%
Ra	rrier Height:	0.0 feet			М	edium 7	rucks:	77.1%	5.3%	17.6%	4.62%
Barrier Type (0-W		0.0				Heavy 1	rucks:	86.3%	1.5%	12.2%	1.94%
Centerline Di		49.0 feet		-							
Centerline Dist.	to Observer:	49.0 feet			Noise S				eet)		
Barrier Distance	to Observer:	0.0 feet				Auto		0.000			
Observer Height (Above Pad):	5.0 feet				m Truck		2.297	Crada Ad	ii rotmo ni	
Pa	ad Elevation:	0.0 feet			Hear	vy Truck	s: 8	3.004	Grade Ad	jusimem	. 0.0
Roa	ad Elevation:	0.0 feet		Ī	Lane Eq	uivalen	t Distai	nce (in	feet)		
	Road Grade:	0.0%		Ī		Auto	s: 42	2.140			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 41	.929			
	Right View:	90.0 degre	es		Hear	vy Truck	(S: 41	1.950			
FHWA Noise Mod	el Calculation	ıs									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fres	snel	Barrier Att	en Bei	rm Atten
Autos:	70.20	1.41		1.0)1	-1.20		-4.64	0.0	000	0.000
Medium Trucks:	81.00	-11.65		1.0)4	-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	85.38	-15.42		1.0)4	-1.20		-5.44	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrie	er atte	nuation)						
VehicleType	Leq Peak Hot			Leq E	vening		Night		Ldn		NEL
Autos:	71		68.8		68.0		65		72.		72.6
Medium Trucks:	69		67.3		61.7		62		69.5	-	69.7
Heavy Trucks:	69		68.4		56.8		61.		69.2		69.3
Vehicle Noise:	75		73.0		69.1		67	.8	75.3	3	75.5
Centerline Distant	ce to Noise C	ontour (in feet)							1	
			L		dBA		dBA	6	0 dBA		dBA
			Ldn:		10		237		511		,100
		C	VEL:	1	15	2	247		533	1,	148

	FH	WA-RE)-77-108 H	GΗ\	WAY N	IOISE PI	REDICTI	ON MC	DEL			
Road Na	ario: HY With F me: Kimball Av ent: e/o Rincor	<i>'</i> .	ows Av.				Project Job No	Name: umber:				
SITE	SPECIFIC I	NPUT	DATA				N	OISE	MODE	L INPUTS	5	
Highway Data						Site Con	ditions	(Hard =	: 10, S	oft = 15)		
Peak Hou Peak	y Traffic (Adt): ır Percentage: Hour Volume:	10 2,224	vehicles				dium Tru avy Truc	icks (2	,	15		
	ehicle Speed:		mph		1	Vehicle	Mix					
Near/Far L	ane Distance:	51	feet			Veh	icleType		Day	Evening	Night	Daily
Site Data							Α	utos:	66.2%	13.5%	20.3%	93.45%
B Barrier Type (0-	arrier Height: Wall, 1-Berm):	0. 0.	0 feet 0				edium Tr Heavy Tr		77.1% 86.3%		17.6% 12.2%	
Centerline I	Dist. to Barrier:	49.	0 feet		-	Noise So	ource Ele	evation	s (in f	eet)		
Barrier Distanc Observer Heigh	Centerline Dist. to Observer: 4 Barrier Distance to Observer: bserver Height (Above Pad):				ĺ	Mediu	Autos m Trucks ry Trucks	: 0. :: 2.	000 297 004	Grade Adj	ustmen	t: 0.0
			0 feet		-	l ana Fa	uivalent	Dieter	aa (in	footl		
R	oad Elevation: Road Grade:		0 feet 0%		-	Laile Ly	Autos		140	ieei)		
	Left View:		u‰ 0 degrees			Mediu	m Trucks		929			
	Right View:		0 degrees				y Trucks		950			
FHWA Noise Mo	del Calculatio	ns										
VehicleType	REMEL		ic Flow	Dist	ance	Finite		Fres		Barrier Atte		rm Atten
Autos			0.88		1.01		-1.20		-4.64	0.0		0.00
Medium Trucks			-12.19		1.04	•	-1.20		-4.87	0.0		0.000
Heavy Trucks Unmitigated Noi			-15.94		1.04		-1.20		-5.44	0.0	00	0.000
VehicleType	Leg Peak Ho		Leg Day		Leg E		Leg I	Viaht		I dn	(NFI
Autos		0.9	68		LUY L	67.4	Logi	64.	4	71.6		72.0
Medium Trucks		8.7	66			61.1		61.		69.0		69.2
	Heavy Trucks: 69.3 67.8					56.3		60.		68.7		68.8
Vehicle Noise: 74.5 72.5					68.6		67.	3	74.7		75.0	
Centerline Distance to Noise Contour (in feet)												
				Т	70 c	iBA	65 (iBA	- (60 dBA	55	5 dBA
				Ldn:				101 218 471 1,				
			La	n:	10)1	21	8	-	471	1	,014
			La CNE		10 10		21 22	-	1	471 491		,014 ,058

	FHWA	-RD-77-108 H	IIGHWAY	NOISE P	REDICTIO	ON MODEL			
Road Nam	io: HY With Projec: Kimball Av. nt: w/o Rincon M					lame: MCI mber: 103			
	SPECIFIC INP	UT DATA					DEL INPUT	s	
Highway Data				Site Con	ditions (Hard = 10,	Soft = 15)		
Average Daily	Traffic (Adt): 23	3,141 vehicles	3			Auto	os: 15		
Peak Hour	Percentage:	10%		Me	dium Trud	cks (2 Axle	s): 15		
Peak H	lour Volume: 2	314 vehicles		He	avy Truck	s (3+ Axle	s): 15		
Ve	hicle Speed:	50 mph		Vehicle I	Wix				
Near/Far La	ne Distance:	51 feet		Veh	icleType	Day	Evening	Night	Daily
Site Data					A	itos: 66.2	2% 13.5%	20.3%	93.45%
Ra	rrier Height:	0.0 feet		Me	edium Tru	icks: 77.	1% 5.3%	17.6%	4.61%
Barrier Type (0-W		0.0		F	leavy Tru	icks: 86.3	3% 1.5%	12.2%	1.94%
Centerline Di		49.0 feet		Maioa Ca	uraa Ela	vations (ir	o footl		
Centerline Dist.	to Observer:	49.0 feet		NOISE SC	Autos:		i ieei)		
Barrier Distance	to Observer:	0.0 feet		Modium	n Trucks:				
Observer Height (Above Pad):	5.0 feet			n Trucks. v Trucks:		Grade Ad	iuetmant	
Pa	ad Elevation:	0.0 feet		пеач	y Trucks.	6.004	Orade Ad	justinent	. 0.0
Roi	ad Elevation:	0.0 feet		Lane Eq	uivalent l	Distance (i	in feet)		
	Road Grade:	0.0%			Autos:	42.140			
	Left View:	-90.0 degrees	3	Mediui	m Trucks:	41.929			
	Right View:	90.0 degrees	3	Heav	y Trucks:	41.950			
FHWA Noise Mod	el Calculations								
VehicleType	REMEL 7	raffic Flow	Distance	Finite	Road	Fresnel	Barrier Att	en Ber	m Atten
Autos:	70.20	1.05	1.	01	-1.20	-4.6	4 0.0	000	0.000
Medium Trucks:	81.00	-12.01	1.	04	-1.20	-4.8	7 0.0	000	0.000
Heavy Trucks:	85.38	-15.77	1.	04	-1.20	-5.4	4 0.0	000	0.000
Unmitigated Noise		t Topo and b	arrier atte	nuation)					
VehicleType	Leq Peak Hour	Leq Day		Evening	Leq N	-	Ldn		NEL
Autos:	71.1	-	B.5	67.6		64.6	71.	-	72.2
Medium Trucks:	68.8	-	6.9	61.3		61.7	69.	_	69.3
Heavy Trucks:	69.4		B.0	56.4		60.8	68.		68.9
Vehicle Noise:	74.7		2.6	68.8		67.5	74.	9	75.2
Centerline Distant	ce to Noise Con	tour (in feet)							

Ldn: CNEL:

Thursday, May 02, 2019

Fl	HWA-RD-77-108	HIGHWAY	NOISE P	REDICTIO	N MODEL		
Scenario: HY With I					lame: MCH		
Road Name: Kimball A				Job Nu	mber: 103	51	
Road Segment: e/o Mill C	reek Av.						
SITE SPECIFIC	NPUT DATA					EL INPUT	S
Highway Data			Site Con	ditions (Hard = 10,	Soft = 15)	
Average Daily Traffic (Adt):	20,303 vehicle	s			Auto	s: 15	
Peak Hour Percentage:	10%		Me	dium Truc	ks (2 Axles	s): 15	
Peak Hour Volume:	2,030 vehicles		He	avy Truck	s (3+ Axles	s): 15	
Vehicle Speed:	50 mph		Vehicle I	Mix			
Near/Far Lane Distance:	51 feet			icleType	Day	Evening	Night Daily
Site Data				A	itos: 66.2	2% 13.5%	20.3% 93.46%
Barrier Height:	0.0 feet		Me	edium Tru	cks: 77.1	% 5.3%	17.6% 4.60%
Barrier Type (0-Wall, 1-Berm):	0.0		F	Heavy Tru	cks: 86.3	3% 1.5%	12.2% 1.95%
Centerline Dist. to Barrier:	49.0 feet		Noise So	ource Ele	vations (in	feet)	
Centerline Dist. to Observer:	49.0 feet			Autos			
Barrier Distance to Observer:	0.0 feet		Mediu	n Trucks:			
Observer Height (Above Pad):	5.0 feet		Heav	v Trucks:	8.004	Grade Ad	ljustment: 0.0
Pad Elevation:	0.0 feet			,			,
Road Elevation:	0.0 feet		Lane Eq		Distance (i	n feet)	
Road Grade:	0.0%			Autos:			
Left View:	-90.0 degree			m Trucks:			
Right View:	90.0 degree	S	Heav	y Trucks:	41.950		
FHWA Noise Model Calculation	ns		!				
VehicleType REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Att	ten Berm Atten
Autos: 70.2	0 0.49	1.	01	-1.20	-4.6	4 0.0	0.000
Medium Trucks: 81.0	0 -12.59	1.	04	-1.20	-4.8	7 0.0	0.000
Heavy Trucks: 85.3	8 -16.33	1.	04	-1.20	-5.4	4 0.0	0.000
Unmitigated Noise Levels (wit	hout Topo and I	barrier atte	nuation)				
VehicleType Leq Peak H			Evening	Leq N	0	Ldn	CNEL
		7.9	67.0		64.0	71.:	
		6.3	60.7		61.2	68.	
		7.5	55.9		60.2	68.	
Vehicle Noise:	4.1	2.1	68.2		66.9	74.	3 74.6
Centerline Distance to Noise	Contour (in feet)						
) dBA	65 d		60 dBA	55 dBA
	I	.dn:	95	20	3	443	954
	CNEL:			21		462	996

Thursday, May 02, 2019

	FH\	WA-RD-77-108	HIGH	WAY	NOISE P	REDICT	ION MC	DEL			
Road Nam	io: HY With Pr ne: Kimball Av. nt: e/o Main Si						t Name: lumber:				
	SPECIFIC IN	IPUT DATA							L INPUT	s	
Highway Data					Site Cor	ditions	(Hard =	: 10, S	oft = 15)		
Average Daily	Traffic (Adt):	19,110 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2	Axles):	15		
Peak H	lour Volume:	1,911 vehicle	S		He	avy Tru	cks (3+	Axles):	15		
Ve	hicle Speed:	50 mph		ŀ	Vehicle	Mix					
Near/Far La	ne Distance:	51 feet				icleType	9	Dav	Evening	Night	Daily
Site Data							Autos:	66.2%	-	20.39	
Ra	rrier Height:	0.0 feet			М	edium T	rucks:	77.1%	5.3%	17.69	6 4.60%
Barrier Type (0-W	-	0.0			1	Heavy T	rucks:	86.3%	1.5%	12.29	6 1.95%
Centerline Di		49.0 feet		-							
Centerline Dist.	to Observer:	49.0 feet			Noise S				eet)		
Barrier Distance	to Observer:	0.0 feet				Auto		000			
Observer Height (Above Pad):	5.0 feet				m Truck		297	Crodo Ad	ii iotmor	4 0 0
Pa	ad Elevation:	0.0 feet			Heat	y Truck	s: 8.	004	Grade Ad	jusurier	n. 0.0
Roa	ad Elevation:	0.0 feet		Ī	Lane Eq	uivalen	t Distan	ce (in	feet)		
	Road Grade:	0.0%		ĺ		Auto	s: 42	140			
	Left View:	-90.0 degre	es		Mediu	m Truck	s: 41	929			
	Right View:	90.0 degre	es		Heav	y Truck	s: 41	950			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	tance	Finite	Road	Fres	nel	Barrier Att	en Be	erm Atten
Autos:	70.20	0.22		1.0		-1.20		-4.64		000	0.000
Medium Trucks:	81.00	-12.85		1.0		-1.20		-4.87		000	0.000
Heavy Trucks:	85.38	-16.58		1.0)4	-1.20		-5.44	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrie	er atte	nuation)						
VehicleType	Leq Peak Hou			Leq E	vening	Leq	Night		Ldn		CNEL
Autos:	70		67.7		66.8		63.		70.9		71.4
Medium Trucks:	68		66.1		60.5		60.	-	68.3	-	68.5
Heavy Trucks: Vehicle Noise:	68 73		67.2 71.8		55.6 67.9		60. 66.		68. ⁻		68.1 74.4
					67.9		66.	0	74.	ı	74.4
Centerline Distant	te to Noise Co	ontour (in feet		70	dBA	65	dBA		50 dBA	- 5	5 dBA
			l dn:		92		98		426	_	917
			VEL:		96		:06		444		957
		0.				_					

Scenar		VA-RD-77-108	HIGHV	VAT NO	JISE PI	KEDICII	ON MO	DEL			
	io: HY With Pr					Project					
	ne: Limonite Av					Job N	umber:	10351			
Road Segme	nt: w/o Archiba	ıld Av.									
	SPECIFIC IN	PUT DATA							L INPUTS	5	
Highway Data				S	ite Con	ditions	(Hard =	10, Sc			
Average Daily	Traffic (Adt):	27,934 vehicle	es					Autos:			
Peak Hour	Percentage:	10%				dium Tru					
Peak F	lour Volume:	2,793 vehicle	s		He	avy Truc	ks (3+ /	4xles):	15		
Ve	hicle Speed:	50 mph		V	ehicle	Miv					
Near/Far La	ne Distance:	78 feet		-		icleType		Day	Evening	Night	Daily
Site Data						- /	lutos:	66.2%	13.5%	20.3%	93.43%
Pa	rrier Height:	0.0 feet			M	edium Tı	ucks:	77.1%	5.3%	17.6%	4.64%
Barrier Type (0-W	-	0.0			F	Heavy Tr	ucks:	86.3%	1.5%	12.2%	1.94%
Centerline Di		76.0 feet									
Centerline Dist.		76.0 feet		N	oise S	ource El		_	eet)		
Barrier Distance		0.0 feet				Autos		000			
		5.0 feet				m Truck		297			
	bserver Height (Above Pad): Pad Elevation:				Heav	y Trucks	3: 8.	004	Grade Adj	ustment	: 0.0
	ad Elevation:	0.0 feet 0.0 feet		Li	ane Ea	uivalent	Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto		422	,		
	Left View:	-90.0 degre	20		Mediu	m Truck:		286			
	Right View:	90.0 degre				y Trucks		299			
	rugin view.	30.0 degre	55		77007	y muon	. 00.	200			
FHWA Noise Mod											
VehicleType	REMEL	Traffic Flow	Dista		Finite	Road	Fresr		Barrier Atte		m Atten
Autos:	70.20	1.87		-1.85		-1.20		-4.73	0.0		0.00
Medium Trucks:	81.00	-11.17		-1.84		-1.20		-4.88	0.0		0.000
Heavy Trucks:	85.38	-14.96		-1.84		-1.20		-5.25	0.0	00	0.000
Unmitigated Nois			barrier	attenu	ation)						
	Leq Peak Hou			Leq Eve	ening	Leq	Night		Ldn		NEL
VehicleType		.0	66.4		65.5		62.5	-	69.7		70.2
Autos:					59.3		59.7		67.1		67.3
Autos: Medium Trucks:	66										
Autos: Medium Trucks: Heavy Trucks:	66 67	.4	65.9		54.4		58.7		66.8		
Autos: Medium Trucks:	66 67	.4			66.7		65.4		72.9		
Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	66 67 72	.4	65.9 70.6	70.	66.7		65.4	1	72.9		73.
Autos: Medium Trucks: Heavy Trucks:	66 67 72	.4	65.9 70.6	70 dE	66.7 BA		65.4 dBA	1	72.9 60 dBA	55	66.9 73.1
Autos: Medium Trucks: Heavy Trucks: Vehicle Noise:	66 67 72	.4 .6 ontour (in feet	65.9 70.6	70 dE 118	66.7 BA	2	65.4 dBA	1	72.9	55	73.

	FRV	/A-KD-//-106 I	IIGHWA	INC	JISE FR	EDICI	ION INC	DEL			
Scenario	: HY With Pro	oject				Project	Name:	мсн			
Road Name	: Kimball Av.					Job N	lumber:	10351			
Road Segmen	t: e/o Flight A	٧.									
	PECIFIC IN	PUT DATA							L INPUT	S	
Highway Data				Si	ite Cond	ditions	(Hard =	10, S	oft = 15)		
Average Daily T	raffic (Adt):	16,235 vehicles	3					Autos:			
Peak Hour F	Percentage:	10%					ucks (2 i				
	ur Volume:	1,624 vehicles			Hea	ivy Tru	cks (3+)	4xles).	15		
	icle Speed:	50 mph		Ve	ehicle N	lix					
Near/Far Lan	e Distance:	51 feet			Vehic	cleType)	Day	Evening	Night	Daily
Site Data							Autos:	66.2%	13.5%	20.3%	93.44%
Barı	ier Height:	0.0 feet			Me	dium T	rucks:	77.1%	5.3%	17.6%	4.60%
Barrier Type (0-Wa		0.0			Н	leavy T	rucks:	86.3%	1.5%	12.2%	1.97%
Centerline Disa	t. to Barrier:	49.0 feet		N	oise So	urce E	levation	s (in f	eet)		
Centerline Dist. to	Observer:	49.0 feet				Auto		000	,		
Barrier Distance to	Observer:	0.0 feet			Mediun			297			
Observer Height (A	lbove Pad):	5.0 feet				/ Truck		004	Grade Ad	iustment	0.0
Pa	d Elevation:	0.0 feet									
	d Elevation:	0.0 feet		Lá	ane Equ		t Distan	_	feet)		
R	oad Grade:	0.0%				Auto		140			
	Left View:	-90.0 degrees			Mediun			929			
	Right View:	90.0 degrees	3		Heavy	/ Truck	s: 41.	950			
FHWA Noise Mode	l Calculations	3									
VehicleType	REMEL	Traffic Flow	Distanc		Finite I		Fresi		Barrier Att		m Atten
Autos:	70.20	-0.49		1.01		-1.20		-4.64		000	0.000
Medium Trucks:	81.00	-13.57		1.04		-1.20		-4.87		000	0.000
Heavy Trucks:	85.38	-17.26		1.04		-1.20		-5.44	0.0	000	0.000
Unmitigated Noise			$\overline{}$	_							
	Leq Peak Hou			q Eve	ening	Leq	Night		Ldn		NEL
Autos:	69.		6.9		66.1		63.		70.2		70.7
Medium Trucks:	67.		5.4		59.8		60.2		67.6		67.8
Heavy Trucks:	68.		6.5		55.0		59.3		67.4		67.4
Vehicle Noise:	73.		1.1		67.2		65.9	9	73.4	1	73.7
Centerline Distance	e to Noise Co	ntour (in feet)		70 015	24	er.	dD A		00 4B4		alD A
			dn:	70 dE 82	DM		dBA 77	<u> </u>	382		dBA 123
		CN		82			// 85		382		123 159
		CN	EL.	db		1	00		299	8	109

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Thursday, May 02, 2019

	FH\	WA-RD-77-108	HIGH	IWAY I	NOISE P	REDICTI	ON M	ODEL				
Road Nan	rio: HY With Pr ne: Limonite A nt: e/o Archiba	v.				Project Job Ni		: MCH : 10351				
SITE	SPECIFIC IN	IPUT DATA				N	OISE	MODE	L INPUT	s		
Highway Data					Site Con	ditions	(Hard	= 10, S	oft = 15)			
Average Daily	Traffic (Adt):	43,906 vehicle	es					Autos:	15			
Peak Hour	Percentage:	10%			Me	dium Tru	icks (2	Axles):	15			
Peak F	Hour Volume:	4,391 vehicle	s		He	avy Truc	ks (3+	- Axles):	15			
Ve	ehicle Speed:	50 mph		-	Vehicle I	Miv						
Near/Far La	ne Distance:	78 feet		-		icleType		Dav	Evening	Night	Daily	
Site Data					* 077		utos:	66.2%	-	20.3%	,	
Do.	rrier Heiaht:	0.0 feet			Me	edium Tr		77.1%	5.3%	17.6%		
Barrier Type (0-V		0.0 feet			F	leavy Tr	ucks:	86.3%	1.5%	12.2%	1.93%	
	ist. to Barrier:	76.0 feet		-								
Centerline Dist.		76.0 feet		-	Noise So			_ •	eet)			
Barrier Distance to Observer: 0.0 feet						Autos		0.000				
Observer Height	Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet					n Trucks		2.297				
	ad Elevation:	0.0 feet			Heav	y Trucks	E - E	3.004	Grade Ad	justment	: 0.0	
Ro	ad Elevation:	0.0 feet			Lane Equivalent Distance (in feet)							
	Road Grade:	0.0%				Autos	: 6	5.422				
	Left View:	-90.0 degree	es		Mediui	n Trucks	6: 6	5.286				
	Right View:	90.0 degree	es		Heav	y Trucks	:: 6	5.299				
FHWA Noise Mod												
VehicleType	REMEL	Traffic Flow	Dis	tance		Road	Fre.	snel	Barrier Att		m Atten	
Autos:		3.83		-1.8	-	-1.20		-4.73		000	0.000	
Medium Trucks:				-1.8		-1.20		-4.88		000	0.000	
Heavy Trucks:	85.38	-13.02		-1.8	14	-1.20		-5.25	0.0	000	0.000	
Unmitigated Nois	e Levels (with	out Topo and	barrie	er attei	nuation)							
VehicleType	Leq Peak Hou			Leq E	vening	Leq I	Vight		Ldn		NEL	
Autos:	71		68.4		67.5		64		71.7		72.1	
Medium Trucks:			66.9		61.3		61		69.		69.3	
,	Heavy Trucks: 69.3 67.9				56.3 60.6 68.7				68.8			
Vehicle Noise:			72.5		68.7		67	'.4	74.8	3	75.1	
Centerline Distan	ce to Noise C	ontour (in feet)					_				
			L		dBA	65 ((60 dBA		dBA	
			Ldn:		159 343				740		594	
	CNEL:				66	358 772 1,				1,	663	

	FH\	WA-RD-77-108	HIGHW	VAY N	IOISE PR	EDICT	ION MC	DEL			
Road Nam	io: HY With Pr ne: Pine Av. nt: w/o El Prac	roject				Project	Name: umber:	мсн			
SITE	SPECIFIC IN	IPUT DATA				N	IOISE	MODE	L INPUT	s	
Highway Data					Site Con	ditions	(Hard =	: 10, S	oft = 15)		
Average Daily	Traffic (Adt):	29,483 vehicle	es					Autos.	15		
Peak Hour	Percentage:	10%			Med	dium Tru	ucks (2	Axles).	: 15		
Peak H	lour Volume:	2,948 vehicles	3		Hea	avy Truc	cks (3+ .	Axles).	: 15		
Ve	hicle Speed:	45 mph		H	Vehicle I	Niv					
Near/Far La	ne Distance:	76 feet		F		cleType	,	Dav	Evening	Night	Daily
Site Data					*0///		Autos:	66.29		20.3%	
Par	rrier Height:	0.0 feet			Ме	dium Ti	rucks:	77.19	6 5.3%	17.6%	5.01%
Barrier Type (0-W	-	0.0			H	leavy Ti	rucks:	86.39	6 1.5%	12.2%	2.60%
Centerline Dis		60.0 feet		L							
Centerline Dist.		60.0 feet		-	Noise So				eet)		
Barrier Distance	to Observer:	0.0 feet				Autos		000			
Observer Height ((Above Pad):	5.0 feet				n Truck		297			
	ad Elevation:	0.0 feet			Heav	y Trucks	s: 8.	004	Grade Ad	ustmen	t: 0.0
Roa	ad Elevation:	0.0 feet			Lane Equ	iivalent	t Distan	ce (in	feet)		
	Road Grade:	0.0%				Autos	s: 46.	.701			
	Left View:	-90.0 degree	es		Mediun	n Truck	s: 46.	511			
	Right View:	90.0 degree			Heav	y Trucks	s: 46	.530			
FHWA Noise Mode	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dista	nce	Finite	Road	Fresi	nel	Barrier Att	en Be	rm Atten
Autos:	68.46	2.51		0.3	4	-1.20		-4.69	0.0	000	0.000
Medium Trucks:	79.45	-10.14		0.3	7	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	84.25	-12.99		0.3	7	-1.20		-5.34	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier	atten	nuation)						
VehicleType	Leq Peak Hou		· L	Leq E	vening	Leq	Night		Ldn	_	NEL
Autos:	70	.1	67.5		66.6		63.	6	70.8	3	71.3
Medium Trucks:	68		6.6		60.9		61.4	4	68.8	3	69.0
Heavy Trucks:	70	.4	69.0		57.4		61.	7	69.8	3	69.9
Vehicle Noise:	74	.5	72.6		68.1		67.	1	74.7	7	74.9
Centerline Distance	ce to Noise Co	ontour (in feet)								
				70 (dBA	65	dBA		60 dBA	55	5 dBA
			Ldn:	12	23	26	65		570	1	,229
		CI	VEL:	12	28	27	75		593	1	,277

	FHW	/A-RD-77-108	HIGHW	AY N	OISE P	REDICT	ION MO	DDEL			
Road Nam	o: HY With Pro e: Pine Av. nt: e/o Euclid A	•					Name: umber:				
SITE	SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data				S	Site Cor	ditions	(Hard :	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	37,606 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Tr	ucks (2	Axles):	15		
Peak H	our Volume:	3,761 vehicles	S		He	avy Tru	cks (3+	Axles):	15		
Ve	hicle Speed:	45 mph		1/	/ehicle	Miv					
Near/Far Lai	ne Distance:	76 feet		ľ		icleType		Dav	Evening	Night	Dailv
Site Data							Autos:	66.2%		20.3%	93.35%
Rai	rier Height:	0.0 feet			М	edium T	rucks:	77.1%	5.3%	17.6%	4.70%
Barrier Type (0-W		0.0				Heavy T	rucks:	86.3%	1.5%	12.2%	1.95%
Centerline Dis	. ,	60.0 feet			/ C			(! 6	4)		
Centerline Dist.	to Observer:	60.0 feet		^	ioise S	ource E			eet)		
Barrier Distance	to Observer:	0.0 feet			A 4 E	Auto m Truck		.000			
Observer Height (Above Pad):	5.0 feet						.004	Grade Ad	i rotmont	
Pa	ad Elevation:	0.0 feet			Heat	y Truck	s: 8	.004	Grade Adj	usuneni	0.0
Roa	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distar	nce (in	feet)		
I	Road Grade:	0.0%				Auto	s: 46	.701			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 46	.511			
	Right View:	90.0 degree	es		Heav	y Truck	s: 46	.530			
FHWA Noise Mode	el Calculations	ì									
VehicleType	REMEL	Traffic Flow	Dista			Road	Fres		Barrier Atte		m Atten
Autos:	68.46	3.62		0.34		-1.20		-4.69	0.0		0.00
Medium Trucks:	79.45	-9.36		0.37		-1.20		-4.88	0.0		0.00
Heavy Trucks:	84.25	-13.19		0.37		-1.20		-5.34	0.0	100	0.00
VehicleType	Leg Peak Hou					1.00	Night		Ldn		NEL
venicie i ype Autos:	Leq Peak Hou		68.6	eq Ev	ening 67.7	Leq	ivignt 64.	7	71.9		VEL 72.4
Medium Trucks:	69.	_	67.3		61.7		62		69.6		69.
Heavy Trucks:	70.	-	68.8		57.2		61.	_	69.6		69.
Vehicle Noise:	75.		73.1		69.0		67.	-	75.3		75.
Centerline Distanc	e to Noise Co	ntour (in feet)								
				70 d			dBA	6	60 dBA		dBA
			Ldn:	13	-	_	92		628	,	353
			VFI:	14			04		654		410

	FHW	A-RD-77-108 HIG	I YAWH	NOISE PE	REDICTIO	N MODEL			
Scenario: Road Name: Road Segment:		•			Project Na Job Nun	ame: MCI nber: 103			
SITE SE	PECIFIC INF	PUT DATA			NO	ISE MOI	DEL INPUT	S	
Highway Data				Site Con	ditions (H	ard = 10,	Soft = 15)		
Average Daily Tr	affic (Adt): 2	5,605 vehicles				Auto	s: 15		
Peak Hour Pe	ercentage:	10%		Me	dium Truck	s (2 Axle	s): 15		
Peak Hou	ır Volume: 2	2,560 vehicles		He	avy Trucks	(3+ Axle	s): 15		
Vehic	cle Speed:	45 mph	-	Vehicle I	Mix				
Near/Far Lane	Distance:	76 feet			icleType	Day	Evening	Night	Daily
Site Data					Aut			20.3%	
Barri	er Height:	0.0 feet		Me	edium Truc	ks: 77.	1% 5.3%	17.6%	4.70%
Barrier Type (0-Wali	-	0.0		F	Heavy Truc	ks: 86.	3% 1.5%	12.2%	1.97%
Centerline Dist.		60.0 feet	-	Naisa Ca	ource Elev	otiono (ir	o foot)		
Centerline Dist. to	Observer:	60.0 feet		Noise St	Autos:	0.000	i ieel)		
Barrier Distance to	Observer:	0.0 feet		Modium	n Trucks:	2.297			
Observer Height (Al	bove Pad):	5.0 feet			y Trucks:	8.004	Grade Ad	diustment	. 0.0
Pad	Elevation:	0.0 feet	L		-			,	- 0.0
	Elevation:	0.0 feet		Lane Eq	uivalent D		in feet)		
	ad Grade:	0.0%			Autos:	46.701			
	Left View:	-90.0 degrees			m Trucks:	46.511			
F	Right View:	90.0 degrees		Heav	y Trucks:	46.530			
FHWA Noise Model	Calculations		-						
VehicleType	REMEL	Traffic Flow D	istance	Finite	Road	Fresnel	Barrier At	ten Bei	m Atten
Autos:	68.46	1.95	0.3	14	-1.20	-4.6	9 0.	000	0.000
Medium Trucks:	79.45	-11.03	0.3		-1.20	-4.8		000	0.000
Heavy Trucks:	84.25	-14.81	0.3	37	-1.20	-5.3	14 0.	000	0.000
Unmitigated Noise L	evels (witho	ut Topo and barr	ier atter	nuation)					
	eq Peak Hour		Leq E	vening	Leq Ni		Ldn		NEL
Autos:	69.5			66.1		63.1	70.	-	70.7
Medium Trucks:	67.6			60.1		60.5	67.		68.1
Heavy Trucks:	68.6			55.6		59.9	68.	-	68.1
Vehicle Noise:	73.4			67.3		66.2	73.	6	73.9
Centerline Distance	to Noise Cor	ntour (in feet)							
				dBA	65 dB	Α	60 dBA		dBA
		Ldn:		05	226		487		049
		CNEL:	1	09	236		508	1,	093

Thursday, May 02, 2019

FH	WA-RD-77-108 HIGH	HWAY NOISE P	REDICTION M	ODEL		
Scenario: HY With P	roject		Project Name	: MCH		
Road Name: Pine Av.	-		Job Number	: 10351		
Road Segment: w/o Chino	Corona Rd.					
SITE SPECIFIC II	NPUT DATA				LINPUTS	
Highway Data		Site Cor	ditions (Hard	= 10, So	ft = 15)	
Average Daily Traffic (Adt):	36,604 vehicles			Autos:	15	
Peak Hour Percentage:	10%	Me	dium Trucks (2	2 Axles):	15	
Peak Hour Volume:	3,660 vehicles	He	avy Trucks (3-	Axles):	15	
Vehicle Speed:	45 mph	Vehicle	Mix			
Near/Far Lane Distance:	76 feet		icleType	Day	Evening N	light Daily
Site Data			Autos:	66.2%	13.5%	20.3% 93.35%
Barrier Height:	0.0 feet	М	edium Trucks:	77.1%	5.3%	17.6% 4.70%
Barrier Type (0-Wall, 1-Berm):	0.0		Heavy Trucks:	86.3%	1.5%	1.95%
Centerline Dist. to Barrier:	60.0 feet	Noise S	ource Elevation	ons (in fe	et)	
Centerline Dist. to Observer:	60.0 feet			0.000	,	
Barrier Distance to Observer:	0.0 feet	Mediu		2.297		
Observer Height (Above Pad):	5.0 feet				Grade Adjus	tment: 0.0
Pad Elevation:	0.0 feet		,			
Road Elevation:	0.0 feet	Lane Eq	uivalent Dista		eet)	
Road Grade:	0.0%			6.701		
Left View:	-90.0 degrees			6.511		
Right View:	90.0 degrees	Hear	ry Trucks: 4	6.530		
FHWA Noise Model Calculation	ıs					
VehicleType REMEL	Traffic Flow Dis	stance Finite	Road Fre	snel l	Barrier Atten	Berm Atten
Autos: 68.46	3.50	0.34	-1.20	-4.69	0.000	0.000
Medium Trucks: 79.45	-9.48	0.37	-1.20	-4.88	0.000	0.000
Heavy Trucks: 84.25	-13.31	0.37	-1.20	-5.34	0.000	0.000
Unmitigated Noise Levels (with	out Topo and barri	er attenuation)				
VehicleType Leq Peak Ho		Leq Evening	Leq Night		Ldn	CNEL
	1.1 68.5	67.6	-	1.6	71.8	72.2
	9.1 67.2	61.6		2.1	69.5	69.6
	0.1 68.7	57.1		1.4	69.5	69.6
Vehicle Noise: 7	5.0 73.0	68.9	67	7.7	75.2	75.4
Centerline Distance to Noise C	ontour (in feet)					
		70 dBA	65 dBA		0 dBA	55 dBA
	Ldn: CNFI:	133 138	286 298		617 643	1,329 1.385

	FHW	/A-RD-77-108	HIGHW	VAYN	IOISE PE	EDICT	ION MO	DEL			
Road Nan	rio: HY With Prone: Pine Av.	oject			.0.02.1.	Project	Name: lumber:	МСН			
SITE	SPECIFIC IN	PUT DATA				N	IOISE I	ИODE	L INPUTS	5	
Highway Data					Site Con	ditions	(Hard =	10, S	oft = 15)		
Average Daily	Traffic (Adt):	19,782 vehicle	es					Autos.	15		
Peak Hour	Percentage:	10%			Me	dium Tri	ucks (2 /	Axles).	: 15		
Peak H	Hour Volume:	1,978 vehicle	S		He	avy Truc	cks (3+ /	Axles).	: 15		
Ve	ehicle Speed:	45 mph		H	Vehicle I	Miv					
Near/Far La	ane Distance:	76 feet		F		cleType		Dav	Evening	Night	Dailv
Site Data					VCIII			66.29		20.3%	. ,
	rrier Height:	0.0 feet			Me	edium Ti		77.19		17.6%	
Barrier Type (0-W		0.0			F	leavy Ti	rucks:	86.39	6 1.5%	12.2%	1.99%
	ist. to Barrier:	60.0 feet		L							
Centerline Dist.		60.0 feet		Ľ	Noise Sc				eet)		
Barrier Distance		0.0 feet				Auto		000			
Observer Height		5.0 feet				n Truck		297			
	ad Elevation:	0.0 feet			Heav	y Truck	s: 8.	004	Grade Adj	ustmen	t: 0.0
	ad Elevation:	0.0 feet			Lane Equ	uivalen	t Distan	ce (in	feet)		
	Road Grade:	0.0%				Auto	s: 46.	701	,		
	I eft View:	-90.0 degree	20		Mediur	n Truck	s: 46.	511			
	Right View:	90.0 degree			Heav	y Truck	s: 46.	530			
FHWA Noise Mod	lel Calculations	3									
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite	Road	Fresr	nel	Barrier Atte	en Be	rm Atten
Autos:	68.46	0.82		0.3	4	-1.20		-4.69	0.0	00	0.000
Medium Trucks:	79.45	-12.14		0.3	7	-1.20		-4.88	0.0	00	0.000
Heavy Trucks:	84.25	-15.88		0.3	7	-1.20		-5.34	0.0	00	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	atten	nuation)						
VehicleType	Leg Peak Hou				vening	Leq	Night		Ldn	C	NEL
Autos:	68.	4	65.8		65.0		62.0)	69.1		69.6
Medium Trucks:	66.	5	64.6		59.0		59.4	1	66.8		67.0
Heavy Trucks:	67.	5	66.1		54.5		58.9	9	67.0	1	67.0
Vehicle Noise:	72.	3	70.3		66.2		65.1	l	72.5		72.8
Centerline Distan	ce to Noise Co	ntour (in feet)								
	-			70 (dBA	65	dBA		60 dBA	55	5 dBA
			Ldn:	-	9	1	91		411	-	886
		CI	VEL:	9	2	1	99		428	!	923

Thursday, May 02, 2019

	FHV	VA-RD-77-108	HIGH	1 YAW	NOISE P	REDICT	ION MO	DDEL			
Road Nam	io: HY With Pro e: Pine Av. nt: w/o Hellman	•					Name: lumber:				
	SPECIFIC IN	PUT DATA							L INPUT	S	
Highway Data					Site Cor	nditions	(Hard :				
Average Daily	. ,	31,206 vehicle	es					Autos:	15		
	Percentage:	10%				edium Tr		,	15		
	our Volume:	3,121 vehicle	S		He	eavy Tru	cks (3+	Axles):	15		
	hicle Speed:	45 mph			Vehicle	Mix					
Near/Far La	ne Distance:	76 feet			Veh	icleType	,	Day	Evening	Night	Daily
Site Data							Autos:	66.2%	13.5%	20.3%	93.339
Rai	rier Height:	0.0 feet			М	edium T	rucks:	77.1%	5.3%	17.6%	4.719
Barrier Type (0-W		0.0			1	Heavy T	rucks:	86.3%	1.5%	12.2%	1.96%
Centerline Dis	st. to Barrier:	60.0 feet		ŀ	Noise S	ource F	levation	ns (in fe	oet)		
Centerline Dist.	to Observer:	60.0 feet		ŀ		Auto		.000	,,,,		
Barrier Distance	to Observer:	0.0 feet			Mediu	m Truck		.297			
Observer Height (Above Pad):	5.0 feet				vy Truck		.004	Grade Ad	iustment	. 0.0
Pa	ad Elevation:	0.0 feet		L						doumone	. 0.0
Roa	ad Elevation:	0.0 feet		L	Lane Eq	uivalen	t Distar	nce (in 1	feet)		
	Road Grade:	0.0%				Auto	s: 46	5.701			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 46	5.511			
	Right View:	90.0 degree	es		Heav	vy Truck	s: 46	5.530			
FHWA Noise Mode	el Calculation:	S		- 1							
VehicleType	REMEL	Traffic Flow	Dis	stance		Road	Fres		Barrier Atte		m Atten
Autos:	68.46	2.81		0.3		-1.20		-4.69	0.0		0.00
Medium Trucks:	79.45	-10.17		0.3		-1.20		-4.88	0.0		0.00
Heavy Trucks:	84.25	-13.97		0.3	7	-1.20		-5.34	0.0	000	0.00
Unmitigated Noise			_					1		_	
VehicleType	Leq Peak Hou			Leq E	vening		Night		Ldn		NEL
Autos:	70.		67.8		66.9		63.		71.1		71.
Medium Trucks:	68. 69.		66.5		60.9		61.		68.8		69.
Heavy Trucks: Vehicle Noise:	74.		68.0 72.3		56.4 68.2		60. 67.		68.9 74.5		68. 74.
Centerline Distant											
como mie Distant	70 10 710/36 00	mou. (III loci		70	dBA	65	dBA	6	0 dBA	55	dBA
			Ldn:	1:	20	2	58		555	1,	196
			VFI:		25		69		579		247

Autos: 66.2% 13.5% 20.3% 93			A-RD-77-108 HIG	HWAY	NOISE PI	REDICTIO	ом мо	DEL			
Average Daily Traffic (Adt): 31,805 vehicles Peak Hour Percentage: 10% Autos: 15	Road Nam	ne: Pine Av.									
Average Daily Traffic (Adt): 31,805 vehicles Peak Hour Percentage: 10% Peak Hour Volume: 3,181 vehicles Vehicle Speed: 45 mph Vehicle Speed: 45 mph Vehicle Type Autos: 15 Vehicle Type Day Evening Night Day Evening Night Day Evening Night Day Evening Night Day Evening Night Day Evening Night Day Evening Night Day Evening Night Day Evening Night Day Night Night Night Night Night Night Night Night Night Night Ni		SPECIFIC INF	PUT DATA							S	
Peak Hour Percentage: 10% Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15	lighway Data				Site Con	ditions (l	Hard =	10, So	ft = 15)		
Peak Hour Volume	Average Daily	Traffic (Adt): 3	1,805 vehicles						15		
Vehicle Speed: 45 mph 76 feet Vehicle Mix Vehicle Type Day Evening Night Day Evening Night Day Evening Night Day Evening Night Day Evening Night Day Evening Night Day Evening Night Day Evening Night Day Evening Night Day Evening Night Day Evening Night Day	Peak Hour	Percentage:	10%		Me	dium Truc	cks (2 A	xles):	15		
Near/Far Lane Distance: 76 feet VehicleType Day Evening Night Day Night Day Night Day Night Day Night Day Night Day Night Day Night Day Night Day Ni	Peak H	lour Volume: 3	3,181 vehicles		He	avy Truck	rs (3+ A	xles):	15		
Near/Far Lane Distance: 76 feet VehicleType Day Evening Night Day Evening Night Day Evening Night Day Evening Night Day Evening Night Day Evening Night Day Evening Night Day Evening Night Day Evening Night Day Evening Night Day Day Evening Night Day Day Evening Night Day	Ve	hicle Speed:	45 mph	-	Vehicle	Miv					
Barrier Height: 0.0 feet Heavy Trucks: 77.1% 5.3% 17.6% 4 Heavy Trucks: 86.3% 1.5% 12.2% 1 Noise Source Elevations (in feet)	Near/Far La	ne Distance:	76 feet					Day	Evening	Night	Daily
Barrier Type (0 Mall, 1-Berm): 0.0 feet Heavy Trucks: 86.3% 1.5% 12.2% 1	Site Data					Au	ıtos:	66.2%	13.5%	20.3%	93.34%
Barrier Type (0-Wall, 1-Berm): Centerline Dist. to Barrier: 60.0 feet Centerline Dist. to Observer: 60.0 feet Barrier Distance to Observer: 0.0 feet Content C	Ra	rrior Hoiaht	0.0 feet		M	edium Tru	icks:	77.1%	5.3%	17.6%	4.71%
Noise Source Elevations (in feet)					1	Heavy Tru	icks:	86.3%	1.5%	12.2%	1.96%
Centerline Dist. to Observer: 60.0 feet Barrier Distance to Observer: 0.0 feet Comparison of C											
Barrier Distance to Observer: 0.0 feet Medium Trucks: 0.000					Noise S				et)		
Observer Height (Above Pad): 5.0 feet Heavy Trucks: 2.297 Heavy Trucks: 8.004 Grade Adjustment: 0.1											
Pad Elevation: 0.0 feet Road Glavation: 0.0 feet Road Grade: 0.0 feet Left View: 90.0 degrees Right View: 90.0 degrees Right View: 90.0 degrees Right View: 90.0 degrees PHWA Noise Model Calculations VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm Autos: 68.46 2.89 0.34 -1.20 -4.69 0.000 Medium Trucks: 79.45 -10.09 0.37 -1.20 -4.68 0.000 Heavy Trucks: 84.25 -13.89 0.37 -1.20 -5.34 0.000											
Road Elevation: 0.0 feet Lane Equivalent Distance (in feet)		,			Heav	ry Trucks:	8.0	004	Grade Adj	ustment:	0.0
Road Grade: 0.0%					Lane Eq	uivalent l	Distand	e (in f	eet)		
Left View:		Road Grade:				Autos:	46.7	701			
Right View: 90.0 degrees Heavy Trucks: 46.530		I eft View:			Mediu	m Trucks:	46.5	511			
VehicleType REMEL Traffic Flow Distance Finite Road Fresnel Barrier Atten Berm A Autos: 68.46 2.89 0.34 -1.20 -4.69 0.000 Medium Trucks: 79.45 -10.09 0.37 -1.20 -4.88 0.000 Heavy Trucks: 84.25 -13.89 0.37 -1.20 -5.34 0.000		Right View:			Heav	y Trucks:					
Autos: 68.46 2.89 0.34 -1.20 -4.69 0.000 Medium Trucks: 79.45 -10.09 0.37 -1.20 -4.88 0.000 Heavy Trucks: 84.25 -13.89 0.37 -1.20 -5.34 0.000	HWA Noise Mod	el Calculations									
Medium Trucks: 79.45 -10.09 0.37 -1.20 -4.88 0.000 Heavy Trucks: 84.25 -13.89 0.37 -1.20 -5.34 0.000	VehicleType	REMEL	Traffic Flow D	istance	Finite	Road	Fresn	el i	Barrier Att	en Ber	m Atten
Heavy Trucks: 84.25 -13.89 0.37 -1.20 -5.34 0.000	Autos:	68.46	2.89	0.3	34	-1.20		4.69	0.0	000	0.000
· · · · · · · · · · · · · · · · · · ·	Medium Trucks:	79.45	-10.09	0.3	37	-1.20		4.88	0.0	000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)	Heavy Trucks:	84.25	-13.89	0.3	37	-1.20		5.34	0.0	000	0.000
	Inmitigated Nois	e Levels (witho	ut Topo and barr	rier atte	nuation)						
VehicleType Leq Peak Hour Leq Day Leq Evening Leq Night Ldn CNEL		Leq Peak Hour	Leq Day	Leq E	vening	Leq N	light				
Autos: 70.5 67.9 67.0 64.0 71.2											71.6
Medium Trucks: 68.5 66.6 61.0 61.4 68.9											69.0
Heavy Trucks: 69.5 68.1 56.5 60.8 68.9	Heavy Trucks:	69.5	68.1		56.5		60.8		68.9)	69.0
Vehicle Noise: 74.4 72.4 68.3 67.1 74.6	Vehicle Noise:	74.4	72.4		68.3		67.1		74.6	3	74.8
Centerline Distance to Noise Contour (in feet)	enterline Distan	ce to Noise Cor	ntour (in feet)								
70 dBA 65 dBA 60 dBA 55 dBA								6			
Ldn: 121 261 562 1,212			I dn	: 1	21	261	1		562	1.3	212

Thursday, May 02, 2019

	FHV	VA-RD-77-108 H	IIGHWAY	NOISE P	REDICTIO	N MODEL					
Scenar	io: HY With Pr	oject			Project Na	ame: MCH					
Road Nan	ne: Schleisman	Rd.			Job Nun	nber: 1035	1				
Road Segme	nt: w/o Archiba	ild Av.									
SITE	SPECIFIC IN	PUT DATA			NO	ISE MODI	EL INPUT	S			
Highway Data				Site Conditions (Hard = 10, Soft = 15)							
Average Daily	Traffic (Adt):	38,557 vehicles				Autos	: 15				
Peak Hour	Percentage:	10%		Me	dium Truci	s (2 Axles)	: 15				
Peak F	lour Volume:	3,856 vehicles		He	avy Trucks	(3+ Axles)	: 15				
	hicle Speed:	45 mph		Vehicle I	Wix						
Near/Far La	ne Distance:	78 feet		Veh	icleType	Day	Evening	Night	Daily		
Site Data					Aut	os: 66.29	6 13.5%	20.3%	93.34%		
Ra	rrier Height:	0.0 feet		Me	edium Truc	ks: 77.19	6 5.3%	17.6%	4.71%		
Barrier Type (0-V		0.0		F	leavy Truc	ks: 86.39	6 1.5%	12.2%	1.95%		
Centerline Di	. ,	76.0 feet		Noise Se	urco Elov	ations (in	foot)				
Centerline Dist.	to Observer:	76.0 feet		NOISE SC	Autos:	0.000	ieei)				
Barrier Distance	to Observer:	0.0 feet		Modiu	n Trucks:	2.297					
Observer Height	(Above Pad):	5.0 feet			y Trucks:	8.004	Grade Adj	iustmont	0.0		
P	ad Elevation:	0.0 feet						usunent	0.0		
Ro	ad Elevation:	0.0 feet		Lane Eq	uivalent D	istance (in	feet)				
	Road Grade:	0.0%			Autos:	65.422					
	Left View:	-90.0 degrees		Mediui	m Trucks:	65.286					
	Right View:	90.0 degrees		Heav	y Trucks:	65.299					
FHWA Noise Mod	ol Calculation	•									
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Att	en Ber	m Atten		
Autos:	68.46	3.72	-1.	85	-1.20	-4.73	0.0	000	0.000		
Medium Trucks:	79.45	-9.24	-1.	84	-1.20	-4.88	0.0	000	0.000		
Heavy Trucks:	84.25	-13.07	-1.	84	-1.20	-5.25	0.0	000	0.000		
Unmitigated Nois	e Levels (with	out Topo and b	arrier atte	nuation)							
VehicleType	Leq Peak Hou			Evening	Leq Ni	ght	Ldn	CI	VEL		
Autos:	69.	.1 66	6.5	65.7		62.7	69.8	3	70.3		
Medium Trucks:	67.	.2 65	5.2	59.6		60.1	67.5	5	67.7		
Heavy Trucks:	68.	.1 66	6.7	55.1		59.5	67.6	6	67.6		
Vehicle Noise:	73	.0 71	1.0	66.9		65.7	73.2	2	73.5		
Centerline Distan	ce to Noise Co	ontour (in feet)									
) dBA	65 dB	Α	60 dBA	55	dBA		
		Le	dn:	124	268	•	577	1,:	244		
		CNE	EL:	130	279		602	1.3	296		

Scenario: Existing Without Project Project Name: MCH (Dirt Haul Truck Trip

Road Name: Pine Av. Job Number: 10351

Road Segment: e/o Euclid Av.

SITE	SPECIFIC IN	IPUT DATA			N	OISE	MODE	L INPUT	s	
Highway Data				Site Co	nditions (Hard :	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	25,747 vehicle	es				Autos:	15		
Peak Hour	Percentage:	10%		M	edium Tru	cks (2	Axles):	15		
Peak H	lour Volume:	2,575 vehicles	3	H	eavy Truci	ks (3+	Axles):	15		
Ve	hicle Speed:	45 mph		Vehicle	Miv					
Near/Far La	ne Distance:	76 feet	_		hicleType		Day	Evening	Night	Daily
Site Data					A	utos:	66.2%	13.5%	20.3%	93.40%
Bar	rrier Height:	0.0 feet		٨	1edium Tru	ıcks:	77.1%	5.3%	17.6%	4.70%
Barrier Type (0-W	•	0.0			Heavy Tru	ıcks:	86.3%	1.5%	12.2%	1.90%
Centerline Di	st. to Barrier:	60.0 feet		Noisa S	Source Ele	vatio	ns (in fa	not)		
Centerline Dist.	to Observer:	60.0 feet		NOISE			0.000			
Barrier Distance	to Observer:	0.0 feet		Modi	Autos					
Observer Height ((Above Pad):	5.0 feet			ım Trucks		2.297	Grade Ad	iustmon	·· 0 0
Pa	ad Elevation:	0.0 feet		неа	vy Trucks	. 8	3.004	Grade Ad	justinent	. 0.0
Roa	ad Elevation:	0.0 feet		Lane Ed	quivalent	Distar	nce (in i	feet)		
	Road Grade:	0.0%			Autos	: 46	5.701			
	Left View:	-90.0 degree	es	Mediu	ım Trucks	: 46	6.511			
	Right View:	90.0 degree	es	Hea	vy Trucks	: 46	6.530			
FHWA Noise Mod	el Calculation	S								
VehicleType	REMEL	Traffic Flow	Distance	Finite	e Road	Fres	snel	Barrier Att	en Bei	rm Atten
Autos:	68.46	1.97	0.3	34	-1.20		-4.69	0.0	000	0.000
Medium Trucks:	79.45	-11.01	0.3	37	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	84.25	-14.94	0.3	37	-1.20		-5.34	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier attei	nuation))					
VehicleType	Leg Peak Hou	ır Leq Day	Leg E	vening	Leg N	light		Ldn	С	NEL

Unmitigated Nois	se Levels (withou	t Topo and barr	ier attenuation)			
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos	69.6	67.0	66.1	63.1	70.3	70.7
Medium Trucks.	67.6	65.7	60.1	60.5	67.9	68.1
Heavy Trucks.	68.5	67.0	55.5	59.8	67.9	68.0
Vehicle Noise	73.4	71.4	67.4	66.2	73.6	73.9

Centerline Distance to Noise Contour (in feet)				
	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	105	226	486	1,047
CNEL:	109	235	506	1,091

Scenario: Existing Without Project Project Name: MCH (Dirt Haul Truck Trip

Road Name: Pine Av. Job Number: 10351

Road Segment: w/o Chino Corona Rd.

SITE SPECIFIC II	NPUT DATA		N	IOISE MODE	L INPUTS	;	
Highway Data		S	ite Conditions	(Hard = 10, S	oft = 15)		
Average Daily Traffic (Adt):	29,771 vehicle	es		Autos:	15		
Peak Hour Percentage:	10%		Medium Tru	ucks (2 Axles).	15		
Peak Hour Volume:	2,977 vehicles	s	Heavy Truc	cks (3+ Axles).	15		
Vehicle Speed:	45 mph	1	ehicle Mix				
Near/Far Lane Distance:	76 feet	V	VehicleType	Day	Evening	Night	Daily
Site Data				Autos: 66.2%	_	20.3%	
			Medium Ti			17.6%	4.70%
Barrier Height:	0.0 feet		Heavy Ti			12.2%	1.90%
Barrier Type (0-Wall, 1-Berm):	0.0		Heavy H	ucks. 60.57	1.570	12.2/0	1.90 /0
Centerline Dist. to Barrier:	60.0 feet	N	loise Source El	levations (in f	eet)		
Centerline Dist. to Observer:	60.0 feet		Autos	•	,		
Barrier Distance to Observer:	0.0 feet		Medium Trucks				
Observer Height (Above Pad):	5.0 feet		Heavy Trucks		Grade Adju	ıstment	. 0 0
Pad Elevation:	0.0 feet		Tieavy Truck	3. 0.004	Orado riaje	1011110111	. 0.0
Road Elevation:	0.0 feet	L	ane Equivalent	t Distance (in	feet)		
Road Grade:	0.0%		Autos	s: 46.701			
Left View:	-90.0 degree	es	Medium Trucks	s: 46.511			
Right View:	90.0 degree		Heavy Trucks	s: 46.530			
FHWA Noise Model Calculation	18						
VehicleType REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atte	n Ber	m Atten
Autos: 68.46	2.60	0.34	-1.20	-4.69	0.0	00	0.000
Medium Trucks: 79.45	-10.38	0.37	-1.20	-4.88	0.0	00	0.000
Heavy Trucks: 84.25	-14.31	0.37	-1.20	-5.34	0.00	00	0.000

Unmitigated Nois	Unmitigated Noise Levels (without Topo and barrier attenuation)												
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL							
Autos:	70.2	67.6	66.7	63.7	70.9	71.3							
Medium Trucks:	68.2	66.3	60.7	61.2	68.6	68.7							
Heavy Trucks:	69.1	67.7	56.1	60.4	68.5	68.6							
Vehicle Noise:	74.0	72.0	68.0	66.8	74.3	74.5							

Centerline Distance to Noise Contour (in feet)										
	70 dBA	65 dBA	60 dBA	55 dBA						
Ldn:	115	248	535	1,153						
CNEL:	120	259	558	1,202						

Scenario: Existing Without Project Project Name: MCH (Dirt Haul Truck Trip

Road Name: Pine Av. Job Number: 10351

Road Segment: w/o W. Preserve Loop

SITE	SPECIFIC IN	IPUT DATA				N	IOISE	MODE	L INPUT	S	
Highway Data				S	ite Cor	ditions	(Hard	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	16,445 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10%			Ме	dium Tru	ucks (2	Axles):	15		
Peak H	lour Volume:	1,645 vehicle	S		He	avy Truc	cks (3+	Axles):	15		
Ve	hicle Speed:	45 mph		V	ehicle	Miv					
Near/Far La	ne Distance:	76 feet		_		icleType	,	Day	Evening	Night	Daily
Site Data							Autos:	66.2%		20.3%	
	rrier Height:	0.0 feet			М	edium Tı	rucks:	77.1%		17.6%	
Barrier Type (0-W	•	0.0 1661			1	Heavy Ti	rucks:	86.3%	1.5%	12.2%	1.90%
Centerline Di		60.0 feet									
Centerline Dist.		60.0 feet		N	oise S	ource El		•	eet)		
Barrier Distance		0.0 feet				Auto		0.000			
Observer Height		5.0 feet				m Truck	_	2.297			
	ad Elevation:	0.0 feet			Heav	y Truck	s: 8	3.004	Grade Ad	iustmen	t: 0.0
	ad Elevation: ad Elevation:	0.0 feet		L	ane Eq	uivalent	t Dista	nce (in	feet)		
	Road Grade:	0.0%			'	Autos		5.701			
	Left View:	-90.0 degre	es		Mediu	m Truck		6.511			
	Right View:	90.0 degre				y Truck		5.530			
	g	00.0 d0g.0	00			,					
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	snel	Barrier Att	en Be	rm Atten
Autos:	68.46	0.03		0.34		-1.20		-4.69	0.0	000	0.000
Medium Trucks:	79.45	-12.96		0.37		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	84.25	-16.89		0.37		-1.20		-5.34	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barri	ier attenu	ation)						
VehicleType	Leq Peak Hou	ur Leq Day	/	Leq Eve	ening	Leq	Night		Ldn	C	NEL
Autos:	67	. .6	65.0		64.2	1	61	.2	68.3	3	68.8
Medium Trucks:	65	5.7	63.7		58.1		58	.6	66.0)	66.2

Vehicle Noise:	71.5	69.4	65.4	64.2	2 71.7	71.9
Centerline Distance to	Noise Contour (in feet))				
			70 dBA	65 dBA	60 dBA	55 dBA
	L	Ldn:	78	167	360	776
	CV	JFI ·	81	174	376	809

53.5

57.8

65.9

66.0

65.1

Monday, May 20, 2019

Heavy Trucks:

66.5

Scenario: Existing Without Project Project Name: MCH (Dirt Haul Truck Trip

Road Name: Pine Av. Job Number: 10351

Road Segment: w/o E. Preserve Loop

SITE	SPECIFIC IN	PUT DATA		NOISE MODEL INPUTS					
Highway Data				Site Con	ditions (Ha	rd = 10, S	oft = 15)		
Average Daily	Traffic (Adt):	26,664 vehicle	es			Autos	: 15		
Peak Hour	Percentage:	10%		Me	dium Trucks	(2 Axles)	: 15		
Peak H	lour Volume:	2,666 vehicles	S	He	avy Trucks ((3+ Axles)	: 15		
Ve	hicle Speed:	45 mph		Vehicle I	Miv				
Near/Far La	ne Distance:	76 feet			icleType	Day	Evening	Night	Daily
Site Data					Auto			20.3%	
Ba	rrier Height:	0.0 feet		Me	edium Truck	s: 77.1%	6 5.3%	17.6%	4.70%
Barrier Type (0-W	•	0.0		I	Heavy Truck	s: 86.3%	6 1.5%	12.2%	1.90%
Centerline Di	st. to Barrier:	60.0 feet		Noise So	ource Eleva	tions (in t	feet)		
Centerline Dist.	to Observer:	60.0 feet		710/30 00	Autos:	0.000	ccij		
Barrier Distance	to Observer:	0.0 feet		Modiu	m Trucks:	2.297			
Observer Height	(Above Pad):	5.0 feet			y Trucks:	8.004	Grade Ad	iustment	. 0 0
P	ad Elevation:	0.0 feet		Tieav	y Trucks.	0.004	Orado riaj	, aou mome	. 0.0
Ro	ad Elevation:	0.0 feet		Lane Eq	uivalent Dis	stance (in	feet)		
	Road Grade:	0.0%			Autos:	46.701			
	Left View:	-90.0 degree	es	Mediu	m Trucks:	46.511			
	Right View:	90.0 degree	es	Heav	y Trucks:	46.530			
FHWA Noise Mod	lel Calculations	S							
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road F	resnel	Barrier Atte	en Ber	m Atten
Autos:	68.46	2.13	0.	.34	-1.20	-4.69	0.0	000	0.000
Medium Trucks:	79.45	-10.86	0.	.37	-1.20	-4.88	0.0	000	0.000
Heavy Trucks:	84.25	-14.79	0.	.37	-1.20	-5.34	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier atte	enuation)					
VehicleType	Leq Peak Hou	r Leq Day	Leq	Evening	Leq Nigl	nt	Ldn	Ci	NEL
Autos:	69	7 (67 1	66.3		63.3	70.4	1	70.9

Unmitigated Nois	Unmitigated Noise Levels (without Topo and barrier attenuation)												
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL							
Autos:	69.7	67.1	66.3	63.3	70.4	70.9							
Medium Trucks:	67.8	65.8	60.2	60.7	68.1	68.3							
Heavy Trucks:	68.6	67.2	55.6	59.9	68.0	68.1							
Vehicle Noise:	73.6	71.5	67.5	66.3	73.8	74.0							

Centerline Distance to Noise Contour (in feet)										
	70 dBA	65 dBA	60 dBA	55 dBA						
Ldn:	107	231	497	1,071						
CNEL:	112	241	518	1,117						

Scenario: Existing Without Project Project Name: MCH (Dirt Haul Truck Trip

Road Name: Pine Av. Job Number: 10351

Road Segment: w/o Hellman Av.

SITE	SPECIFIC IN	PUT DATA				NC	DISE	MODE	L INPUT	S	
Highway Data				5	Site Con	ditions (l	Hard =	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	26,513 vehicl	es					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Truc	cks (2	Axles):	15		
Peak H	lour Volume:	2,651 vehicle	s		He	avy Truck	(S (3+	Axles):	15		
Ve	hicle Speed:	45 mph		,	/ehicle	Miv					
Near/Far La	ne Distance:	76 feet				icleType		Day	Evening	Night	Daily
Site Data							ıtos:	66.2%		20.3%	
Ra	rrier Height:	0.0 feet			M	edium Tru	icks:	77.1%	5.3%	17.6%	6 4.70%
Barrier Type (0-W	•	0.0			ı	Heavy Tru	icks:	86.3%	1.5%	12.2%	6 1.90%
Centerline Di	,	60.0 feet		_							
Centerline Dist.		60.0 feet		<i></i>	loise So	ource Ele		•	eet)		
Barrier Distance		0.0 feet				Autos:		.000			
Observer Height		5.0 feet				m Trucks:		.297			
<u> </u>	ad Elevation:	0.0 feet			Heav	y Trucks:	8	.004	Grade Ad	justmen	t: 0.0
- '	ad Elevation:	0.0 feet		L	ane Eq	uivalent l	Distar	ice (in i	feet)		
	Road Grade:	0.0%				Autos:		.701			
	Left View:	-90.0 degre	es		Mediu	m Trucks:	46	.511			
	Right View:	90.0 degre			Heav	y Trucks:	46	.530			
FHWA Noise Mod			ı		T						
VehicleType	REMEL	Traffic Flow		stance	1	Road	Fres		Barrier Att		erm Atten
Autos:	68.46	2.10		0.34		-1.20		-4.69	0.0	000	0.000
Medium Trucks:	79.45	-10.88		0.37	•	-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	84.25	-14.82		0.37	•	-1.20		-5.34	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barri	er atten	uation)						
VehicleType	Leq Peak Hou	ır Leq Day	/	Leq Ev	ening	Leq N	light		Ldn	(CNEL
Autos:	69	.7	67.1		66.2		63.	2	70.4	1	70.8

Unmitigated Nois	Unmitigated Noise Levels (without Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL						
Autos:	69.7	67.1	66.2	63.2	70.4	70.8						
Medium Trucks:	67.7	65.8	60.2	60.6	68.1	68.2						
Heavy Trucks:	68.6	67.2	55.6	59.9	68.0	68.1						
Vehicle Noise:	73.5	71.5	67.5	66.3	73.8	74.0						

Centerline Distance to Noise Contour (in feet)										
	70 dBA	65 dBA	60 dBA	55 dBA						
Ldn:	107	230	495	1,067						
CNEL:	111	240	516	1,112						

Scenario: Existing Without Project Project Name: MCH (Dirt Haul Truck Trip

Road Name: Chino Corona Rd. Job Number: 10351

Road Segment: s/o Pine Av.

SITE	SPECIFIC IN	IPUT DATA		NOISE MODEL INPUTS						
Highway Data				Site Co	nditions	(Hard	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	3,068 vehicle	es				Autos:	15		
Peak Hour	Percentage:	10%		Me	edium Tru	ıcks (2	Axles):	15		
Peak H	lour Volume:	307 vehicles	6	He	eavy Truc	cks (3+	Axles):	15		
Ve	hicle Speed:	45 mph	-	Vehicle	Miv					
Near/Far La	ne Distance:	12 feet	-		nicleType		Day	Evening	Night	Daily
Site Data						Autos:	66.2%	13.5%	20.3%	93.40%
Ba	rrier Height:	0.0 feet		M	ledium Ti	ucks:	77.1%	5.3%	17.6%	4.70%
Barrier Type (0-W	•	0.0			Heavy Tı	rucks:	86.3%	1.5%	12.2%	1.90%
Centerline Di	st. to Barrier:	30.0 feet	_	Noisa S	ource El	ovatio	ne (in f	not)		
Centerline Dist.	to Observer:	30.0 feet		NOISE S	Autos).000			
Barrier Distance	to Observer:	0.0 feet		Modi	Autos ım Trucks		2.297			
Observer Height ((Above Pad):	5.0 feet					3.004	Grade Ad	iustmont	
Pa	ad Elevation:	0.0 feet		пеа	vy Trucks	S. C	5.004	Orace Au	justinent	. 0.0
Roa	ad Elevation:	0.0 feet		Lane Ed	quivalent	Dista	nce (in i	feet)		
	Road Grade:	0.0%			Autos	s: 29	9.816			
	Left View:	-90.0 degree	es	Mediu	ım Trucks	s: 29	9.518			
	Right View:	90.0 degree	es	Hea	vy Trucks	s: 29	9.547			
FHWA Noise Mod	el Calculation	S								
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fres	snel	Barrier Att	en Ber	m Atten
Autos:	68.46	-7.27	3.2	26	-1.20		-4.49	0.0	000	0.000
Medium Trucks:	79.45	-20.25	3.3	33	-1.20		-4.86	0.0	000	0.000
Heavy Trucks:	84.25	-24.18	3.3	32	-1.20		-5.77	0.0	000	0.000
Unmitigated Noise	e Levels (with	out Topo and	barrier atte	nuation)						
VehicleType	Leg Peak Hou	ır Leq Day	Leg E	vening	Leg	Night		Ldn	C	NEL

Unmitigated Nois	Unmitigated Noise Levels (without Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL						
Autos:	63.3	60.7	59.8	56.8	64.0	64.4						
Medium Trucks:	61.3	59.4	53.8	54.2	61.7	61.8						
Heavy Trucks:	62.2	60.8	49.2	53.5	61.6	61.7						
Vehicle Noise:	67.1	65.1	61.1	59.9	67.3	67.6						

Centerline Distance to Noise Contour (in feet)				
	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	20	43	92	199
CNEL:	21	45	96	207

Scenario: Existing Without Project Project Name: MCH (Dirt Haul Truck Trip

Road Name: Chino Corona Rd. Job Number: 10351

Road Segment: e/o Cucamonga Av.

SITE	SPECIFIC IN	IPUT DATA				NOISE	MODE	L INPUT	S	
Highway Data				Site C	onditions	(Hard	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	3,068 vehicle	es				Autos:	15		
Peak Hour	Percentage:	10%		1	Medium Ti	rucks (2	Axles):	15		
Peak H	lour Volume:	307 vehicles	S		Heavy Tru	icks (3+	Axles):	15		
Ve	hicle Speed:	40 mph		Vehic	e Mix					
Near/Far La	ne Distance:	12 feet			ehicleTyp	е	Day	Evening	Night	Daily
Site Data						Autos:	66.2%	_	20.3%	_
	rrier Height:	0.0 feet			Medium 7	rucks:	77.1%		17.6%	
Barrier Type (0-W	•	0.0			Heavy 7	rucks:	86.3%	1.5%	12.2%	1.90%
Centerline Di	,	30.0 feet		A/	0		(* 6	4)		
Centerline Dist.		30.0 feet		Noise	Source E			eet)		
Barrier Distance		0.0 feet			Auto		0.000			
Observer Height	(Above Pad):	5.0 feet			lium Truck –	_	2.297	0 - 4 - 4 - 4		0.0
•	ad Elevation:	0.0 feet		He	avy Truck	rs: E	3.004	Grade Ad	justment	. 0.0
Ro	ad Elevation:	0.0 feet		Lane	Equivalen	t Dista	nce (in	feet)		
	Road Grade:	0.0%			Auto	os: 29	9.816			
	Left View:	-90.0 degree	es	Med	lium Truck	ks: 29	9.518			
	Right View:	90.0 degree		He	avy Truck	rs: 29	9.547			
FHWA Noise Mod	el Calculation	s								
VehicleType	REMEL	Traffic Flow	Distanc	e Fin	ite Road	Fres	snel	Barrier Att	en Ber	m Atten
Autos:	66.51	-6.75	;	3.26	-1.20		-4.49	0.0	000	0.000
Medium Trucks:	77.72	-19.74	;	3.33	-1.20		<i>-4.86</i>	0.0	000	0.000
Heavy Trucks:	82.99	-23.67	;	3.32	-1.20		-5.77	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier at	tenuatio	1)					
VehicleType	Leq Peak Hou	ır Leq Day	Led	g Evening	Leq	Night		Ldn	C	NEL
Autos:	61	.8	59.2	58	.4	55	.4	62.5	5	63.0
Medium Trucks:	60	.1	58.2	52	.6	53	.0	60.4	1	60.6
Heavy Trucks:	61	.4	60.0	48	.4	52	.8	60.9	9	60.9

Centerline Distance to Noise Contour (in feet)				
	70 dBA	65 dBA	60 dBA	55 dBA
Ldn: _	17	36	77	166
CNEL:	17	37	80	173

59.7

58.7

66.1

64.0

66.4

Monday, May 20, 2019

Vehicle Noise:

66.0

Scenario: Existing Without Project Project Name: MCH (Dirt Haul Truck Trip

Road Name: Hellman Av. Job Number: 10351

Road Segment: s/o Pine Av.

SITE	SPECIFIC IN	IPUT DATA				ı	IOISE	MODE	L INPUT	S	
Highway Data				S	ite Cor	nditions	(Hard :	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	13,118 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10%			Me	edium Tr	ucks (2	Axles):	15		
Peak H	lour Volume:	1,312 vehicles	S		He	avy Tru	cks (3+	Axles):	15		
Ve	hicle Speed:	45 mph		1/	ehicle	Mix					
Near/Far La	ne Distance:	51 feet		-		icleType)	Day	Evening	Night	Daily
Site Data							Autos:	66.2%		20.3%	
Ra	rrier Height:	0.0 feet			M	edium T	rucks:	77.1%	5.3%	17.6%	4.70%
Barrier Type (0-W	•	0.0			ı	Heavy T	rucks:	86.3%	1.5%	12.2%	1.90%
Centerline Di	st. to Barrier:	49.0 feet		Α.	laisa Si	ource E	lovatio	ne (in fa	not)		
Centerline Dist.	to Observer:	49.0 feet			0136 30	Auto		.000			
Barrier Distance	to Observer:	0.0 feet			Madiu						
Observer Height	(Above Pad):	5.0 feet			Medium Trucks: 2.297 Heavy Trucks: 8.004		Grade Ad	iustmeni	·· 0 0		
P	ad Elevation:	0.0 feet			Heat	y Truck	S. O	.004	Grade Adj	ustricin	. 0.0
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Distar	nce (in i	feet)		
	Road Grade:	0.0%				Auto	s: 42	.140			
	Left View:	-90.0 degree	es		Mediu	m Truck	s: 41	.929			
	Right View:	90.0 degree	es		Heav	∕y Truck	s: 41	.950			
FHWA Noise Mod	el Calculation	s									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	nel	Barrier Att	en Be	rm Atten
Autos:	68.46	-0.96		1.01		-1.20		-4.64	0.0	000	0.000
Medium Trucks:	79.45	-13.94		1.04		-1.20		-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-17.87		1.04		-1.20		-5.44	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barri	er attenu	ıation)						
VehicleType	Leq Peak Hou	ır Leq Day	,	Leq Eve	ening	Leq	Night		Ldn	С	NEL

Unmitigated Nois	Inmitigated Noise Levels (without Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL						
Autos:	67.3	64.7	63.8	60.8	68.0	68.5						
Medium Trucks:	65.4	63.4	57.8	58.3	65.7	65.9						
Heavy Trucks:	66.2	64.8	53.2	57.5	65.6	65.7						
Vehicle Noise:	71.1	69.1	65.1	63.9	71.4	71.6						

Centerline Distance to Noise Contour (in feet)				
	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	60	130	281	605
CNEL:	63	136	292	630

Scenario: Existing With Project Project Name: MCH (Dirt Haul Truck Trip

Road Name: Pine Av. Job Number: 10351

Road Segment: e/o Euclid Av.

SITE SPECIFIC I	NPUT DATA			NOISE	MODE	L INPUT	S	
Highway Data			Site Condition	s (Hard	= 10, Sc	oft = 15)		
Average Daily Traffic (Adt):	26,935 vehicle	es			Autos:	15		
Peak Hour Percentage:	10%		Medium 7	Trucks (2	2 Axles):	15		
Peak Hour Volume:	2,694 vehicle	S	Heavy Tr	ucks (3+	+ Axles):	15		
Vehicle Speed:	45 mph		Vehicle Mix					
Near/Far Lane Distance:	76 feet		VehicleTy	ре	Day	Evening	Night	Daily
Site Data			<u> </u>	Autos:	66.2%	13.5%	20.3%	89.28%
Barrier Height:	0.0 feet		Medium	Trucks:	77.1%	5.3%	17.6%	4.49%
Barrier Type (0-Wall, 1-Berm):	0.0		Heavy	Trucks:	32.3%	21.7%	46.1%	6.23%
Centerline Dist. to Barrier:	60.0 feet		Noise Source	Flevatio	ons (in fe	eet)		
Centerline Dist. to Observer:	60.0 feet	-			0.000			
Barrier Distance to Observer:	0.0 feet		Medium Trud		2.297			
Observer Height (Above Pad):	5.0 feet		Heavy Truc	_	8.004	Grade Ad	iustment	. 0 0
Pad Elevation:	0.0 feet		Ticavy Truc	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	0.004			
Road Elevation:	0.0 feet		Lane Equivale	nt Dista	nce (in	feet)		
Road Grade:	0.0%		Aut	tos: 4	6.701			
Left View:	-90.0 degre	es	Medium Truc	cks: 4	6.511			
Right View:	90.0 degre	es	Heavy Truc	cks: 4	6.530			
FHWA Noise Model Calculatio	ns							
VehicleType REMEL	Traffic Flow	Distance	Finite Road	Fre	snel	Barrier Att	en Ber	m Atten
Autos: 68.4	6 1.97	0.3	-1.20)	-4.69	0.0	000	0.000
Medium Trucks: 79.4	5 -11.01	0.3	37 -1.20)	-4.88	0.0	000	0.000
Heavy Trucks: 84.2	5 -9.59	0.3	37 -1.20)	-5.34	0.0	000	0.000
Unmitigated Noise Levels (wit	hout Topo and	barrier atte	nuation)					

Unmitigated Nois	e Levels (without	t Topo and barri	ier attenuation)			
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.6	67.0	66.1	63.1	70.3	70.7
Medium Trucks:	67.6	65.7	60.1	60.5	67.9	68.1
Heavy Trucks:	73.8	68.1	72.4	70.9	77.1	77.5
Vehicle Noise:	75.9	71.8	73.5	71.9	78.4	78.7

Centerline Distance to Noise Contour (in feet)				
	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	217	467	1,006	2,167
CNEL:	229	494	1,064	2,293

Scenario: Existing With Project Project Name: MCH (Dirt Haul Truck Trip

Road Name: Pine Av. Job Number: 10351

Road Segment: w/o Chino Corona Rd.

SITE	SPECIFIC IN	NPUT DATA			NC	ISE MOD	DEL INPU	TS	
Highway Data				Site Cor	nditions (F	Hard = 10,	Soft = 15)		
Average Daily	Traffic (Adt):	30,959 vehicle	es			Auto	s: 15		
Peak Hour	Percentage:	10%		Me	dium Truc	ks (2 Axle	s <i>):</i> 15		
Peak H	lour Volume:	3,096 vehicles	S	He	avy Truck	s (3+ Axle	s): 15		
Ve	hicle Speed:	45 mph		Vehicle	Miy				
Near/Far La	ne Distance:	76 feet		VehicleType Day			Evenin	g Nigh	t Daily
Site Data						itos: 66.2			% 89.82%
Ba	rrier Height:	0.0 feet		М	edium Tru	cks: 77.1	1% 5.39	% 17.6	% 4.52%
Barrier Type (0-W	•	0.0		ı	Heavy Tru	cks: 34.6	6% 20.8°	% 44.6	% 5.66%
Centerline Di	st. to Barrier:	60.0 feet		Noisa S	ource Ele	vations (in	foot)		
Centerline Dist.	to Observer:	60.0 feet		NOISE S	Autos:	0.000	i ieei)		
Barrier Distance	to Observer:	0.0 feet		Modiu	Autos. m Trucks:				
Observer Height	(Above Pad):	5.0 feet			ni Trucks. /y Trucks:		Grade	Adjustme	nt. 0 0
P	ad Elevation:	0.0 feet		Heat	y Trucks.	0.004	Orade 7	чајазинс	
Ro	ad Elevation:	0.0 feet		Lane Eq	uivalent E	Distance (i	n feet)		
	Road Grade:	0.0%			Autos:	46.701			
	Left View:	-90.0 degree	es	Mediu	m Trucks:	46.511			
	Right View:	90.0 degree	es	Heav	y Trucks:	46.530			
FHWA Noise Mod	el Calculation	IS							
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier A	Atten E	Berm Atten
Autos:	68.46	2.60	0.3	4	-1.20	-4.6	9	0.000	0.000
Medium Trucks:	79.45	-10.38	0.3	7	-1.20	-4.8	8	0.000	0.000
Heavy Trucks:	84.25	-9.40	0.3	7	-1.20	<i>-5</i> .3	4	0.000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier atter	nuation)					
VehicleType	Log Poak Hou	ur Lea Dav	Log F	venina	LaaN	iaht	l dn		CNEL

Unmitigated Nois	e Levels (withou	t Topo and barri	ier attenuation)			
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	70.2	67.6	66.7	63.7	70.9	71.3
Medium Trucks:	68.2	66.3	60.7	61.2	68.6	68.7
Heavy Trucks:	74.0	68.6	72.4	71.0	77.2	77.6
Vehicle Noise:	76.3	72.4	73.7	72.1	78.6	79.0

Centerline Distance to Noise Contour (in feet)									
	70 dBA	65 dBA	60 dBA	55 dBA					
Ldn:	224	483	1,041	2,242					
CNEL:	237	511	1,100	2,371					

Scenario: Existing With Project Project Name: MCH (Dirt Haul Truck Trip

Road Name: Pine Av. Job Number: 10351

Road Segment: w/o W. Preserve Loop

72.9

SITE SPECIFIC INPUT DATA					NOISE MODEL INPUTS							
Highway Data				Sit	e Cond	itions (H	dard = 10	So	ft = 15)			
Average Daily	Traffic (Adt):	17,495 vehicle	es				Aut	os:	15			
Peak Hour	Percentage:	10%			Medi	um Truc	ks (2 Axle	s):	15			
Peak H	lour Volume:	1,750 vehicles	3		Heav	y Truck	s (3+ Axle	s):	15			
Ve	ehicle Speed:	45 mph		Ve	hicle Mi	ix						
Near/Far La	ne Distance:	76 feet		10.		leType	Da	v	Evening	Night	Daily	
Site Data							tos: 66.		13.5%		87.79%	
Ra	rrier Height:	0.0 feet			Med	lium Truc	cks: 77.	1%	5.3%	17.6%	4.42%	
Barrier Type (0-W	•	0.0			He	avy Truc	cks: 27.	5%	23.5%	49.0%	7.79%	
• • • • • • • • • • • • • • • • • • • •	ist. to Barrier:	60.0 feet		No	ioo Cor	Fla:	.a4:ana /:	fa	-4\			
Centerline Dist.	to Observer:	60.0 feet		NO	ise sou		/ations (i		et)			
Barrier Distance	to Observer:	0.0 feet		١,	N 4 = -1:	Autos:	0.000					
Observer Height	(Above Pad):	5.0 feet		'	Medium		2.297 8.004		Grade Adj	ustmont		
P	ad Elevation:	0.0 feet			Heavy	Trucks:	8.004		Graue Auj	usimem	. 0.0	
Ro	ad Elevation:	0.0 feet		Lai	ne Equi	ivalent E	Distance (in fe	eet)			
	Road Grade:	0.0%				Autos:	46.701					
	Left View:	-90.0 degree	es	1	Medium	Trucks:	46.511					
	Right View:	90.0 degree	es		Heavy	Trucks:	46.530)				
FHWA Noise Mod	lel Calculations	<u> </u>										
VehicleType	REMEL	Traffic Flow	Distan	ce	Finite R	Road	Fresnel	E	Barrier Atte	en Bei	m Atten	
Autos:	68.46	0.03		0.34		-1.20	-4.6	69	0.0	00	0.000	
Medium Trucks:	79.45	-12.96		0.37		-1.20	-4.8	38	0.0	00	0.000	
Heavy Trucks:	84.25	-10.49		0.37		-1.20	-5.3	34	0.0	00	0.000	
Unmitigated Nois	e Levels (with	out Topo and	barrier a	ttenua	tion)							
VehicleType	Leq Peak Hou	r Leq Day	Le	eq Ever	ning	Leq Ni	ight		Ldn	С	NEL	
Autos:	67.	6	65.0		64.2		61.2		68.3	}	68.8	
Medium Trucks:	65.	7	63.7		58.1		58.6		66.0)	66.2	

Vehicle Noise:	74.6 70.0	72.7	71.0	77.4	77.8
Centerline Distance to	Noise Contour (in feet)				
		70 dBA	65 dBA	60 dBA	55 dBA
	Ldn:	187	403	868	1,870
	CNEL:	198	427	920	1,982

66.5

71.9

76.5

70.3

76.8

Monday, May 20, 2019

Heavy Trucks:

Scenario: Existing With Project Project Name: MCH (Dirt Haul Truck Trip

Road Name: Pine Av. Job Number: 10351

Road Segment: w/o E. Preserve Loop

SITE S	SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS						
Highway Data				Site Cor	nditions (F	lard =	10, Sc	oft = 15)			
Average Daily	Traffic (Adt):	27,714 vehicle	s				Autos:	15			
Peak Hour	Percentage:	10%		Me	edium Truc	ks (2 A	Axles):	15			
Peak H	our Volume:	2,771 vehicles		He	avy Truck	s (3+ A	Axles):	15			
Vel	hicle Speed:	45 mph		Vehicle	Miy						
Near/Far Lai	ne Distance:	76 feet			icleType		Day	Evening	Night	Daily	
Site Data					Au	itos:	66.2%	13.5%	20.3%	89.86%	
Bar	rier Height:	0.0 feet		М	edium Trud	cks:	77.1%	5.3%	17.6%	4.52%	
Barrier Type (0-W	•	0.0		I	Heavy Trud	cks:	34.8%	20.7%	44.4%	5.62%	
Centerline Dis	st. to Barrier:	60.0 feet		Noisa S	ource Elev	vation	s (in fa	not)			
Centerline Dist.	to Observer:	60.0 feet		140/30 0	Autos:		000	,			
Barrier Distance	to Observer:	0.0 feet		Mediu	m Trucks:		297				
Observer Height (A	Above Pad):	5.0 feet			y Trucks:		004	Grade Ad	iustment	. 0 0	
Pa	ad Elevation:	0.0 feet		Tical	ry Trucks.	0.	004	Orado riaj	GOUTTOTTE	. 0.0	
Roa	ad Elevation:	0.0 feet		Lane Eq	uivalent E	Distan	ce (in f	feet)			
F	Road Grade:	0.0%			Autos:	46.	701				
	Left View:	-90.0 degree	S	Mediu	m Trucks:	46.	511				
	Right View:	90.0 degree	s	Heav	y Trucks:	46.	530				
FHWA Noise Mode	el Calculations	<u> </u>									
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresr	nel	Barrier Att	en Ber	m Atten	
Autos:	68.46	2.13	0.0	34	-1.20		-4.69	0.0	000	0.000	
Medium Trucks:	79.45	-10.86	0.3	37	-1.20		-4.88	0.0	000	0.000	
Heavy Trucks:	84.25	-9.92	0.0	37	-1.20		-5.34	0.0	000	0.000	
Unmitigated Noise	Levels (witho	ut Topo and k	barrier atte	nuation)							
VehicleType	Leq Peak Hou	Leq Day	Leq E	Evening	Leq Ni	ight		Ldn	Ci	NEL	
Autos:	69.	7 6	57.1	66.3		63.3	3	70.4	1	70.9	

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	69.7	67.1	66.3	63.3	70.4	70.9
Medium Trucks:	67.8	65.8	60.2	60.7	68.1	68.3
Heavy Trucks:	73.5	68.1	71.9	70.4	76.7	77.1
Vehicle Noise:	75.8	71.9	73.2	71.6	78.1	78.4
0 1 " 0" 1	(- N-' O	(' (()				

Centerline Distance to Noise Contour (in feet)										
	70 dBA	65 dBA	60 dBA	55 dBA						
Ldn:	207	446	962	2,072						
CNEL:	219	472	1,017	2,191						

Scenario: Existing With Project Project Name: MCH (Dirt Haul Truck Trip

Road Name: Pine Av. Job Number: 10351

Road Segment: w/o Hellman Av.

SITE	SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS							
Highway Data				Site Cor	nditions (F	Hard =	: 10, Sc	oft = 15)				
Average Daily	Traffic (Adt):	27,563 vehicles	S				Autos:	15				
Peak Hour	Percentage:	10%		Me	dium Truc	ks (2	Axles):	15				
Peak H	lour Volume:	2,756 vehicles		He	avy Truck	s (3+	Axles):	15				
Ve	hicle Speed:	45 mph		Vehicle	Miy							
Near/Far La	ne Distance:	76 feet			icleType		Day	Evening	Night	Daily		
Site Data					Au	itos:	66.2%	_	20.3%	89.84%		
Ba	rrier Height:	0.0 feet		M	edium Tru	cks:	77.1%	5.3%	17.6%	4.52%		
Barrier Type (0-W	•	0.0		I	Heavy Tru	cks:	34.7%	20.8%	44.5%	5.64%		
Centerline Di	st. to Barrier:	60.0 feet		Noisa S	ource Ele	vətior	s (in fa	not)				
Centerline Dist.	to Observer:	60.0 feet		140/36 30	Autos:		000					
Barrier Distance	to Observer:	0.0 feet		Modiu	m Trucks:		297					
Observer Height ((Above Pad):	5.0 feet			y Trucks:		004	Grade Ad	iustment	. 0 0		
Pa	ad Elevation:	0.0 feet		i ical	y Trucks.	0.	004	Orado riaj	uoumom	. 0.0		
Roa	ad Elevation:	0.0 feet		Lane Eq	uivalent [Distan	ce (in i	feet)				
	Road Grade:	0.0%			Autos:	46	.701					
	Left View:	-90.0 degrees	S	Mediu	m Trucks:	46	.511					
	Right View:	90.0 degrees	S	Heav	y Trucks:	46	.530					
FHWA Noise Mod	el Calculations	}										
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresi	nel	Barrier Att	en Ber	m Atten		
Autos:	68.46	2.10	0.3	34	-1.20		-4.69	0.0	000	0.000		
Medium Trucks:	79.45	-10.88	0.3	37	-1.20		-4.88	0.0	000	0.000		
Heavy Trucks:	84.25	-9.92	0.3	37	-1.20		-5.34	0.0	000	0.000		
Unmitigated Noise	e Levels (witho	out Topo and b	arrier attei	nuation)								
VehicleType	Leq Peak Hou	r Leq Day	Leq E	vening	Leq N	ight		Ldn	C	NEL		
Autos:	69.	7 6	7.1	66.2		63.	2	70.4	1	70.8		

			70 dBA	65 dBA	60 dBA	55 dBA
Centerline Distance to	Noise Contour (in feet)				
Vehicle Noise:	75.8	71.9	73.2	71.6	78.1	78.4
Heavy Trucks:	73.5	68.1	71.9	70.4	76.7	77.1
Medium Trucks:	67.7	65.8	60.2	60.6	68.1	68.2

Centerline Distance to Noise Contour (in feet)				
	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	207	446	960	2,069
CNEL:	219	471	1.015	2.188

Scenario: Existing With Project Project Name: MCH (Dirt Haul Truck Trip

Road Name: Chino Corona Rd. Job Number: 10351

Road Segment: s/o Pine Av.

SITE	SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS							
Highway Data				Site Cor	nditions (l	Hard =	10, Sc	oft = 15)				
Average Daily	Traffic (Adt):	4,256 vehicle	es				Autos:	15				
Peak Hour	Percentage:	10%		Me	edium Truc	cks (2 /	Axles):	15				
Peak F	lour Volume:	426 vehicles	S	He	eavy Truck	ks (3+ A	Axles):	15				
Ve	ehicle Speed:	45 mph		Vehicle	Mix							
Near/Far La	ane Distance:	12 feet							Night	Daily		
Site Data					Au	utos:	66.2%	13.5%	20.3%	67.33%		
Ba	rrier Height:	0.0 feet		M	ledium Tru	ıcks:	77.1%	5.3%	17.6%	3.39%		
Barrier Type (0-V	•	0.0			Heavy Tru	ıcks:	13.6%	28.7%	57.8%	29.28%		
Centerline Di	ist. to Barrier:	30.0 feet		Noisa S	ource Ele	wation	c (in fa	not)				
Centerline Dist.	to Observer:	30.0 feet		NOISE S			000	,c ()				
Barrier Distance	to Observer:	0.0 feet		Madiu	:Autos :m Trucks		297					
Observer Height	(Above Pad):	5.0 feet						Grade Ad	liustman	· 00		
P	ad Elevation:	0.0 feet		пеа	vy Trucks:	0.	004	Grade Ad	justili e m	. 0.0		
Ro	ad Elevation:	0.0 feet		Lane Eq	uivalent	Distan	ce (in i	feet)				
	Road Grade:	0.0%			Autos:	29.	816					
	Left View:	-90.0 degree	es	Mediu	m Trucks:	29.	518					
	Right View:	90.0 degree	es	Hea	vy Trucks:	29.	547					
FHWA Noise Mod	lel Calculation	ıs										
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresr	nel	Barrier Att	ten Be	rm Atten		
Autos:	68.46	-7.27	3.2	6	-1.20		-4.49	0.0	000	0.000		
Medium Trucks:	79.45	-20.25	3.3	3	-1.20		-4.86	0.0	000	0.000		
Heavy Trucks:	84.25	-10.88	3.3	2	-1.20		-5.77	0.0	000	0.000		
Unmitigated Nois	e Levels (with	out Topo and	barrier atter	nuation)								
VahialaTura	Las Daals Ha	Las Da			1001	l: o.lo.t		l do		NICI		

Unmitigated Nois	Unmitigated Noise Levels (without Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL						
Autos:	63.3	60.7	59.8	56.8	64.0	64.4						
Medium Trucks:	61.3	59.4	53.8	54.2	61.7	61.8						
Heavy Trucks:	75.5	66.0	75.3	73.6	79.6	80.0						
Vehicle Noise:	75.9	67.8	75.4	73.7	79.8	80.2						

Centerline Distance to Noise Contour (in feet)											
	70 dBA	65 dBA	60 dBA	55 dBA							
Ldn:	135	291	627	1,350							
CNEL:	144	310	668	1,438							

Scenario: Existing With Project Project Name: MCH (Dirt Haul Truck Trip

Road Name: Chino Corona Rd. Job Number: 10351

Road Segment: e/o Cucamonga Av.

SITE	SPECIFIC IN	IPUT DATA				NO	ISE MODE	LINPUT	S	
Highway Data				Si	ite Conditi	ons (H	lard = 10, Se	oft = 15)		
Average Daily	Traffic (Adt):	4,256 vehicle	es				Autos:	15		
Peak Hour	Percentage:	10%			Mediur	n Trucl	ks (2 Axles):	15		
Peak H	lour Volume:	426 vehicles	3		Heavy	Trucks	s (3+ Axles):	15		
Ve	hicle Speed:	40 mph		V	ehicle Mix					
Near/Far La	ne Distance:	12 feet			Vehicle [*]	Tvpe	Day	Evening	Night	Daily
Site Data						Aut	•	Ū	20.3%	•
	rrier Height:	0.0 feet			Mediu	ım Truc	ks: 77.1%	5.3%	17.6%	
Barrier Type (0-W	•	0.0			Hea	vy Truc	ks: 13.6%	28.7%	57.8%	29.28%
Centerline Di	•	30.0 feet		-	-: O			41		
Centerline Dist.	to Observer:	30.0 feet		N			rations (in f	eet)		
Barrier Distance		0.0 feet				Autos:	0.000			
Observer Height		5.0 feet			Medium T		2.297	Crada Ad		
_	ad Elevation:	0.0 feet			Heavy T	rucks:	8.004	Grade Ad	lustriierit	. 0.0
Ro	ad Elevation:	0.0 feet		Lé	ane Equiva	alent D	istance (in	feet)		
	Road Grade:	0.0%			/	Autos:	29.816			
	Left View:	-90.0 degree	es		Medium T	rucks:	29.518			
	Right View:	90.0 degree	es		Heavy T	rucks:	29.547			
FHWA Noise Mod	lel Calculation	ıs								
VehicleType	REMEL	Traffic Flow	Dista	ance	Finite Roa	ad	Fresnel	Barrier Att	en Bei	rm Atten
Autos:	66.51	-6.75		3.26	-1	.20	-4.49	0.0	000	0.000
Medium Trucks:	77.72	-19.74		3.33	-1	.20	-4.86	0.0	000	0.000
Heavy Trucks:	82.99	-10.37		3.32	-1	.20	-5.77	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier	attenu	ation)					
VehicleType	Leq Peak Hot	ur Leq Day		Leq Eve	ening	Leq Ni	ght	Ldn	С	NEL
Autos:	61	.8	59.2		58.4		55.4	62.5	5	63.0
Medium Trucks:	60	0.1	58.2		52.6		53.0	60.4	1	60.6

Centerline Distance to Noise Contour (in feet)										
	70 dBA	65 dBA	60 dBA	55 dBA						
Ldn:	120	258	557	1,200						
CNEL:	128	275	593	1.278						

74.6

74.7

72.8

72.9

78.9

79.0

79.3 79.4

65.3

66.9

Monday, May 20, 2019

Heavy Trucks:

Vehicle Noise:

74.7

75.1

Scenario: Existing With Project Project Name: MCH (Dirt Haul Truck Trip

Road Name: Hellman Av. Job Number: 10351

Road Segment: s/o Pine Av.

SITE	SPECIFIC IN	PUT DATA		NOISE MODEL INPUTS					
Highway Data				Site Con	ditions (Ha	rd = 10, Se	oft = 15)		
Average Daily	Traffic (Adt):	14,168 vehicles	3			Autos:	15		
Peak Hou	r Percentage:	10%		Med	dium Trucks	(2 Axles):	15		
Peak I	Hour Volume:	1,417 vehicles		Hea	avy Trucks (3+ <i>Axles</i>):	15		
Ve	ehicle Speed:	45 mph		Vehicle II	liv				
Near/Far La	ane Distance:	51 feet			cleType	Day	Evening	Night	Daily
Site Data				VOIII	Auto		_	20.3%	86.48%
				Me	edium Truck			17.6%	4.35%
	arrier Height:	0.0 feet			leavy Truck			50.8%	9.17%
Barrier Type (0-V	,	0.0		1	leavy IIuch	24.07	24.070	50.6 %	9.17 /0
	ist. to Barrier:	49.0 feet	1	Noise Source Elevations (in feet)					
Centerline Dist.	to Observer:	49.0 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 Ad	iustment	. 0 0
F	Pad Elevation:	0.0 feet		i icav	y Trucks.	0.004	Orado riaj	, ao anno ma	0.0
Ro	ad Elevation:	0.0 feet	1	Lane Equ	uivalent Dis	tance (in	feet)		
	Road Grade:	0.0%			Autos:	42.140			
	Left View:	-90.0 degrees	S	Medium Trucks: 41.929					
	Right View:	90.0 degrees	S	Heav	y Trucks:	41.950			
FHWA Noise Mod	del Calculation	s							
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road F	resnel	Barrier Att	en Ber	m Atten
Autos:	68.46	-0.96	1.0	1	-1.20	-4.64	0.0	000	0.000
Medium Trucks:	79.45	-13.94	1.04	4	-1.20	-4.87	0.0	000	0.000
Heavy Trucks:	84.25	-10.70	1.04	4	-1.20	-5.44	0.0	000	0.000
Unmitigated Nois									
VehicleType	Leq Peak Hou	ır Leq Day	Leq E	vening	Leq Nigh	nt	Ldn	CI	VEL
Autos	67	3 6	<i>1</i> 7	63.8		60 B	68 (1	68.5

Unmitigated Nois	Unmitigated Noise Levels (without Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL						
Autos:	67.3	64.7	63.8	60.8	68.0	68.5						
Medium Trucks:	65.4	63.4	57.8	58.3	65.7	65.9						
Heavy Trucks:	73.4	66.5	72.5	70.9	77.1	77.4						
Vehicle Noise:	74.9	69.9	73.2	71.5	77.8	78.2						

Centerline Distance to Noise Contour (in feet)										
	70 dBA	65 dBA	60 dBA	55 dBA						
Ldn:	163	352	757	1,632						
CNEL:	173	373	804	1,731						

Scenario: Existing With Project Project Name: MCH (Dirt Haul Truck Trip

Road Name: Pine Av. Job Number: 10351

Road Segment: e/o Euclid Av.

SITE SPECIFIC I	NPUT DATA			NOIS	SE M	ODE	L INPUT	S	
Highway Data			Site Cor	nditions (Ha	rd = 1	0, Sc	oft = 15)		
Average Daily Traffic (Adt):	26,935 vehicle	S			A	utos:	15		
Peak Hour Percentage:	10%		Ме	edium Trucks	(2 Ax	des):	15		
Peak Hour Volume:	2,694 vehicles	;	Heavy Trucks (3+ Axles): 15						
Vehicle Speed:	45 mph		Vehicle Mix						
Near/Far Lane Distance:	76 feet			nicleType	E	Day	Evening	Night	Daily
Site Data				Auto	s: 6	6.2%	13.5%	20.3%	89.28%
Barrier Height:	0.0 feet		М	edium Truck	s: 7	7.1%	5.3%	17.6%	4.49%
Barrier Type (0-Wall, 1-Berm):	0.0			Heavy Truck	s: 9	6.0%	0.4%	3.6%	6.23%
Centerline Dist. to Barrier:	60.0 feet		Noise S	ource Eleva	tions	(in fa	not)		
Centerline Dist. to Observer:	60.0 feet		Autos: 0.000						
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		Hea	vy Trucks.	0.00	J4	Grade Adj	ustinoni.	. 0.0
Road Elevation:	0.0 feet		Lane Eq	uivalent Dis	stance	e (in f	feet)		
Road Grade:	0.0%			Autos:	46.70	01			
Left View:	-90.0 degree	s	Mediu	m Trucks:	46.5	11			
Right View:	90.0 degree	s	Hea	vy Trucks:	46.53	30			
FHWA Noise Model Calculation	าร								
VehicleType REMEL	Traffic Flow	Distance	Finite	Road F	resne	1	Barrier Atte	en Ber	m Atten
Autos: 68.46	1.97	0.0	34	-1.20	-4	4.69	0.0	000	0.000
Medium Trucks: 79.45	-11.01	0.0	37	-1.20	-4	4.88	0.0	000	0.000
Heavy Trucks: 84.25	-9.59	0.0	37	-1.20	-{	5.34	0.0	000	0.000
Unmitigated Noise Levels (with	hout Topo and I	barrier atte	nuation)						
VehicleType Leq Peak Ho		1	vening	Leq Nigl	ht		Ldn	CI	NEL

Unmitigated Noise Levels (without Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL					
Autos:	69.6	67.0	66.1	63.1	70.3	70.7					
Medium Trucks:	67.6	65.7	60.1	60.5	67.9	68.1					
Heavy Trucks:	73.8	72.9	55.5	59.8	71.2	71.3					
Vehicle Noise:	75.9	74.5	67.4	66.2	74.8	75.0					

Centerline Distance to Noise Contour (in feet)										
	70 dBA	65 dBA	60 dBA	55 dBA						
Ldn:	125	270	581	1,253						
CNEL:	129	279	600	1,293						

Scenario: Existing With Project Project Name: MCH (Dirt Haul Truck Trip

Road Name: Pine Av. Job Number: 10351

Road Segment: w/o Chino Corona Rd.

SITE SPECIFIC II	NPUT DATA		NOISE MODEL INPUTS				
Highway Data		S	ite Conditions (Hard = 10, Se	oft = 15)		
Average Daily Traffic (Adt):	30,959 vehicle	es		Autos:	15		
Peak Hour Percentage:	10%		Medium Tru	cks (2 Axles):	15		
Peak Hour Volume:	3,096 vehicles	3	Heavy Truck	ks (3+ Axles):	15		
Vehicle Speed:	45 mph	V	ehicle Mix				
Near/Far Lane Distance:	76 feet		VehicleType	Day	Evening	Night	Daily
Site Data				utos: 66.2%	_	20.3%	
Barrier Height:	0.0 feet		Medium Tru	ucks: 77.1%	5.3%	17.6%	4.52%
Barrier Type (0-Wall, 1-Berm):	0.0		Heavy Tru	ucks: 95.6%	0.5%	3.9%	5.66%
Centerline Dist. to Barrier:	60.0 feet	٨	loise Source Ele	evations (in f	eet)		
Centerline Dist. to Observer:	60.0 feet		Autos.	•			
Barrier Distance to Observer:	0.0 feet		Medium Trucks				
Observer Height (Above Pad):	5.0 feet		Heavy Trucks		Grade Adju	ıstment:	0.0
Pad Elevation:	0.0 feet						
Road Elevation:	0.0 feet	L	ane Equivalent	Distance (in	feet)		
Road Grade:	0.0%		Autos	46.701			
Left View:	-90.0 degree	es	Medium Trucks	46.511			
Right View:	90.0 degree	es	Heavy Trucks.	46.530			
FHWA Noise Model Calculation	ıs						
VehicleType REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atte	n Ber	m Atten
Autos: 68.46	2.60	0.34	-1.20	-4.69	0.00	00	0.000
Medium Trucks: 79.45	-10.38	0.37	-1.20	-4.88	0.00	00	0.000
Heavy Trucks: 84.25	-9.40	0.37	-1.20	-5.34	0.00	00	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL					
Autos.	70.2	67.6	66.7	63.7	70.9	71.3					
Medium Trucks:	68.2	66.3	60.7	61.2	68.6	68.7					
Heavy Trucks.	74.0	73.0	56.1	60.4	71.5	71.6					
Vehicle Noise.	76.3	74.8	68.0	66.8	75.3	75.5					

Centerline Distance to Noise Contour (in feet)										
	70 dBA	65 dBA	60 dBA	55 dBA						
Ldn:	135	291	627	1,350						
CNEL:	140	301	648	1,395						

Scenario: Existing With Project Project Name: MCH (Dirt Haul Truck Trip

Road Name: Pine Av. Job Number: 10351

Road Segment: w/o W. Preserve Loop

SITE	SPECIFIC IN	PUT DATA			NC	ISE MOD	EL INPUT	S	
Highway Data				Site Con	ditions (F	lard = 10, 3	Soft = 15)		
Average Daily	Traffic (Adt):	17,495 vehicle	S			Auto	s: 15		
Peak Hour	Percentage:	10%		Me	dium Truc	ks (2 Axles	<i>):</i> 15		
Peak H	Hour Volume:	1,750 vehicles		He	avy Truck	s (3+ Axles) <i>:</i> 15		
Ve	ehicle Speed:	45 mph		Vehicle	Miv				
Near/Far La	ne Distance:	76 feet			icleType	Day	Evening	Night	Daily
Site Data				V 011		tos: 66.2	J		87.79%
	uuiau Ilaiabt	0.0 foot		M	edium Tru			17.6%	4.42%
Barrier Type (0-W	rrier Height:	0.0 feet 0.0			Heavy Tru			2.8%	7.79%
, ,	ist. to Barrier:	60.0 feet							
Centerline Dist.		60.0 feet		Noise Source Elevations (in feet)					
Barrier Distance		0.0 feet			Autos:	0.000			
Observer Height		5.0 feet		Mediu	m Trucks:	2.297			
_	ad Elevation:	0.0 feet		Heavy Trucks: 8.004 Grade Adjustment: 0.0				: 0.0	
	ad Elevation: ad Elevation:	0.0 feet		Lane Eq	uivalent [Distance (ii	ı feet)		
	Road Grade:	0.0%			Autos:	46.701			
	Left View:	-90.0 degree	9	Mediu	m Trucks:	46.511			
	Right View:	90.0 degree			y Trucks:	46.530			
	g	00.0 d0g.00	•						
FHWA Noise Mod	lel Calculations	•							
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier At	ten Ber	m Atten
Autos:	68.46	0.03	0.	34	-1.20	<i>-4.6</i> 9	9 0.	000	0.000
Medium Trucks:	79.45	-12.96	0.	37	-1.20	-4.88	3 0.	000	0.000
Heavy Trucks:	84.25	-10.49	0.	37	-1.20	-5.34	<i>1</i> 0.	000	0.000
Unmitigated Nois	e Levels (witho	out Topo and b	barrier atte	nuation)					
VehicleType	Leq Peak Hou	Leq Day	Leq	Evening	Leq N	ight	Ldn	CI	VEL
Autos:	67.	6 6	5.0	64.2		61.2	68.	3	68.8
Medium Trucks:	65.	7 6	3.7	58.1		58.6	66.	0	66.2

		Ldn:	98	212	457	984				
			70 dBA	65 dBA	60 dBA	55 dBA				
Centerline Distance to Noise Contour (in feet)										
Vehicle Noise:	74.6	73.3	65.4	64.2	64.2 73.2					
Heavy Trucks:	72.9	72.0	53.5	57.8	70.1	70.1				
Mediam macks.	05.7	03.7	30.1	30.0	00.0	00.2				

101

218

470

1,013

CNEL:

Scenario: Existing With Project Project Name: MCH (Dirt Haul Truck Trip

Road Name: Pine Av. Job Number: 10351

Road Segment: w/o E. Preserve Loop

SITE	SPECIFIC IN	PUT DATA					NOISE	MODE	L INPUT	S	
Highway Data				S	ite Cor	nditions	(Hard	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	27,714 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10%			Me	edium Ti	rucks (2	Axles):	15		
Peak H	lour Volume:	2,771 vehicles	S		Heavy Trucks (3+ Axles): 15						
Ve	ehicle Speed:	45 mph		V	Vehicle Mix						
Near/Far La	ne Distance:	76 feet				icleTyp	е	Day	Evening	Night	Daily
Site Data							Autos:	66.2%	13.5%	20.3%	89.86%
Ba	rrier Height:	0.0 feet			М	edium 7	rucks:	77.1%	5.3%	17.6%	4.52%
Barrier Type (0-W		0.0			ı	Heavy 7	rucks:	95.5%	0.5%	4.0%	5.62%
Centerline Di	st. to Barrier:	60.0 feet		۸	loise S	ource F	levatio	ns (in fe	eet)		
Centerline Dist. to Observer: 60.0 feet					Auto		0.000	,			
Barrier Distance to Observer:		0.0 feet			Mediu	m Truck		2.297			
Observer Height	Observer Height (Above Pad):					ry Truck	_	3.004	Grade Ad	iustment	. 00
P	ad Elevation:	0.0 feet			,					. 0.0	
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Dista	nce (in i	feet)		
	Road Grade:	0.0%				Auto	os: 46	5.701			
	Left View:	-90.0 degree	es		Medium Trucks: 46.511						
	Right View:	90.0 degree	es		Heav	y Truck	rs: 46	6.530			
FHWA Noise Mod	el Calculations	;									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	snel	Barrier Att	en Bei	m Atten
Autos:	68.46	2.13		0.34		-1.20		-4.69	0.0	000	0.000
Medium Trucks:	79.45	-10.86		0.37		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	84.25	-9.92		0.37		-1.20		-5.34	0.0	000	0.000
Unmitigated Nois	e Levels (witho	out Topo and	barri	er attenu	uation)						
VehicleType	Leq Peak Hou	r Leq Day	,	Leq Ev	ening	Leq	Night		Ldn	С	NEL

Unmitigated Nois	Unmitigated Noise Levels (without Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL						
Autos:	69.7	67.1	66.3	63.3	70.4	70.9						
Medium Trucks:	67.8	65.8	60.2	60.7	68.1	68.3						
Heavy Trucks:	73.5	72.5	55.6	59.9	71.0	71.1						
Vehicle Noise:	75.8	74.3	67.5	66.3	74.8	75.0						

Centerline Distance to Noise Contour (in feet)										
	70 dBA	65 dBA	60 dBA	55 dBA						
Ldn:	125	270	581	1,252						
CNEL:	129	279	601	1,294						

Scenario: Existing With Project Project Name: MCH (Dirt Haul Truck Trip

Road Name: Pine Av. Job Number: 10351

Road Segment: w/o Hellman Av.

SITE	SPECIFIC IN	PUT DATA					NOISE	MODE	L INPUT	S	
Highway Data				S	ite Cor	nditions	(Hard	= 10, Sc	oft = 15)		
Average Daily	Traffic (Adt):	27,563 vehicle	es					Autos:	15		
Peak Hour	Percentage:	10%			Me	dium Ti	rucks (2	Axles):	15		
Peak H	lour Volume:	2,756 vehicles	S		Heavy Trucks (3+ Axles): 15						
Ve	hicle Speed:	45 mph		V	Vehicle Mix						
Near/Far La	ne Distance:	Distance: 76 feet				icleTyp	е	Day	Evening	Night	Daily
Site Data							Autos:	66.2%	13.5%	20.3%	89.84%
Ba	rrier Height:	0.0 feet			М	edium 7	rucks:	77.1%	5.3%	17.6%	4.52%
Barrier Type (0-W		0.0			ı	Heavy 7	rucks:	95.6%	0.5%	4.0%	5.64%
Centerline Di	st. to Barrier:	60.0 feet		۸	loise S	ource F	levatio	ns (in fe	eet)		
Centerline Dist.	to Observer:	60.0 feet				Auto		0.000	<i>-</i>		
Barrier Distance to Observer:		0.0 feet			Mediu	m Truck		2.297			
Observer Height	Observer Height (Above Pad):					ry Truck	_	3.004	Grade Ad	iustment	. 00
P	ad Elevation:	0.0 feet									
Ro	ad Elevation:	0.0 feet		L	ane Eq	uivalen	t Dista	nce (in i	feet)		
	Road Grade:	0.0%				Auto	os: 46	6.701			
	Left View:	-90.0 degree	es		Medium Trucks: 46.511						
	Right View:	90.0 degree	es		Heav	/y Truck	rs: 46	6.530			
FHWA Noise Mod	el Calculations	;									
VehicleType	REMEL	Traffic Flow	Dis	stance	Finite	Road	Fres	snel	Barrier Att	en Bei	m Atten
Autos:	68.46	2.10		0.34		-1.20		-4.69	0.0	000	0.000
Medium Trucks:	79.45	-10.88		0.37		-1.20		-4.88	0.0	000	0.000
Heavy Trucks:	84.25	-9.92		0.37		-1.20		-5.34	0.0	000	0.000
Unmitigated Nois	e Levels (witho	out Topo and	barrie	er attenu	uation)						
VehicleType	Leq Peak Hou	r Leq Day	′	Leq Ev	ening	Leq	Night		Ldn	С	NEL

Unmitigated Nois	Unmitigated Noise Levels (without Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL						
Autos:	69.7	67.1	66.2	63.2	70.4	70.8						
Medium Trucks:	67.7	65.8	60.2	60.6	68.1	68.2						
Heavy Trucks:	73.5	72.5	55.6	59.9	71.0	71.0						
Vehicle Noise:	75.8	74.3	67.5	66.3	74.8	75.0						

Centerline Distance to Noise Contour (in feet)										
	70 dBA	65 dBA	60 dBA	55 dBA						
Ldn:	125	269	580	1,249						
CNEL:	129	278	599	1,290						

Scenario: Existing With Project Project Name: MCH (Dirt Haul Truck Trip

Road Name: Chino Corona Rd. Job Number: 10351

Road Segment: s/o Pine Av.

SITE SPECIF	IC INPUT	DATA			NOIS	E MODE	L INPUT	S			
Highway Data				Site Condi	tions (Hai	d = 10, So	oft = 15)				
Average Daily Traffic (A	dt): 4,25	6 vehicles				Autos:	15				
Peak Hour Percenta	<i>ge:</i> 10	%		Medium Trucks (2 Axles): 15							
Peak Hour Volui	<i>ne:</i> 426	vehicles		Heav	y Trucks (3+ Axles):	15				
Vehicle Spe	ed: 45	mph		Vehicle Mix	,						
Near/Far Lane Distar	nce: 12	feet		VehicleType Day Evening Nig.					Daily		
Site Data					Autos			20.3%	67.33%		
Barrier Heig	<i>iht:</i> 0.	0 feet		Medi	um Trucks	s: 77.1%	5.3%	17.6%	3.39%		
Barrier Type (0-Wall, 1-Bei	-	-		Hea	avy Trucks	s: 99.4%	0.1%	0.6%	29.28%		
Centerline Dist. to Bar	,	0 feet		Noise Soul	ree Elever	ions (in f	201				
Centerline Dist. to Obser	ver: 30.	0 feet		Noise Soul			(U)				
Barrier Distance to Obser	<i>ver:</i> 0.	0 feet		Ma divers	Autos:	0.000					
Observer Height (Above Pa	ad): 5.	0 feet		Medium		2.297	Grade Ad	iustmont			
Pad Elevat	ion: 0.	0 feet		Heavy	Trucks:	8.004	Grade Auj	justinent.	0.0		
Road Elevat	ion: 0.	0 feet		Lane Equiv	alent Dis	tance (in	feet)				
Road Gra	de: 0.	0%			Autos:	29.816					
Left Vi	ew: -90.	0 degrees		Medium	Trucks:	29.518					
Right Vi	ew: 90.	0 degrees		Heavy	Trucks:	29.547					
FHWA Noise Model Calcul	ations										
VehicleType REME	L Traff	ic Flow	Distance	Finite Ro	oad F	resnel	Barrier Att	en Ber	m Atten		
Autos: 6	88.46	-7.27	3.2	6 -	1.20	-4.49	0.0	000	0.000		
Medium Trucks:	9.45	-20.25	3.3	3 -	1.20	-4.86	0.0	000	0.000		
Heavy Trucks: 8	34.25	-10.88	3.3	2 -	1.20	-5.77	0.0	000	0.000		
Unmitigated Noise Levels	(without To	ppo and ba	arrier atter	nuation)							
VehicleType Leq Pea	k Hour	Leq Day	Leq E	vening	Leq Nigh	t	Ldn	CI	VEL		
Autos:	63.3	60).7	59.8		56.8	64.0)	64.4		

Unmitigated Nois	Unmitigated Noise Levels (without Topo and barrier attenuation)											
VehicleType	Leq Peak Hour	Leq Day Leq Evening Leq Night		Ldn	CNEL							
Autos:	63.3	60.7	59.8	56.8	64.0	64.4						
Medium Trucks:	61.3	59.4	53.8	54.2	61.7	61.8						
Heavy Trucks:	75.5	74.7	49.2	53.5	71.9	71.9						
Vehicle Noise:	75.9	75.0	61.1	59.9	72.9	73.0						

Centerline Distance to Noise Contour (in feet)										
	70 dBA	65 dBA	60 dBA	55 dBA						
Ldn:	47	101	217	468						
CNEL:	47	102	220	473						

Scenario: Existing With Project Project Name: MCH (Dirt Haul Truck Trip

Road Name: Chino Corona Rd. Job Number: 10351

Road Segment: e/o Cucamonga Av.

SITE	SPECIFIC IN	IPUT DATA				NO	ISE MODE	L INPUT	S	
Highway Data				Si	te Conditi	ions (H	ard = 10, So	oft = 15)		
Average Daily	Traffic (Adt):	4,256 vehicle	es				Autos:	15		
Peak Hour	Percentage:	10%			Mediui	m Trucl	ks (2 Axles):	15		
Peak H	lour Volume:	426 vehicles	S		Heavy	Trucks	s (3+ Axles):	15		
Ve	hicle Speed:	40 mph		Ve	hicle Mix	,				
Near/Far La	Near/Far Lane Distance: 12 feet				VehicleType Day		Evening	Night	Daily	
Site Data						Aut		13.5%	20.3%	67.33%
Ва	rrier Height:	0.0 feet			Mediu	ım Truc	ks: 77.1%	5.3%	17.6%	3.39%
Barrier Type (0-W	•	0.0			Hea	vy Truc	ks: 99.4%	0.1%	0.6%	29.28%
Centerline Di	st. to Barrier:	30.0 feet		No	oise Sour	ce Elev	ations (in fe	eet)		
Centerline Dist.	to Observer:	30.0 feet		Autos: 0.000						
Barrier Distance	to Observer:	0.0 feet			Medium T		2.297			
Observer Height (Above Pad): 5.0 feet		5.0 feet			Heavy T		8.004	Grade Ad	iustment.	. 0.0
P	ad Elevation:	0.0 feet			Ticavy T	rucks.	0.004	Orado riaj	401.770771	. 0.0
Ro	ad Elevation:	0.0 feet		La	ne Equiv	alent D	istance (in	feet)		
	Road Grade:	0.0%				Autos:	29.816			
	Left View:	-90.0 degree	es		Medium T	rucks:	29.518			
	Right View:	90.0 degree	es		Heavy T	rucks:	29.547			
FHWA Noise Mod	el Calculation	s								
VehicleType	REMEL	Traffic Flow	Distar	ice	Finite Ro	ad	Fresnel	Barrier Atte	en Ber	m Atten
Autos:	66.51	-6.75		3.26	-1	1.20	-4.49	0.0	000	0.000
Medium Trucks:	77.72	-19.74		3.33	-1	1.20	-4.86	0.0	000	0.000
Heavy Trucks:	82.99	-10.37		3.32	-1	1.20	-5.77	0.0	000	0.000
Unmitigated Nois	e Levels (with	out Topo and	barrier a	attenua	ation)					
VehicleType	Leq Peak Hou	ır Leq Day	' Le	eq Eve	ning	Leq Ni	ght	Ldn	CI	NEL
Autos:	61	.8	59.2		58.4		55.4	62.5	5	63.0
Medium Trucks:	60	.1	58.2		52.6		53.0	60.4	ļ	60.6

Centerline Distance to Noise Contour (in feet)										
	70 dBA	65 dBA	60 dBA	55 dBA						
Ldn:	41	88	190	410						
CNEL:	41	89	192	414						

48.4

59.7

71.2

72.0

71.2

72.1

52.8

58.7

73.9

74.2

74.7

75.1

Monday, May 20, 2019

Heavy Trucks:

Vehicle Noise:

Scenario: Existing With Project Project Name: MCH (Dirt Haul Truck Trip

Road Name: Hellman Av. Job Number: 10351

Road Segment: s/o Pine Av.

SITE	SPECIFIC IN	PUT DATA			NO	ISE MODE	L INPUT	S			
Highway Data			9	Site Con	ditions (H	ard = 10, S	oft = 15)				
Average Daily	Traffic (Adt): 1	14,168 vehicles	3			Autos:	15				
Peak Hou	r Percentage:	10%		Med	dium Truc <mark>l</mark>	ks (2 Axles):	15				
Peak I	Hour Volume:	1,417 vehicles		Hea	avy Trucks	(3+ Axles):	15				
Ve	ehicle Speed:	45 mph	1	Vehicle Mix							
Near/Far La	ane Distance:	51 feet		VehicleType Day Evening Nig					Daily		
Site Data					Aut			20.3%			
Ra	arrier Height:	0.0 feet		Me	edium Truc	ks: 77.1%	5.3%	17.6%	4.35%		
Barrier Type (0-V	•	0.0		F	leavy Truc	ks: 97.4%	0.3%	2.3%	9.17%		
• • • •	ist. to Barrier:	49.0 feet	_								
Centerline Dist.		49.0 feet		voise Sc		ations (in f	eet)				
Barrier Distance		0.0 feet			Autos:	0.000					
Observer Height		5.0 feet		Mediur	n Trucks:	2.297					
•	Pad Elevation:	0.0 feet		Heav	y Trucks:	8.004	Grade Ad	justment	: 0.0		
			1	ane Fai	uivalent D	istance (in	foot)				
RO	pad Elevation:	0.0 feet		ane Ly		_	icci)				
	Road Grade:	0.0%			Autos:	42.140					
	Left View:	-90.0 degrees		Medium Trucks: 41.929							
	Right View:	90.0 degrees	3	Heav	y Trucks:	41.950					
FHWA Noise Mod	del Calculations										
VehicleType	REMEL	Traffic Flow	Distance	Finite	Road	Fresnel	Barrier Att	en Ber	m Atten		
Autos:	68.46	-0.96	1.01	1	-1.20	-4.64	0.0	000	0.000		
Medium Trucks:	79.45	-13.94	1.04		-1.20	-4.87	0.0	000	0.000		
Heavy Trucks:	84.25	-10.70	1.04	1.04 -1.20 <i>-5.44</i> 0.000 0.							
Unmitigated Nois	se Levels (witho	ut Topo and b	arrier atten	uation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Ev	rening	Leq Ni	ght	Ldn	Ci	NEL		
A (07.		4	00.0		00.0	00.0		00.5		

Unmitigated Noise Levels (without Topo and barrier attenuation)									
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL			
Autos:	67.3	64.7	63.8	60.8	68.0	68.5			
Medium Trucks:	65.4	63.4	57.8	58.3	65.7	65.9			
Heavy Trucks:	73.4	72.5	53.2	57.5	70.4	70.4			
Vehicle Noise:	74.9	73.6	65.1	63.9	73.2	73.4			

Centerline Distance to Noise Contour (in feet)								
	70 dBA	65 dBA	60 dBA	55 dBA				
Ldn:	81	173	374	805				
CNEL:	83	178	384	827				

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APPENDIX 9.1:

OPERATIONAL NOISE LEVEL CALCULATIONS





Observer Location: R1 Project Name: MCH

Source: Air Conditioning Unit (Roof-Top) Job Number: 10351 Condition: Operational Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 3,808.0 feet Barrier Height: 0.0 feet Noise Source Height: 5.0 feet Noise Distance to Barrier: 3,808.0 feet Observer Height: 5.0 feet Barrier Distance to Observer: 0.0 feet

Barrier Type (0-Wall, 1-Berm): 0 Observer Elevation: 0.0 feet

Drop Off Coefficient: 20.0 Noise Source Elevation: 30.0 feet

20 = 6 dBA per doubling of distance Barrier Elevation: 0.0 feet 15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS											
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax				
Reference (Sample)	5.0	0.0	74.4	76.1	77.4	77.7	78.2				
Distance Attenuation	3,808.0	-57.6	-57.6	-57.6	-57.6	-57.6	-57.6				
Shielding (Barrier Attenuation)	3,808.0	0.0	0.0	0.0	0.0	0.0	0.0				
Raw (Distance + Barrier)		-57.6	16.8	18.5	19.8	20.1	20.6				
39 Minute Hourly Adjustmen	nt	-59.5	14.9	16.6	17.9	18.2	18.7				

STATIONARY SOURCE NOISE PREDICTION MODEL 6/17/2019

6/17/2019

Project Name: MCH Observer Location: R1 Source: Truck Unloading/Docking Activity Job Number: 10351

Condition: Operational Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 3.995.0 feet Barrier Height: 0.0 feet Noise Source Height: 8.0 feet Noise Distance to Barrier: 3,995.0 feet Observer Height: 5.0 feet Barrier Distance to Observer: 0.0 feet

Barrier Type (0-Wall, 1-Berm): 0 Observer Elevation: 0.0 feet

Drop Off Coefficient: 20.0 Noise Source Elevation: 0.0 feet

NOISE MODEL PROJECTIONS											
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax				
Reference (Sample)	30.0	0.0	64.2	67.2	71.8	75.6	80.0				
Distance Attenuation	3,995.0	-42.5	-42.5	-42.5	-42.5	-42.5	-42.5				
Shielding (Barrier Attenuation)	3,995.0	0.0	0.0	0.0	0.0	0.0	0.0				
Raw (Distance + Barrier)		-42.5	21.7	24.7	29.3	33.1	37.5				
60 Minute Hourly Adjustmen	nt	-42.5	21.7	24.7	29.3	33.1	37.5				

Observer Location: R1 Project Name: MCH

Source: Parking Lot Vehicle Movements Job Number: 10351 Condition: Operational Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 3,685.0 feet Barrier Height: 0.0 feet Noise Source Height: 5.0 feet Noise Distance to Barrier: 3,685.0 feet Observer Height: 5.0 feet Barrier Distance to Observer: 0.0 feet

Barrier Type (0-Wall, 1-Berm): 0 Observer Elevation: 0.0 feet

Drop Off Coefficient: 20.0 Noise Source Elevation: 0.0 feet

20 = 6 dBA per doubling of distance Barrier Elevation: 0.0 feet 15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS											
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax				
Reference (Sample)	10.0	0.0	49.0	50.0	55.0	61.0	71.9				
Distance Attenuation	3,685.0	-51.3	-51.3	-51.3	-51.3	-51.3	-51.3				
Shielding (Barrier Attenuation)	3,685.0	0.0	0.0	0.0	0.0	0.0	0.0				
Raw (Distance + Barrier)		-51.3	-2.3	-1.3	3.7	9.7	20.6				
60 Minute Hourly Adjustmen	nt	-51.3	-2.3	-1.3	3.7	9.7	20.6				

STATIONARY SOURCE NOISE PREDICTION MODEL 6/17/2019

6/17/2019

Project Name: MCH Observer Location: R2 Source: Air Conditioning Unit (Roof-Top) Job Number: 10351

Condition: Operational Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 3.132.0 feet Barrier Height: 0.0 feet Noise Source Height: 5.0 feet Noise Distance to Barrier: 3,132.0 feet Observer Height: 5.0 feet Barrier Distance to Observer: 0.0 feet

Barrier Type (0-Wall, 1-Berm): 0 Observer Elevation: 0.0 feet

Drop Off Coefficient: 20.0 Noise Source Elevation: 30.0 feet

NOISE MODEL PROJECTIONS											
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax				
Reference (Sample)	5.0	0.0	74.4	76.1	77.4	77.7	78.2				
Distance Attenuation	3,132.0	-55.9	-55.9	-55.9	-55.9	-55.9	-55.9				
Shielding (Barrier Attenuation)	3,132.0	0.0	0.0	0.0	0.0	0.0	0.0				
Raw (Distance + Barrier)		-55.9	18.5	20.2	21.5	21.8	22.3				
39 Minute Hourly Adjustmen	nt	-57.8	16.6	18.3	19.6	19.9	20.4				

Observer Location: R2 Project Name: MCH

Source: Truck Unloading/Docking Activity Job Number: 10351 Condition: Operational Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 3,355.0 feet Barrier Height: 0.0 feet Noise Source Height: 8.0 feet Noise Distance to Barrier: 3,355.0 feet Observer Height: 5.0 feet Barrier Distance to Observer: 0.0 feet

Barrier Type (0-Wall, 1-Berm): 0 Observer Elevation: 0.0 feet

Drop Off Coefficient: 20.0 Noise Source Elevation: 0.0 feet

20 = 6 dBA per doubling of distance Barrier Elevation: 0.0 feet 15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS											
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax				
Reference (Sample)	30.0	0.0	64.2	67.2	71.8	75.6	80.0				
Distance Attenuation	3,355.0	-41.0	-41.0	-41.0	-41.0	-41.0	-41.0				
Shielding (Barrier Attenuation)	3,355.0	0.0	0.0	0.0	0.0	0.0	0.0				
Raw (Distance + Barrier)		-41.0	23.2	26.2	30.8	34.6	39.0				
60 Minute Hourly Adjustmen	nt	-41.0	23.2	26.2	30.8	34.6	39.0				

STATIONARY SOURCE NOISE PREDICTION MODEL 6/17/2019

6/17/2019

Project Name: MCH Observer Location: R2 Source: Parking Lot Vehicle Movements Job Number: 10351

Condition: Operational Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 2.983.0 feet Barrier Height: 0.0 feet Noise Source Height: 5.0 feet Noise Distance to Barrier: 2,983.0 feet Observer Height: 5.0 feet Barrier Distance to Observer: 0.0 feet

Barrier Type (0-Wall, 1-Berm): 0 Observer Elevation: 0.0 feet

Drop Off Coefficient: 20.0 Noise Source Elevation: 0.0 feet

NOISE MODEL PROJECTIONS											
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax				
Reference (Sample)	10.0	0.0	49.0	50.0	55.0	61.0	71.9				
Distance Attenuation	2,983.0	-49.5	-49.5	-49.5	-49.5	-49.5	-49.5				
Shielding (Barrier Attenuation)	2,983.0	0.0	0.0	0.0	0.0	0.0	0.0				
Raw (Distance + Barrier)		-49.5	-0.5	0.5	5.5	11.5	22.4				
60 Minute Hourly Adjustmen	nt	-49.5	-0.5	0.5	5.5	11.5	22.4				

Observer Location:R3Project Name:MCH

Source: Air Conditioning Unit (Roof-Top)

Job Number: 10351

Condition: Operational

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 4,943.0 feet
Noise Distance to Barrier: 4,943.0 feet
Noise Distance to Barrier: 4,943.0 feet
Noise Source Height: 5.0 feet
Observer Height: 5.0 feet

Observer Elevation: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0

Noise Source Elevation: 30.0 feet Drop Off Coefficient: 20.0

Barrier Elevation: 0.0 feet 20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS											
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax				
Reference (Sample)	5.0	0.0	74.4	76.1	77.4	77.7	78.2				
Distance Attenuation	4,943.0	-59.9	-59.9	-59.9	-59.9	-59.9	-59.9				
Shielding (Barrier Attenuation)	4,943.0	0.0	0.0	0.0	0.0	0.0	0.0				
Raw (Distance + Barrier)		-59.9	14.5	16.2	17.5	17.8	18.3				
39 Minute Hourly Adjustmen	nt	-61.8	12.6	14.3	15.6	15.9	16.4				

STATIONARY SOURCE NOISE PREDICTION MODEL 6/17/2019

6/17/2019

Observer Location: R3 Project Name: MCH
Source: Truck Unloading/Docking Activity Job Number: 10351

Condition: Operational Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 5,030.0 feet
Noise Distance to Barrier: 5,030.0 feet

Barrier Distance to Observer: 0.0 feet

Noise Distance to Observer: 0.0 feet

Observer Height: 0.0 feet

Observer Height: 5.0 feet

Observer Elevation: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0

Noise Source Elevation: 0.0 feet Drop Off Coefficient: 20.0

Barrier Elevation: 0.0 feet 20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS											
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax				
Reference (Sample)	30.0	0.0	64.2	67.2	71.8	75.6	80.0				
Distance Attenuation	5,030.0	-44.5	-44.5	-44.5	-44.5	-44.5	-44.5				
Shielding (Barrier Attenuation)	5,030.0	0.0	0.0	0.0	0.0	0.0	0.0				
Raw (Distance + Barrier)		-44.5	19.7	22.7	27.3	31.1	35.5				
60 Minute Hourly Adjustmen	nt	-44.5	19.7	22.7	27.3	31.1	35.5				

Observer Location: R3 Project Name: MCH

Source: Parking Lot Vehicle Movements Job Number: 10351 Condition: Operational Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 6,330.0 feet Barrier Height: 0.0 feet Noise Source Height: Noise Distance to Barrier: 6,330.0 feet 5.0 feet Observer Height: 5.0 feet Barrier Distance to Observer: 0.0 feet

Barrier Type (0-Wall, 1-Berm): 0 Observer Elevation: 0.0 feet

Drop Off Coefficient: 20.0 Noise Source Elevation: 0.0 feet

20 = 6 dBA per doubling of distance Barrier Elevation: 0.0 feet 15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS											
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax				
Reference (Sample)	10.0	0.0	49.0	50.0	55.0	61.0	71.9				
Distance Attenuation	6,330.0	-56.0	-56.0	-56.0	-56.0	-56.0	-56.0				
Shielding (Barrier Attenuation)	6,330.0	0.0	0.0	0.0	0.0	0.0	0.0				
Raw (Distance + Barrier)		-56.0	-7.0	-6.0	-1.0	5.0	15.9				
60 Minute Hourly Adjustmen	nt	-56.0	-7.0	-6.0	-1.0	5.0	15.9				

STATIONARY SOURCE NOISE PREDICTION MODEL 6/17/2019

6/17/2019

Project Name: MCH Observer Location: R15 Source: Air Conditioning Unit (Roof-Top) Job Number: 10351

Condition: Operational Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 860.0 feet Barrier Height: 0.0 feet Noise Source Height: 5.0 feet Noise Distance to Barrier: 860.0 feet Observer Height: 5.0 feet Barrier Distance to Observer: 0.0 feet

Barrier Type (0-Wall, 1-Berm): 0 Observer Elevation: 0.0 feet

Drop Off Coefficient: 20.0 Noise Source Elevation: 30.0 feet

NOISE MODEL PROJECTIONS											
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax				
Reference (Sample)	5.0	0.0	74.4	76.1	77.4	77.7	78.2				
Distance Attenuation	860.0	-44.7	-44.7	-44.7	-44.7	-44.7	-44.7				
Shielding (Barrier Attenuation)	860.0	0.0	0.0	0.0	0.0	0.0	0.0				
Raw (Distance + Barrier)		-44.7	29.7	31.4	32.7	33.0	33.5				
39 Minute Hourly Adjustmen	nt	-46.6	27.8	29.5	30.8	31.1	31.6				

Observer Location: R15 Project Name: MCH

Source: Truck Unloading/Docking Activity Job Number: 10351 Condition: Operational Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 887.0 feet Barrier Height: 0.0 feet Noise Source Height: 8.0 feet Noise Distance to Barrier: 887.0 feet Observer Height: 5.0 feet Barrier Distance to Observer: 0.0 feet

Barrier Type (0-Wall, 1-Berm): 0 Observer Elevation: 0.0 feet

Drop Off Coefficient: 20.0 Noise Source Elevation: 0.0 feet

20 = 6 dBA per doubling of distance Barrier Elevation: 0.0 feet 15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS											
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax				
Reference (Sample)	30.0	0.0	64.2	67.2	71.8	75.6	80.0				
Distance Attenuation	887.0	-29.4	-29.4	-29.4	-29.4	-29.4	-29.4				
Shielding (Barrier Attenuation)	887.0	0.0	0.0	0.0	0.0	0.0	0.0				
Raw (Distance + Barrier)		-29.4	34.8	37.8	42.4	46.2	50.6				
60 Minute Hourly Adjustmen	nt	-29.4	34.8	37.8	42.4	46.2	50.6				

STATIONARY SOURCE NOISE PREDICTION MODEL 6/17/2019

6/17/2019

Project Name: MCH Observer Location: R15 Source: Parking Lot Vehicle Movements Job Number: 10351

Condition: Operational Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 715.0 feet Barrier Height: 0.0 feet Noise Source Height: 5.0 feet Noise Distance to Barrier: 715.0 feet Observer Height: 5.0 feet Barrier Distance to Observer: 0.0 feet

Barrier Type (0-Wall, 1-Berm): 0 Observer Elevation: 0.0 feet

Drop Off Coefficient: 20.0 Noise Source Elevation: 0.0 feet

NOISE MODEL PROJECTIONS											
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax				
Reference (Sample)	10.0	0.0	49.0	50.0	55.0	61.0	71.9				
Distance Attenuation	715.0	-37.1	-37.1	-37.1	-37.1	-37.1	-37.1				
Shielding (Barrier Attenuation)	715.0	0.0	0.0	0.0	0.0	0.0	0.0				
Raw (Distance + Barrier)		-37.1	11.9	12.9	17.9	23.9	34.8				
60 Minute Hourly Adjustmen	nt	-37.1	11.9	12.9	17.9	23.9	34.8				

Observer Location:R16Project Name:MCH

Source: Air Conditioning Unit (Roof-Top)

Job Number: 10351

Condition: Operational

Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 871.0 feet Barrier Height: 0.0 feet

Noise Distance to Barrier: 871.0 feet Noise Source Height: 5.0 feet

Barrier Distance to Observer: 0.0 feet Observer Height: 5.0 feet

Observer Elevation: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0

Noise Source Elevation: 30.0 feet Drop Off Coefficient: 20.0

Barrier Elevation: 0.0 feet 20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	5.0	0.0	74.4	76.1	77.4	77.7	78.2
Distance Attenuation	871.0	-44.8	-44.8	-44.8	-44.8	-44.8	-44.8
Shielding (Barrier Attenuation)	871.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		-44.8	29.6	31.3	32.6	32.9	33.4
39 Minute Hourly Adjustmen	nt	-46.7	27.7	29.4	30.7	31.0	31.5

STATIONARY SOURCE NOISE PREDICTION MODEL 6/17/2019

6/17/2019

Observer Location:R16Project Name:MCHSource:Truck Unloading/Docking ActivityJob Number:10351

Condition: Operational Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 896.0 feet Barrier Height: Noise Distance to Barrier: 896.0 feet Noise Source Height: 8.0 feet Barrier Distance to Observer: 0.0 feet Observer Height: 5.0 feet

Observer Elevation: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0

Noise Source Elevation: 0.0 feet Drop Off Coefficient: 20.0

Barrier Elevation: 0.0 feet 20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS								
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax	
Reference (Sample)	30.0	0.0	64.2	67.2	71.8	75.6	80.0	
Distance Attenuation	896.0	-29.5	-29.5	-29.5	-29.5	-29.5	-29.5	
Shielding (Barrier Attenuation)	896.0	0.0	0.0	0.0	0.0	0.0	0.0	
Raw (Distance + Barrier)		-29.5	34.7	37.7	42.3	46.1	50.5	
60 Minute Hourly Adjustmen	nt	-29.5	34.7	37.7	42.3	46.1	50.5	

6/17/2019

Observer Location:R16Project Name:MCH

Source: Parking Lot Vehicle Movements Job Number: 10351
Condition: Operational Analyst: A. Wolfe

NOISE MODEL INPUTS

Noise Distance to Observer 2,213.0 feet
Noise Distance to Barrier: 2,213.0 feet
Noise Distance to Barrier: 2,213.0 feet
Noise Source Height: 5.0 feet
Observer Height: 5.0 feet

Observer Elevation: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0

Noise Source Elevation: 0.0 feet Drop Off Coefficient: 20.0

Barrier Elevation: 0.0 feet 20 = 6 dBA per doubling of distance 15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS							
Noise Level	Distance (feet)	Leq	L50	L25	L8	L2	Lmax
Reference (Sample)	10.0	0.0	49.0	50.0	55.0	61.0	71.9
Distance Attenuation	2,213.0	-46.9	-46.9	-46.9	-46.9	-46.9	-46.9
Shielding (Barrier Attenuation)	2,213.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		-46.9	2.1	3.1	8.1	14.1	25.0
60 Minute Hourly Adjustmen	nt	-46.9	2.1	3.1	8.1	14.1	25.0



APPENDIX 3.1:

CITY OF CHINO MUNICIPAL CODE





APPENDIX 5.1:

STUDY AREA PHOTOS



APPENDIX 5.2:

NOISE LEVEL MEASUREMENT WORKSHEETS





APPENDIX 7.1:

OFF-SITE TRAFFIC NOISE LEVEL CONTOURS





APPENDIX 9.1:

OPERATIONAL NOISE LEVEL CALCULATIONS



