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# **Appendix F**

## Noise Attachments



# FIELD NOISE MEASUREMENT DATA

MISSION BLVD WHSE

PROJECT MONTCLAIR NEW CROSSINGS PROJECT # 13716  
 SITE ID \_\_\_\_\_  
 SITE ADDRESS \_\_\_\_\_ OBSERVER(S) PETE VITAN  
 START DATE 9/22/21 END DATE 9/22/21  
 START TIME \_\_\_\_\_ END TIME \_\_\_\_\_

METEOROLOGICAL CONDITIONS  
 TEMP 92 F HUMIDITY 23 % R.H. WIND CALM LIGHT MODERATE  
 WINDSPD 5 MPH DIR. N NE S SE S SW W NW VARIABLE STEADY GUSTY  
 SKY SUNNY CLEAR OVRCAST PRTLY CLDY FOG RAIN

ACOUSTIC MEASUREMENTS  
 MEAS. INSTRUMENT PICCOLO SLM-P3 TYPE 1 2 SERIAL # 140317004  
 CALIBRATOR ISSWA CA 114 SERIAL # 490151  
 CALIBRATION CHECK \_\_\_\_\_ PRE-TEST \_\_\_\_\_ dBA SPL POST-TEST \_\_\_\_\_ dBA SPL WINDSCREEN YES

SETTINGS A-WTD SLOW FAST FRONTAL RANDOM ANSI OTHER: \_\_\_\_\_

REC. #	BEGIN	END	Leq	Lmax	Lmin	L90	L50	L10	OTHER (SPECIFY METRIC)
<u>71-86</u>	<u>11:32</u>	<u>11:53</u>							

(ST1)

COMMENTS  
READING TAKEN ON SOUTH SIDE OF MISSION BLVD, EAST OF MONTE VISTA AVE,  
AT NORTHEAST CORNER OF RESIDENCE AT 4998 MISSION BLVD; PRIMARY NOISE  
SOURCE IS TRAFFIC ON MISSION BLVD;

SOURCE INFO AND TRAFFIC COUNTS  
 PRIMARY NOISE SOURCE TRAFFIC AIRCRAFT RAIL INDUSTRIAL OTHER: \_\_\_\_\_  
 ROADWAY TYPE: ASPHALT DIST. TO RDWY C/L OR EOP: APX 60' TO EDGE OF C/L MEDIAN ON MISSION BL  
 TRAFFIC COUNT DURATION: 15 MIN SPEED \_\_\_\_\_ MIN SPEED \_\_\_\_\_  

COUNT 1 (OR RDWY 1)	DIRECTION		SPEED		IF COUNTING BOTH DIRECTIONS AS ONE, CHECK HERE	COUNT 2 (OR RDWY 2)	DIRECTION		SPEED	
	NB/EB	SB/WB	NB/EB	SB/WB			NB/EB	SB/WB		
	AUTOS	<u>256</u>								
	MED TRKS	<u>11</u>								
	HVY TRKS	<u>7</u>								
	BUSES	<u>1</u>								
	MOTRCLS	<u>2</u>								

SPEEDS ESTIMATED BY: RADAR / DRIVING THE PACE  
 POSTED SPEED LIMIT SIGNS SAY: \_\_\_\_\_

OTHER NOISE SOURCES (BACKGROUND): DIST. AIRCRAFT RUSTLING LEAVES DIST. BARKING DOGS BIRDS DIST. INDUSTRIAL  
 DIST. KIDS PLAYING DIST. CONVRSTNS / YELLING DIST. TRAFFIC (LIST RDWYS BELOW) DISTD GARDENERS/LANDSCAPING NOISE  
 OTHER: \_\_\_\_\_

DESCRIPTION / SKETCH  
 TERRAIN HARD SOFT MIXED FLAT OTHER: \_\_\_\_\_  
 PHOTOS 2236; 2237; 2238; 2239;  
 OTHER COMMENTS / SKETCH \_\_\_\_\_




# FIELD NOISE MEASUREMENT DATA

MISSION BL WHSE

PROJECT <u>MONTECLAIR NEW S.A. SEGMENT</u>	PROJECT # <u>13716</u>
SITE ID _____	OBSERVER(S) <u>PEPE VITAR</u>
SITE ADDRESS _____	
START DATE <u>9/22/21</u>	END DATE <u>9/22/21</u>
START TIME _____	END TIME _____

<b>METEOROLOGICAL CONDITIONS</b>			
TEMP <u>96</u> F	HUMIDITY <u>20</u> % R.H.	WIND CALM <u>(LIGHT)</u> MODERATE	
WINDSPD <u>8</u> MPH	DIR. N NE S SE S SW W NW	VARIABLE STEADY GUSTY	
SKY <u>(SUNNY)</u> <u>(CLEAR)</u>	OVRCAST PRTLY CLDY FOG	RAIN	
<b>ACOUSTIC MEASUREMENTS</b>			
MEAS. INSTRUMENT <u>PICCULO SLM P-3</u>	TYPE <u>1</u> <u>2</u>	SERIAL # <u>140317004</u>	
CALIBRATOR <u>BSWA CA 114</u>		SERIAL # <u>49151</u>	
CALIBRATION CHECK _____	PRE-TEST _____ dBA SPL	POST-TEST _____ dBA SPL	WINDSCRN <u>YES</u>
<b>SETTINGS</b>			
<u>(A-WTD)</u> <u>(SLOW)</u>	FAST	FRONTAL	RANDOM ANSI OTHER: _____
REC. # <u>87-102</u>	BEGIN <u>12:03</u>	END <u>12:18</u>	Leq Lmax Lmin L90 L50 L10 OTHER (SPECIFY METRIC)
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
<b>COMMENTS</b>			
<u>READILY TAKEN ON NORTH SIDE MISSION BLVD, EAST OF MONTE VISTA AVE;</u>			
<u>AT SOUTHWEST CORNER OF BUILDING AT 4918 MISSION BLVD; DOMINANT NOISE</u>			
<u>SOURCE IS TRAFFIC ON MISSION BLVD; SOME TRAFFIC NOISE FROM MONTE VISTA AVE</u>			
<u>TO THE WEST</u>			

<b>SOURCE INFO AND TRAFFIC COUNTS</b>													
PRIMARY NOISE SOURCE <u>(TRAFFIC)</u>				AIRCRAFT		RAIL		INDUSTRIAL		OTHER: <u>OK</u>			
ROADWAY TYPE: <u>150MPH</u>				DIST. TO RDWY C/L OR EOP: <u>APX 70' TO EDGE OF MEDIAN ON MISSION BL</u>									
TRAFFIC COUNT DURATION: <u>15</u> MIN				SPEED		MIN		SPEED					
COUNT 1 (OR RDWY 1)	DIRECTION	NB/EB	SB/WB	NB/EB	SB/WB	COUNT 2 (OR RDWY 2)	NB/EB	SB/WB	NB/EB	SB/WB			
	AUTOS	<u>283</u>											
	MED TRKS	<u>9</u>											
	HVY TRKS	<u>12</u>											
	BUSES	<u>0</u>											
	MOTRCLS	<u>1</u>											
SPEEDS ESTIMATED BY: <u>RADAR / DRIVING THE PACE</u>													
POSTED SPEED LIMIT SIGNS SAY:													
OTHER NOISE SOURCES (BACKGROUND): <u>DIST. AIRCRAFT RUSTLING LEAVES DIST. BARKING DOGS BIRDS DIST. INDUSTRIAL</u>													
<u>DIST. KIDS PLAYING DIST. CONVRSTNS / YELLING DIST. TRAFFIC (LIST RDWYS BELOW) DISTD GARDENERS/LANDSCAPING NOISE</u>													
OTHER: _____													

<b>DESCRIPTION / SKETCH</b>																																																					
TERRAIN <u>HARD SOFT (MIXED) FLAT OTHER:</u>																																																					
PHOTOS <u>2241; 2242; 2243; 2244; 2245; 2246; 2247</u>																																																					
OTHER COMMENTS / SKETCH																																																					
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 25%; height: 20px;"></td><td style="width: 25%; height: 20px;"></td><td style="width: 25%; height: 20px;"></td><td style="width: 25%; height: 20px;"></td></tr> <tr><td style="width: 25%; height: 20px;"></td><td style="width: 25%; height: 20px;"></td><td style="width: 25%; height: 20px;"></td><td style="width: 25%; height: 20px;"></td></tr> <tr><td style="width: 25%; height: 20px;"></td><td style="width: 25%; height: 20px;"></td><td style="width: 25%; height: 20px;"></td><td style="width: 25%; height: 20px;"></td></tr> <tr><td style="width: 25%; height: 20px;"></td><td style="width: 25%; height: 20px;"></td><td style="width: 25%; height: 20px;"></td><td style="width: 25%; height: 20px;"></td></tr> <tr><td style="width: 25%; height: 20px;"></td><td style="width: 25%; height: 20px;"></td><td style="width: 25%; height: 20px;"></td><td style="width: 25%; height: 20px;"></td></tr> <tr><td style="width: 25%; height: 20px;"></td><td style="width: 25%; height: 20px;"></td><td style="width: 25%; height: 20px;"></td><td style="width: 25%; height: 20px;"></td></tr> <tr><td style="width: 25%; height: 20px;"></td><td style="width: 25%; height: 20px;"></td><td style="width: 25%; height: 20px;"></td><td style="width: 25%; height: 20px;"></td></tr> <tr><td style="width: 25%; height: 20px;"></td><td style="width: 25%; height: 20px;"></td><td style="width: 25%; height: 20px;"></td><td style="width: 25%; height: 20px;"></td></tr> <tr><td style="width: 25%; height: 20px;"></td><td style="width: 25%; height: 20px;"></td><td style="width: 25%; height: 20px;"></td><td style="width: 25%; height: 20px;"></td></tr> <tr><td style="width: 25%; height: 20px;"></td><td style="width: 25%; height: 20px;"></td><td style="width: 25%; height: 20px;"></td><td style="width: 25%; height: 20px;"></td></tr> </table>																																																					



**FIELD NOISE MEASUREMENT DATA**

MISSION BL WHSE

PROJECT MISSION BL WHSE PROJECT # 13716  
 SITE ID \_\_\_\_\_  
 SITE ADDRESS \_\_\_\_\_ OBSERVER(S) PEPE VITIAK  
 START DATE 9/22/21 END DATE 9/22/21  
 START TIME \_\_\_\_\_ END TIME \_\_\_\_\_

**METEOROLOGICAL CONDITIONS**  
 TEMP 97 F HUMIDITY 20 % R.H. WIND CALM LIGHT MODERATE  
 WINDSPD 9 MPH DIR. N NE S SE S SW W NW VARIABLE STEADY GUSTY  
 SKY SUNNY CLEAR OVRCAST PRTLY CLDY FOG RAIN

**ACOUSTIC MEASUREMENTS**  
 MEAS. INSTRUMENT PICCOLLO SLM P-3 TYPE 1 2 SERIAL # 140317004  
 CALIBRATOR SSWA CA 114 SERIAL # 450151  
 CALIBRATION CHECK PRE-TEST dBA SPL POST-TEST \_\_\_\_\_ dBA SPL WINDSCRN YES

SETTINGS A-WTD SLOW FAST FRONTAL RANDOM ANSI OTHER: \_\_\_\_\_

REC. #	BEGIN	END	Leg	Lmax	Lmin	L90	L50	L10	OTHER (SPECIFY METRIC)
<u>103-118</u>	<u>12:27</u>	<u>12:42</u>							

COMMENTS  
READING TAKEN ON WEST SIDE OF MONTE VISTA AVE. SOUTH OF  
EARTHARDT W/OFF; PRIMARY NOISE SOURCE IS TRAFFIC ON MONTE VISTA AVE; SOME  
TRAFFIC NOISE FROM MISSION BLVD TO THE SOUTH

573

**SOURCE INFO AND TRAFFIC COUNTS**


PRIMARY NOISE SOURCE TRAFFIC AIRCRAFT RAIL INDUSTRIAL OTHER: \_\_\_\_\_  
 ROADWAY TYPE: ASPHALT DIST. TO RDWY C/L OR EOP: APX 32' FROM C/L ON MONTE VISTA AVE

COUNT 1 (OR RDWY 1)	DIRECTION		SPEED		IF COUNTING BOTH DIRECTIONS AS ONE, CHECK HERE	COUNT 2 (OR RDWY 2)	DIRECTION		SPEED	
	NB/EB	SB/WB	NB/EB	SB/WB			NB/EB	SB/WB	NB/EB	SB/WB
	AUTOS	<u>206</u>								
	MED TRKS	<u>6</u>								
	HVY TRKS	<u>1</u>								
	BUSES	<u>1</u>								
	MOTRCLS	<u>0</u>								

SPEEDS ESTIMATED BY: RADAR / DRIVING THE PACE  
 POSTED SPEED LIMIT SIGNS SAY: \_\_\_\_\_

OTHER NOISE SOURCES (BACKGROUND): DIST. AIRCRAFT RUSTLING LEAVES DIST. BARKING DOGS BIRDS DIST. INDUSTRIAL  
 DIST. KIDS PLAYING DIST. CONVRTNS/YELLING DIST. TRAFFIC (LIST RDWYS BELOW) DISTD GARDENERS/LANDSCAPING NOISE  
 OTHER: \_\_\_\_\_

**DESCRIPTION / SKETCH**  
 TERRAIN HARD SOFT MIXED FLAT OTHER: \_\_\_\_\_  
 PHOTOS 2249; 2250; 2251; 2252; 2253; 2254  
 OTHER COMMENTS / SKETCH \_\_\_\_\_

To User: bordered cells are inputs, unbordered cells have formulas

noise level limit for construction phase, per County = **80**  
 allowable hours over which Leq is to be averaged (example: 8 for County of San Diego, FTA guidance) = **8**

Construction Phase	Equipment	Total Equipment Qty	AUF % (from FHWA RCNM)	Reference Lmax @ 50 ft. from FHWA RCNM	Client Equipment Description, Data Source and/or Notes	Source to NSR Distance (ft.)	Distance-Adjusted Lmax	Allowable Operation Time (hours)	Allowable Operation Time (minutes)	Predicted 8-hour Leq
Site Preparation	Dozer	3	40	82		150	72.5	8	480	73
	Backhoe	4	40	78		150	68.5	8	480	70
Total for Site Preparation Phase:										<b>75.1</b>
Demolition	concrete saw	1	20	90		150	80.5	8	480	73
	excavator	3	40	81		150	71.5	8	480	72
	dozer	2	40	82		150	72.5	8	480	71
Total for Demolition Phase:										<b>77.3</b>
Grading	Excavator	1	40	81		150	71.5	8	480	67
	Dozer	1	40	82		150	72.5	8	480	68
	Backhoe	3	40	78		150	68.5	8	480	69
Total for Grading Phase:										<b>73.2</b>
Building Construction	Crane	1	16	81		150	71.5	7	420	63
	Man Lift	3	20	75		150	65.5	8	480	63
	Generator	1	50	72		150	62.5	8	480	59
	Backhoe	1	40	78		150	68.5	7	420	64
	Front End Loader	2	40	79		150	69.5	7	420	68
	Welder / Torch	3	40	73		150	63.5	8	480	64
Total for Building Construction Phase:										<b>72.1</b>
Architectural Coating	Compressor (air)	1	40	78		150	68.5	6	360	63
Total for Architectural Coating Phase:										<b>63.2</b>
Paving	Paver	2	50	77		150	67.5	8	480	67
	Concrete Mixer Truck	1	40	79		150	69.5	8	480	65
	Roller	2	20	80		150	70.5	8	480	66
Total for Paving Phase:										<b>71.3</b>

To User: bordered cells are inputs, unbordered cells have formulas

noise level limit for construction phase, per County = **80**  
 allowable hours over which Leq is to be averaged (example: 8 for County of San Diego, FTA guidance) = **8**

Construction Phase	Equipment	Total Equipment Qty	AUF % (from FHWA RCNM)	Reference Lmax @ 50 ft. from FHWA RCNM	Client Equipment Description, Data Source and/or Notes	Source to NSR Distance (ft.)	Distance-Adjusted Lmax	Allowable Operation Time (hours)	Allowable Operation Time (minutes)	Predicted 8-hour Leq
Site Preparation	Dozer	3	40	82		335	65.5	8	480	66
	Backhoe	4	40	78		335	61.5	8	480	64
Total for Site Preparation Phase:										<b>68.1</b>
Demolition	concrete saw	1	20	90		335	73.5	8	480	66
	excavator	3	40	81		335	64.5	8	480	65
	dozer	2	40	82		335	65.5	8	480	65
Total for Demolition Phase:										<b>70.3</b>
Grading	Excavator	1	40	81		335	64.5	8	480	60
	Dozer	1	40	82		335	65.5	8	480	61
	Backhoe	3	40	78		335	61.5	8	480	62
Total for Grading Phase:										<b>66.3</b>
Building Construction	Crane	1	16	81		335	64.5	7	420	56
	Man Lift	3	20	75		335	58.5	8	480	56
	Generator	1	50	72		335	55.5	8	480	52
	Backhoe	1	40	78		335	61.5	7	420	57
	Front End Loader	2	40	79		335	62.5	7	420	61
	Welder / Torch	3	40	73		335	56.5	8	480	57
Total for Building Construction Phase:										<b>65.1</b>
Architectural Coating	Compressor (air)	1	40	78		335	61.5	6	360	56
Total for Architectural Coating Phase:										<b>56.2</b>
Paving	Paver	2	50	77		335	60.5	8	480	60
	Concrete Mixer Truck	1	40	79		335	62.5	8	480	58
	Roller	2	20	80		335	63.5	8	480	59
Total for Paving Phase:										<b>64.3</b>

Equipment Description	Impact Device?	Acoustical Use Factor (%)	Lesser of or available Lmax	Spec. 721 Lmax	Measured L <sub>max</sub> @50ft (dBA, slow)
All Other Equipment > 5 HP	No	50	85	85	-- N/A --
Auger Drill Rig	No	20	84	85	84
Backhoe	No	40	78	80	78
Bar Bender	No	20	80	80	-- N/A --
Blasting	Yes	-- N/A --	94	94	-- N/A --
Boring Jack Power Unit	No	50	80	80	83
Chain Saw	No	20	84	85	84
Clam Shovel (dropping)	Yes	20	87	93	87
Compactor (ground)	No	20	80	80	83
Compressor (air)	No	40	78	80	78
Concrete Batch Plant	No	15	83	83	-- N/A --
Concrete Mixer Truck	No	40	79	85	79
Concrete Pump Truck	No	20	81	82	81
Concrete Saw	No	20	90	90	90
Crane	No	16	81	85	81
Dozer	No	40	82	85	82
Drill Rig Truck	No	20	79	84	79
Drum Mixer	No	50	80	80	80
Dump Truck	No	40	76	84	76
Excavator	No	40	81	85	81
Flat Bed Truck	No	40	74	84	74
Front End Loader	No	40	79	80	79
Generator	No	50	72	72	81
Generator (<25KVA, VMS signs)	No	50	70	70	73
Gradall	No	40	83	85	83
Grader	No	40	85	85	-- N/A --
Grapple (on backhoe)	No	40	85	85	87
Horizontal Boring Hydr. Jack	No	25	80	80	82
Hydra Break Ram	Yes	10	90	90	-- N/A --
Impact Pile Driver	Yes	20	95	95	101
Jackhammer	Yes	20	85	85	89
Man Lift	No	20	75	85	75
Mounted Impact Hammer (hoe ram)	Yes	20	90	90	90
Pavement Scarafier	No	20	85	85	90
Paver	No	50	77	85	77
Pickup Truck	No	40	55	55	75
Pneumatic Tools	No	50	85	85	85
Pumps	No	50	77	77	81
Refrigerator Unit	No	100	73	82	73
Rivit Buster/chipping gun	Yes	20	79	85	79



Rock Drill	No	20	81	85	81
Roller	No	20	80	85	80
Sand Blasting (Single Nozzle)	No	20	85	85	96
Scraper	No	40	84	85	84
Shears (on backhoe)	No	40	85	85	96
Slurry Plant	No	100	78	78	78
Slurry Trenching Machine	No	50	80	82	80
Soil Mix Drill Rig	No	50	80	80	-- N/A --
Tractor	No	40	84	84	-- N/A --
Vacuum Excavator (Vac-truck)	No	40	85	85	85
Vacuum Street Sweeper	No	10	80	80	82
Ventilation Fan	No	100	79	85	79
Vibrating Hopper	No	50	85	85	87
Vibratory Concrete Mixer	No	20	80	80	80
Vibratory Pile Driver	No	20	95	95	101
Warning Horn	No	5	83	85	83
Welder / Torch	No	40	73	73	74



## TECHNICAL GUIDE

### R-410A ZE/ZF/ZR/XN/XP SERIES 3 - 6 TON 60 Hertz



### Description

YORK® ZE/ZF/ZR/XN/XP Series units are convertible single package high efficiency rooftops with a common roof curb for the 3, 4, 5 and 6 Ton sizes (ZE, ZR, XN, XP not available in 6 Ton). Although the units are primarily designed for curb mounting on a roof, they can also be slab-mounted at ground level or set on steel beams above a finished roof.

All ZE/ZF/ZR/XN/XP Series units are self-contained and assembled on rigid full perimeter base rails allowing for overhead rigging. Every unit is completely charged, wired, piped and tested at the factory to provide a quick and easy field installation.

All models (including those with an economizer) are convertible between bottom and horizontal duct connections.

ZE/ZF/ZR Series units are available in the following configurations: cooling only, cooling with electric heat, and cooling with one or two stage gas heat. Electric heaters are available as factory-installed option or field installed accessory.

XN/XP Series units are available in the following configurations: cooling and heating only and cooling and heating with electric heat.

Tested in accordance with:



## Sound Performance

### ZF/ZR/XP Indoor Sound Power Levels

Size (Tons)	CFM	ESP (IWG)	Blower		Sound Power, dB ( $10^{-12}$ ) Watts								
					Sound Rating <sup>1</sup> dB (A)	Octave Band Centerline Frequency (Hz)							
			RPM	BHP		63	125	250	500	1000	2000	4000	8000
036 (3.0)	1200	0.2	630	0.41	63	82	77	59	50	43	42	40	45
048 (4.0)	1600	0.2	791	0.54	72	95	84	58	54	46	44	45	44
060 (5.0)	2000	0.2	840	0.67	62	84	71	58	53	50	49	49	49
072 (6.0)	2200	0.3	920	1.45	76	61	71	68	67	72	66	61	54

1. These values have been accessed using a model of sound propagation from a point source into the hemispheric/free field. The dBA values provided are to be used for reference only. Calculation of dBA values cover matters of system design and the fan manufacture has no way of knowing the details of each system. This constitutes an exception to any specification or guarantee requiring a dBA value of sound data in any other form than sound power level ratings.

### ZE/ZF/ZR Outdoor Sound Power Levels

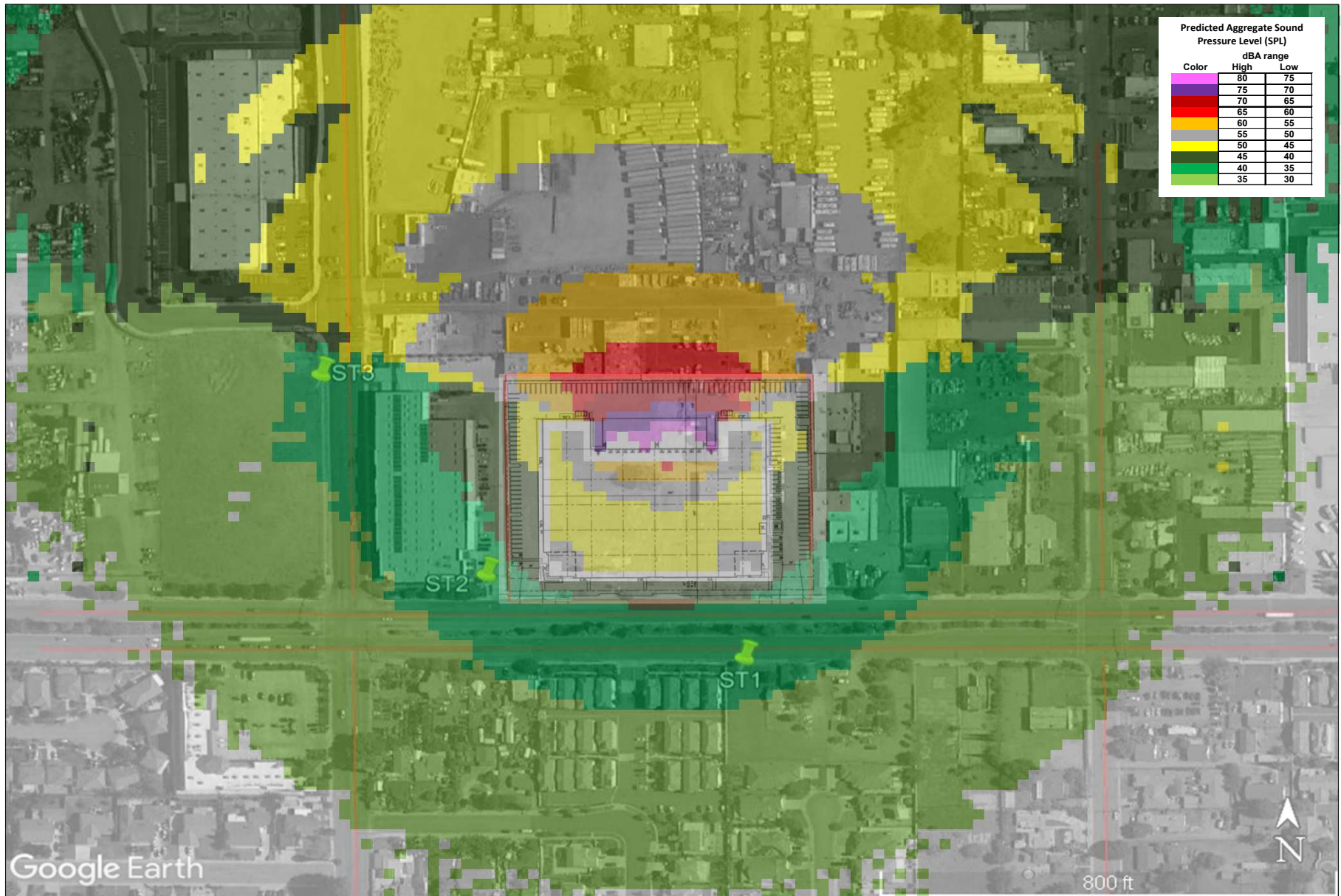
Size (Tons)	Sound Rating <sup>1</sup> dB (A)	Octave Band Centerline Frequency (Hz)							
		63	125	250	500	1000	2000	4000	8000
036 (3.0)	81	87.5	86.0	81.0	77.0	75.0	69.5	65.5	70.5
048 (4.0)	80	84.5	81.0	80.0	78.0	75.0	70.0	67.0	70.5
060 (5.0)	82	86.5	87.5	81.5	77.5	75.0	71.5	68.0	70.5
072 (6.0)	83	-	84.0	85.0	79.0	80.0	72.0	67.5	62.5

1. Rated in accordance with AHRI 270 standard.

### XN/XP Outdoor Sound Power Levels

Size (Tons)	Sound Rating <sup>1</sup> dB (A)	Octave Band Centerline Frequency (Hz)							
		63	125	250	500	1000	2000	4000	8000
036 (3.0)	76	83.5	84.5	76.5	72.0	68.0	66.0	60.0	56.0
048 (4.0)	80	85.0	83.0	81.0	77.5	75.5	71.5	67.5	61.5
060 (5.0)	80	86.0	84.0	81.0	77.0	75.5	71.0	66.5	60.5

1. Rated in accordance with AHRI 270 standard.



SOURCE: Dudek 2021

**DUDEK**



**FIGURE 2**  
 Predicted Stationary Source Operations Noise

Mission Blvd Warehouse

## RAY-TRACE PROGRAM (FOR A POINT-SOURCE)

Uses the Equation:  $(A_{ed})_{point} = 20 \cdot \log[(2 \cdot \pi \cdot N)^{1/2} / \tanh(2 \cdot \pi \cdot N)^{1/2}] + 5 \text{dB}$   
 (Ref. Pg.174, Noise and Vibration Control, L.L. Beranek Editor, 1971 Ed.)

Project: Mission BLVD Warehouse

Date: 10/12/21

By: CB

Please Enter: Using English (E) units or Metric (M) units ?

E

1128

Ray Trace Number/Description	Source-Receiver Distance (ft. or m)	Source Base Elev. (ft. or m)	Source Height above Ground (ft. or m)	Receiver Base Elev. (ft. or m)	Receiver Height above Ground (ft. or m)	Horizontal Barrier Dist. (in ref. to source) (ft. or m)	Barrier Base Elev. (ft. or m)	Barrier Height (ft. or m)	Dominant Freq.(Hz)	Source-Rcvr Straight-Line Dist. (ft. or m)	Source-Top-of-Barrier Dist. (ft. or m)	Receiver-Top-of-Barrier Dist. (ft. or m)	Lambda	N <sub>max</sub>	AE <sub>(barriers)</sub> (dB)
1. Source - Truck Noise at Neasrest Residence	150.0	0.0	5.0	0.0	5.0	0.0	0.0	35.0	500.0	150.0	30.0	153.0	2.3	29.2	27.6

INPUT: ROADWAYS

Mission Blvd Warehouse

				13 October 2021							
Dudek CB				TNM 2.5							
INPUT: ROADWAYS				Mission Blvd Warehouse			Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA				
PROJECT/CONTRACT:				Existing							
RUN:											
Roadway Name	Width	Points Name	No.	Coordinates (pavement)			Flow Control			Segment	
				X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Monte Vista Ave North	50.0	point1	1	6,653,064.5	1,844,220.2	0.00				Average	
		point2	2	6,653,088.5	1,842,924.5	0.00					
Mission Blvd West	40.0	point3	3	6,655,108.0	1,842,900.5	0.00				Average	
		point4	4	6,654,811.0	1,842,899.5	0.00				Average	
		point5	5	6,654,379.5	1,842,893.8	0.00				Average	
		point6	6	6,654,267.0	1,842,893.4	0.00				Average	
		point7	7	6,653,674.5	1,842,891.1	0.00				Average	
		point8	8	6,653,092.0	1,842,889.1	0.00					
Monte Vista Ave South	50.0	point10	10	6,653,089.5	1,842,812.1	0.00				Average	
		point11	11	6,653,104.5	1,841,696.4	0.00					
Fremont Ave South	50.0	point12	12	6,654,403.5	1,842,809.2	0.00				Average	
		point13	13	6,654,420.5	1,841,634.8	0.00					
Fremont Ave North	50.0	point14	14	6,654,388.0	1,843,818.4	0.00				Average	
		point15	15	6,654,393.5	1,843,533.6	0.00				Average	
		point16	16	6,654,400.0	1,842,936.2	0.00					
Mission Blvd East	40.0	point17	17	6,652,541.0	1,842,819.2	0.00				Average	
		point22	22	6,653,087.5	1,842,830.2	0.00					
Mission Blvd West-2	40.0	point19	19	6,653,092.0	1,842,889.1	0.00				Average	
		point9	9	6,652,539.5	1,842,891.8	0.00					
Mission Blvd East-2	40.0	point24	24	6,653,087.5	1,842,830.2	0.00				Average	
		point21	21	6,653,182.0	1,842,822.0	0.00				Average	
		point20	20	6,653,823.5	1,842,824.8	0.00				Average	
		point18	18	6,655,106.0	1,842,830.2	0.00					

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Mission Blvd Warehouse**

<b>Dudek</b>		<b>13 October 2021</b>										
<b>CB</b>		<b>TNM 2.5</b>										
<b>INPUT: TRAFFIC FOR LAeq1h Volumes</b>												
<b>PROJECT/CONTRACT:</b>		<b>Mission Blvd Warehouse</b>										
<b>RUN:</b>		<b>Existing</b>										
<b>Roadway</b>	<b>Points</b>											
<b>Name</b>	<b>Name</b>	<b>No.</b>	<b>Segment</b>		<b>MTrucks</b>		<b>HTrucks</b>		<b>Buses</b>		<b>Motorcycles</b>	
			<b>Autos</b>		<b>V</b>	<b>S</b>	<b>V</b>	<b>S</b>	<b>V</b>	<b>S</b>	<b>V</b>	<b>S</b>
			<b>veh/hr</b>	<b>mph</b>	<b>veh/hr</b>	<b>mph</b>	<b>veh/hr</b>	<b>mph</b>	<b>veh/hr</b>	<b>mph</b>	<b>veh/hr</b>	<b>mph</b>
Monte Vista Ave North	point1	1	1377	35	28	35	14	35	0	0	0	0
	point2	2										
Mission Blvd West	point3	3	1069	45	22	45	11	45	0	0	0	0
	point4	4	1069	45	22	45	11	45	0	0	0	0
	point5	5	1069	45	22	45	11	45	0	0	0	0
	point6	6	1069	45	22	45	11	45	0	0	0	0
	point7	7	1069	45	22	45	11	45	0	0	0	0
	point8	8										
Monte Vista Ave South	point10	10	1032	35	21	35	10	35	0	0	0	0
	point11	11										
Fremont Ave South	point12	12	100	35	0	0	0	0	0	0	0	0
	point13	13										
Fremont Ave North	point14	14	100	35	0	0	0	0	0	0	0	0
	point15	15	100	35	0	0	0	0	0	0	0	0
	point16	16										
Mission Blvd East	point17	17	982	45	20	45	10	45	0	0	0	0
	point22	22										
Mission Blvd West-2	point19	19	982	45	20	45	10	45	0	0	0	0
	point9	9										
Mission Blvd East-2	point24	24	1069	45	22	45	11	45	0	0	0	0
	point21	21	1069	45	22	45	11	45	0	0	0	0
	point20	20	1069	45	22	45	11	45	0	0	0	0
	point18	18										

**INPUT: RECEIVERS**

**Mission Blvd Warehouse**

							13 October 2021					
Dudek							TNM 2.5					
CB												
INPUT: RECEIVERS												
PROJECT/CONTRACT:		Mission Blvd Warehouse										
RUN:		Existing										
Receiver												
Name	No.	#DUs	Coordinates (ground)			Height	Input Sound Levels and Criteria				Active	
			X	Y	Z		above	Existing	Impact Criteria	NR		in
						Ground	L <sub>Aeq</sub> 1h	L <sub>Aeq</sub> 1h	Sub'l	Goal	Calc.	
			ft	ft	ft	ft	dBA	dBA	dB	dB		
ST1	1	1	6,653,765.0	1,842,777.6	0.00	4.92	74.33	66	10.0	8.0	Y	
ST2	2	1	6,653,312.0	1,842,939.5	0.00	4.92	74.14	66	10.0	8.0	Y	
ST3	3	1	6,653,022.0	1,843,328.4	0.00	4.92	70.18	66	10.0	8.0	Y	



**RESULTS: SOUND LEVELS**

**Mission Blvd Warehouse**

<b>Dudek</b>													<b>13 October 2021</b>	
<b>CB</b>													<b>TNM 2.5</b>	
													<b>Calculated with TNM 2.5</b>	
<b>RESULTS: SOUND LEVELS</b>														
<b>PROJECT/CONTRACT:</b>			<b>Mission Blvd Warehouse</b>											
<b>RUN:</b>			<b>Existing</b>											
<b>BARRIER DESIGN:</b>			<b>INPUT HEIGHTS</b>										<b>Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.</b>	
<b>ATMOSPHERICS:</b>			<b>68 deg F, 50% RH</b>											
<b>Receiver</b>														
<b>Name</b>		<b>No.</b>	<b>#DUs</b>	<b>Existing</b>	<b>No Barrier</b>			<b>With Barrier</b>						
				<b>LAeq1h</b>	<b>LAeq1h</b>		<b>Increase over existing</b>		<b>Type</b>	<b>Calculated</b>	<b>Noise Reduction</b>			
					<b>Calculated</b>	<b>Crit'n</b>	<b>Calculated</b>	<b>Crit'n</b>	<b>Impact</b>	<b>LAeq1h</b>	<b>Calculated</b>	<b>Goal</b>	<b>Calculated</b>	
								<b>Sub'l Inc</b>					<b>minus</b>	
				<b>dB</b>	<b>dB</b>	<b>dB</b>	<b>dB</b>	<b>dB</b>		<b>dB</b>	<b>dB</b>	<b>dB</b>	<b>dB</b>	
ST1		1	1	74.3	70.0	66	-4.3	10	Snd Lvl	70.0	0.0	8	-8.0	
ST2		2	1	74.1	69.9	66	-4.2	10	Snd Lvl	69.9	0.0	8	-8.0	
ST3		3	1	70.2	66.4	66	-3.8	10	Snd Lvl	66.4	0.0	8	-8.0	
<b>Dwelling Units</b>			<b># DUs</b>	<b>Noise Reduction</b>										
				<b>Min</b>	<b>Avg</b>	<b>Max</b>								
				<b>dB</b>	<b>dB</b>	<b>dB</b>								
All Selected			3	0.0	0.0	0.0								
All Impacted			3	0.0	0.0	0.0								
All that meet NR Goal			0	0.0	0.0	0.0								

**INPUT: ROADWAYS**

**Mission Blvd Warehouse**

				<b>13 October 2021</b>							
<b>Dudek</b>				<b>TNM 2.5</b>							
<b>CB</b>											
<b>INPUT: ROADWAYS</b>							<b>Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA</b>				
<b>PROJECT/CONTRACT:</b>				<b>Mission Blvd Warehouse</b>							
<b>RUN:</b>				<b>Existing + P</b>							
<b>Roadway</b>		<b>Points</b>									
<b>Name</b>	<b>Width</b>	<b>Name</b>	<b>No.</b>	<b>Coordinates (pavement)</b>			<b>Flow Control</b>			<b>Segment</b>	
				<b>X</b>	<b>Y</b>	<b>Z</b>	<b>Control Device</b>	<b>Speed Constraint</b>	<b>Percent Vehicles Affected</b>	<b>Pvmt Type</b>	<b>On Struct?</b>
	ft			ft	ft	ft		mph	%		
Monte Vista Ave North	50.0	point1	1	6,653,064.5	1,844,220.2	0.00				Average	
		point2	2	6,653,088.5	1,842,924.5	0.00					
Mission Blvd West	40.0	point3	3	6,655,108.0	1,842,900.5	0.00				Average	
		point4	4	6,654,811.0	1,842,899.5	0.00				Average	
		point5	5	6,654,379.5	1,842,893.8	0.00				Average	
		point6	6	6,654,267.0	1,842,893.4	0.00				Average	
		point7	7	6,653,674.5	1,842,891.1	0.00				Average	
		point8	8	6,653,092.0	1,842,889.1	0.00					
Monte Vista Ave South	50.0	point10	10	6,653,089.5	1,842,812.1	0.00				Average	
		point11	11	6,653,104.5	1,841,696.4	0.00					
Fremont Ave South	50.0	point12	12	6,654,403.5	1,842,809.2	0.00				Average	
		point13	13	6,654,420.5	1,841,634.8	0.00					
Fremont Ave North	50.0	point14	14	6,654,388.0	1,843,818.4	0.00				Average	
		point15	15	6,654,393.5	1,843,533.6	0.00				Average	
		point16	16	6,654,400.0	1,842,936.2	0.00					
Mission Blvd East	40.0	point17	17	6,652,541.0	1,842,819.2	0.00				Average	
		point22	22	6,653,087.5	1,842,830.2	0.00					
Mission Blvd West-2	40.0	point19	19	6,653,092.0	1,842,889.1	0.00				Average	
		point9	9	6,652,539.5	1,842,891.8	0.00					
Mission Blvd East-2	40.0	point24	24	6,653,087.5	1,842,830.2	0.00				Average	
		point21	21	6,653,182.0	1,842,822.0	0.00				Average	
		point20	20	6,653,823.5	1,842,824.8	0.00				Average	
		point18	18	6,655,106.0	1,842,830.2	0.00					

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Mission Blvd Warehouse**

<b>Dudek</b>		<b>13 October 2021</b>										
<b>CB</b>		<b>TNM 2.5</b>										
<b>INPUT: TRAFFIC FOR LAeq1h Volumes</b>												
<b>PROJECT/CONTRACT:</b>		<b>Mission Blvd Warehouse</b>										
<b>RUN:</b>		<b>Existing + P</b>										
<b>Roadway</b>	<b>Points</b>											
<b>Name</b>	<b>Name</b>	<b>No.</b>	<b>Segment</b>		<b>MTrucks</b>		<b>HTrucks</b>		<b>Buses</b>		<b>Motorcycles</b>	
			<b>Autos</b>		<b>V</b>	<b>S</b>	<b>V</b>	<b>S</b>	<b>V</b>	<b>S</b>	<b>V</b>	<b>S</b>
			<b>veh/hr</b>	<b>mph</b>	<b>veh/hr</b>	<b>mph</b>	<b>veh/hr</b>	<b>mph</b>	<b>veh/hr</b>	<b>mph</b>	<b>veh/hr</b>	<b>mph</b>
Monte Vista Ave North	point1	1	1396	35	28	35	14	35	0	0	0	0
	point2	2										
Mission Blvd West	point3	3	1134	45	23	45	11	45	0	0	0	0
	point4	4	1134	45	23	45	11	45	0	0	0	0
	point5	5	1134	45	23	45	11	45	0	0	0	0
	point6	6	1134	45	23	45	11	45	0	0	0	0
	point7	7	1134	45	23	45	11	45	0	0	0	0
	point8	8										
Monte Vista Ave South	point10	10	1057	35	21	35	10	35	0	0	0	0
	point11	11										
Fremont Ave South	point12	12	100	35	0	0	0	0	0	0	0	0
	point13	13										
Fremont Ave North	point14	14	100	35	0	0	0	0	0	0	0	0
	point15	15	100	35	0	0	0	0	0	0	0	0
	point16	16										
Mission Blvd East	point17	17	1010	45	20	45	10	45	0	0	0	0
	point22	22										
Mission Blvd West-2	point19	19	1010	45	20	45	10	45	0	0	0	0
	point9	9										
Mission Blvd East-2	point24	24	1134	45	23	45	11	45	0	0	0	0
	point21	21	1134	45	23	45	11	45	0	0	0	0
	point20	20	1134	45	23	45	11	45	0	0	0	0
	point18	18										

**INPUT: RECEIVERS**

**Mission Blvd Warehouse**

							13 October 2021					
Dudek							TNM 2.5					
CB												
INPUT: RECEIVERS												
PROJECT/CONTRACT:		Mission Blvd Warehouse										
RUN:		Existing + P										
Receiver												
Name	No.	#DUs	Coordinates (ground)			Height	Input Sound Levels and Criteria				Active	
			X	Y	Z		above	Existing	Impact Criteria	NR		in
						Ground	L <sub>Aeq</sub> 1h	L <sub>Aeq</sub> 1h	Sub'l	Goal	Calc.	
			ft	ft	ft	ft	dBA	dBA	dB	dB		
ST1	1	1	6,653,765.0	1,842,777.6	0.00	4.92	74.33	66	10.0	8.0	Y	
ST2	2	1	6,653,312.0	1,842,939.5	0.00	4.92	74.14	66	10.0	8.0	Y	
ST3	3	1	6,653,022.0	1,843,328.4	0.00	4.92	70.18	66	10.0	8.0	Y	

INPUT: BARRIERS

Mission Blvd Warehouse

Dudek		13 October 2021
CB		TNM 2.5

INPUT: BARRIERS

PROJECT/CONTRACT: Mission Blvd Warehouse

RUN: Existing + P

Barrier									Points										
Name	Type	Height		If Wall \$ per Unit Area	If Berm			Add'tnl \$ per Unit Length	Name	No.	Coordinates (bottom)			Height at Point	Segment				Important Reflec- tions?
		Min	Max		\$ per Unit Vol.	Top Width	Run:Rise ft:ft				X	Y	Z		Seg Ht	Perturbs #Up #Dn	On Struct?		
		ft	ft		\$/sq ft	ft	ft:ft				ft	ft	ft		ft	ft	ft	ft	
Barrier1	W	0.00	99.99	0.00				0.00	point1	1	6,653,499.5	1,843,258.0	0.00	45.00	0.00	0	0		
									point2	2	6,653,499.5	1,843,219.2	0.00	45.00	0.00	0	0		
									point3	3	6,653,808.0	1,843,218.1	0.00	45.00	0.00	0	0		
									point4	4	6,653,810.5	1,843,009.6	0.00	45.00	0.00	0	0		
									point5	5	6,653,753.5	1,843,006.5	0.00	45.00	0.00	0	0		
									point6	6	6,653,752.5	1,842,956.8	0.00	45.00	0.00	0	0		
									point7	7	6,653,477.5	1,842,954.5	0.00	45.00	0.00	0	0		
									point8	8	6,653,473.5	1,843,003.2	0.00	45.00	0.00	0	0		
									point9	9	6,653,418.5	1,843,005.1	0.00	45.00	0.00	0	0		
									point10	10	6,653,414.5	1,843,276.6	0.00	45.00	0.00	0	0		
									point11	11	6,653,499.5	1,843,278.8	0.00	45.00					

**RESULTS: SOUND LEVELS**

**Mission Blvd Warehouse**

<b>Dudek</b>													<b>13 October 2021</b>	
<b>CB</b>													<b>TNM 2.5</b>	
													<b>Calculated with TNM 2.5</b>	
<b>RESULTS: SOUND LEVELS</b>														
<b>PROJECT/CONTRACT:</b>			<b>Mission Blvd Warehouse</b>											
<b>RUN:</b>			<b>Existing + P</b>											
<b>BARRIER DESIGN:</b>			<b>INPUT HEIGHTS</b>										<b>Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.</b>	
<b>ATMOSPHERICS:</b>			<b>68 deg F, 50% RH</b>											
<b>Receiver</b>														
<b>Name</b>		<b>No.</b>	<b>#DUs</b>	<b>Existing LAeq1h</b>	<b>No Barrier LAeq1h</b>	<b>Increase over existing</b>		<b>Type</b>	<b>With Barrier</b>		<b>Noise Reduction</b>			
					<b>Calculated</b>	<b>Crit'n</b>	<b>Calculated</b>	<b>Crit'n</b>	<b>Impact</b>	<b>Calculated LAeq1h</b>	<b>Calculated</b>	<b>Goal</b>	<b>Calculated minus Goal</b>	
				<b>dB</b>	<b>dB</b>	<b>dB</b>	<b>dB</b>	<b>dB</b>		<b>dB</b>	<b>dB</b>	<b>dB</b>	<b>dB</b>	
ST1		1	1	74.3	70.2	66	-4.1	10	Snd Lvl	70.2	0.0	8	-8.0	
ST2		2	1	74.1	70.1	66	-4.0	10	Snd Lvl	70.1	0.0	8	-8.0	
ST3		3	1	70.2	66.4	66	-3.8	10	Snd Lvl	66.4	0.0	8	-8.0	
<b>Dwelling Units</b>			<b># DUs</b>	<b>Noise Reduction</b>										
				<b>Min</b>	<b>Avg</b>	<b>Max</b>								
				<b>dB</b>	<b>dB</b>	<b>dB</b>								
All Selected			3	0.0	0.0	0.0								
All Impacted			3	0.0	0.0	0.0								
All that meet NR Goal			0	0.0	0.0	0.0								

INPUT: ROADWAYS

Mission Blvd Warehouse

				13 October 2021							
Dudek CB				TNM 2.5							
INPUT: ROADWAYS				Mission Blvd Warehouse			Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA				
PROJECT/CONTRACT:				Future							
RUN:											
Roadway Name	Width	Points Name	No.	Coordinates (pavement)			Flow Control			Segment	
				X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Monte Vista Ave North	50.0	point1	1	6,653,064.5	1,844,220.2	0.00				Average	
		point2	2	6,653,088.5	1,842,924.5	0.00					
Mission Blvd West	40.0	point3	3	6,655,108.0	1,842,900.5	0.00				Average	
		point4	4	6,654,811.0	1,842,899.5	0.00				Average	
		point5	5	6,654,379.5	1,842,893.8	0.00				Average	
		point6	6	6,654,267.0	1,842,893.4	0.00				Average	
		point7	7	6,653,674.5	1,842,891.1	0.00				Average	
		point8	8	6,653,092.0	1,842,889.1	0.00					
Monte Vista Ave South	50.0	point10	10	6,653,089.5	1,842,812.1	0.00				Average	
		point11	11	6,653,104.5	1,841,696.4	0.00					
Fremont Ave South	50.0	point12	12	6,654,403.5	1,842,809.2	0.00				Average	
		point13	13	6,654,420.5	1,841,634.8	0.00					
Fremont Ave North	50.0	point14	14	6,654,388.0	1,843,818.4	0.00				Average	
		point15	15	6,654,393.5	1,843,533.6	0.00				Average	
		point16	16	6,654,400.0	1,842,936.2	0.00					
Mission Blvd East	40.0	point17	17	6,652,541.0	1,842,819.2	0.00				Average	
		point22	22	6,653,087.5	1,842,830.2	0.00					
Mission Blvd West-2	40.0	point19	19	6,653,092.0	1,842,889.1	0.00				Average	
		point9	9	6,652,539.5	1,842,891.8	0.00					
Mission Blvd East-2	40.0	point24	24	6,653,087.5	1,842,830.2	0.00				Average	
		point21	21	6,653,182.0	1,842,822.0	0.00				Average	
		point20	20	6,653,823.5	1,842,824.8	0.00				Average	
		point18	18	6,655,106.0	1,842,830.2	0.00					

INPUT: TRAFFIC FOR LAeq1h Volumes

Mission Blvd Warehouse

Dudek													
CB													
INPUT: TRAFFIC FOR LAeq1h Volumes													
PROJECT/CONTRACT:	Mission Blvd Warehouse												
RUN:	Future												
Roadway	Points												
Name	Name	No.	Segment		MTrucks		HTrucks		Buses		Motorcycles		
			Autos		V	S	V	S	V	S	V	S	
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	
Monte Vista Ave North	point1	1	1441	35	29	35	14	35	0	0	0	0	
	point2	2											
Mission Blvd West	point3	3	1256	45	25	45	12	45	0	0	0	0	
	point4	4	1256	45	25	45	12	45	0	0	0	0	
	point5	5	1256	45	25	45	12	45	0	0	0	0	
	point6	6	1256	45	25	45	12	45	0	0	0	0	
	point7	7	1256	45	25	45	12	45	0	0	0	0	
	point8	8											
Monte Vista Ave South	point10	10	119	35	23	35	11	35	0	0	0	0	
	point11	11											
Fremont Ave South	point12	12	100	35	0	0	0	0	0	0	0	0	
	point13	13											
Fremont Ave North	point14	14	100	35	0	0	0	0	0	0	0	0	
	point15	15	100	35	0	0	0	0	0	0	0	0	
	point16	16											
Mission Blvd East	point17	17	1110	45	22	45	11	45	0	0	0	0	
	point22	22											
Mission Blvd West-2	point19	19	1110	45	22	45	11	45	0	0	0	0	
	point9	9											
Mission Blvd East-2	point24	24	1256	45	25	45	12	45	0	0	0	0	
	point21	21	1256	45	25	45	12	45	0	0	0	0	
	point20	20	1256	45	25	45	12	45	0	0	0	0	
	point18	18											



**INPUT: RECEIVERS**

**Mission Blvd Warehouse**

							13 October 2021					
Dudek							TNM 2.5					
CB												
INPUT: RECEIVERS												
PROJECT/CONTRACT:		Mission Blvd Warehouse										
RUN:		Future										
Receiver												
Name	No.	#DUs	Coordinates (ground)			Height above Ground	Input Sound Levels and Criteria				Active in Calc.	
			X	Y	Z		Existing LAeq1h	Impact LAeq1h	Criteria Sub'l	NR Goal		
			ft	ft	ft	ft	dBA	dBA	dB	dB		
ST1	1	1	6,653,765.0	1,842,777.6	0.00	4.92	74.33	66	10.0	8.0	Y	
ST2	2	1	6,653,312.0	1,842,939.5	0.00	4.92	74.14	66	10.0	8.0	Y	
ST3	3	1	6,653,022.0	1,843,328.4	0.00	4.92	70.18	66	10.0	8.0	Y	

INPUT: BARRIERS

Mission Blvd Warehouse

Dudek	13 October 2021
CB	TNM 2.5

INPUT: BARRIERS

PROJECT/CONTRACT: Mission Blvd Warehouse

RUN: Future

Barrier										Points									
Name	Type	Height		If Wall	If Berm			Add'tnl	Name	No.	Coordinates (bottom)			Height	Segment				
		Min	Max	\$ per Unit	\$ per Unit	Top Width	Run:Rise	\$ per Unit			X	Y	Z	at Point	Seg	Ht	Perturbs	On	Important
				Area	Vol.			Length							Incre-	#Up	#Dn	Struct?	Reflec-
		ft	ft	\$/sq ft	\$/cu yd	ft	ft:ft	\$/ft			ft	ft	ft	ft	ft				tions?
<< This table is empty >>																			

**RESULTS: SOUND LEVELS**

**Mission Blvd Warehouse**

<b>Dudek</b>													<b>13 October 2021</b>	
<b>CB</b>													<b>TNM 2.5</b>	
													<b>Calculated with TNM 2.5</b>	
<b>RESULTS: SOUND LEVELS</b>														
<b>PROJECT/CONTRACT:</b>			<b>Mission Blvd Warehouse</b>											
<b>RUN:</b>			<b>Future</b>											
<b>BARRIER DESIGN:</b>			<b>INPUT HEIGHTS</b>										<b>Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.</b>	
<b>ATMOSPHERICS:</b>			<b>68 deg F, 50% RH</b>											
<b>Receiver</b>														
<b>Name</b>		<b>No.</b>	<b>#DUs</b>	<b>Existing LAeq1h</b>	<b>No Barrier LAeq1h</b>			<b>Increase over existing</b>		<b>Type</b>	<b>With Barrier</b>			
					<b>Calculated</b>	<b>Crit'n</b>	<b>Calculated</b>	<b>Crit'n</b>	<b>Impact</b>	<b>Calculated LAeq1h</b>	<b>Noise Reduction</b>		<b>Calculated</b>	<b>Goal</b>
								<b>Sub'l Inc</b>			<b>Calculated</b>	<b>Goal</b>	<b>Calculated minus Goal</b>	
				<b>dB</b>	<b>dB</b>	<b>dB</b>	<b>dB</b>	<b>dB</b>		<b>dB</b>	<b>dB</b>	<b>dB</b>	<b>dB</b>	<b>dB</b>
ST1		1	1	74.3	70.7	66	-3.6	10	Snd Lvl	70.7	0.0	8	-8.0	
ST2		2	1	74.1	70.4	66	-3.7	10	Snd Lvl	70.4	0.0	8	-8.0	
ST3		3	1	70.2	66.6	66	-3.6	10	Snd Lvl	66.6	0.0	8	-8.0	
<b>Dwelling Units</b>			<b># DUs</b>	<b>Noise Reduction</b>										
				<b>Min</b>	<b>Avg</b>	<b>Max</b>								
				<b>dB</b>	<b>dB</b>	<b>dB</b>								
All Selected			3	0.0	0.0	0.0								
All Impacted			3	0.0	0.0	0.0								
All that meet NR Goal			0	0.0	0.0	0.0								

INPUT: ROADWAYS

Mission Blvd Warehouse

				13 October 2021							
Dudek CB				TNM 2.5							
INPUT: ROADWAYS				Mission Blvd Warehouse			Average pavement type shall be used unless a State highway agency substantiates the use of a different type with the approval of FHWA				
PROJECT/CONTRACT:				Future + Project							
RUN:											
Roadway Name	Width	Points Name	No.	Coordinates (pavement)			Flow Control			Segment	
				X	Y	Z	Control Device	Speed Constraint	Percent Vehicles Affected	Pvmt Type	On Struct?
	ft			ft	ft	ft		mph	%		
Monte Vista Ave North	50.0	point1	1	6,653,064.5	1,844,220.2	0.00				Average	
		point2	2	6,653,088.5	1,842,924.5	0.00					
Mission Blvd West	40.0	point3	3	6,655,108.0	1,842,900.5	0.00				Average	
		point4	4	6,654,811.0	1,842,899.5	0.00				Average	
		point5	5	6,654,379.5	1,842,893.8	0.00				Average	
		point6	6	6,654,267.0	1,842,893.4	0.00				Average	
		point7	7	6,653,674.5	1,842,891.1	0.00				Average	
		point8	8	6,653,092.0	1,842,889.1	0.00					
Monte Vista Ave South	50.0	point10	10	6,653,089.5	1,842,812.1	0.00				Average	
		point11	11	6,653,104.5	1,841,696.4	0.00					
Fremont Ave South	50.0	point12	12	6,654,403.5	1,842,809.2	0.00				Average	
		point13	13	6,654,420.5	1,841,634.8	0.00					
Fremont Ave North	50.0	point14	14	6,654,388.0	1,843,818.4	0.00				Average	
		point15	15	6,654,393.5	1,843,533.6	0.00				Average	
		point16	16	6,654,400.0	1,842,936.2	0.00					
Mission Blvd East	40.0	point17	17	6,652,541.0	1,842,819.2	0.00				Average	
		point22	22	6,653,087.5	1,842,830.2	0.00					
Mission Blvd West-2	40.0	point19	19	6,653,092.0	1,842,889.1	0.00				Average	
		point9	9	6,652,539.5	1,842,891.8	0.00					
Mission Blvd East-2	40.0	point24	24	6,653,087.5	1,842,830.2	0.00				Average	
		point21	21	6,653,182.0	1,842,822.0	0.00				Average	
		point20	20	6,653,823.5	1,842,824.8	0.00				Average	
		point18	18	6,655,106.0	1,842,830.2	0.00					

**INPUT: TRAFFIC FOR LAeq1h Volumes**

**Mission Blvd Warehouse**

<b>Dudek</b>		<b>13 October 2021</b>										
<b>CB</b>		<b>TNM 2.5</b>										
<b>INPUT: TRAFFIC FOR LAeq1h Volumes</b>												
<b>PROJECT/CONTRACT:</b>		<b>Mission Blvd Warehouse</b>										
<b>RUN:</b>		<b>Future + Project</b>										
<b>Roadway</b>	<b>Points</b>											
<b>Name</b>	<b>Name</b>	<b>No.</b>	<b>Segment</b>		<b>MTrucks</b>		<b>HTrucks</b>		<b>Buses</b>		<b>Motorcycles</b>	
			<b>Autos</b>		<b>V</b>	<b>S</b>	<b>V</b>	<b>S</b>	<b>V</b>	<b>S</b>	<b>V</b>	<b>S</b>
			<b>veh/hr</b>	<b>mph</b>	<b>veh/hr</b>	<b>mph</b>	<b>veh/hr</b>	<b>mph</b>	<b>veh/hr</b>	<b>mph</b>	<b>veh/hr</b>	<b>mph</b>
Monte Vista Ave North	point1	1	1451	35	29	35	14	35	0	0	0	0
	point2	2										
Mission Blvd West	point3	3	1262	45	26	45	13	45	0	0	0	0
	point4	4	1262	45	26	45	13	45	0	0	0	0
	point5	5	1262	45	26	45	13	45	0	0	0	0
	point6	6	1262	45	26	45	13	45	0	0	0	0
	point7	7	1262	45	26	45	13	45	0	0	0	0
	point8	8										
Monte Vista Ave South	point10	10	1131	35	23	35	11	35	0	0	0	0
	point11	11										
Fremont Ave South	point12	12	100	35	0	0	0	0	0	0	0	0
	point13	13										
Fremont Ave North	point14	14	100	35	0	0	0	0	0	0	0	0
	point15	15	100	35	0	0	0	0	0	0	0	0
	point16	16										
Mission Blvd East	point17	17	1124	45	23	45	11	45	0	0	0	0
	point22	22										
Mission Blvd West-2	point19	19	1124	45	23	45	11	45	0	0	0	0
	point9	9										
Mission Blvd East-2	point24	24	1262	45	26	45	13	45	0	0	0	0
	point21	21	1262	45	26	45	13	45	0	0	0	0
	point20	20	1262	45	26	45	13	45	0	0	0	0
	point18	18										

**INPUT: RECEIVERS**

**Mission Blvd Warehouse**

							13 October 2021				
Dudek							TNM 2.5				
CB											
INPUT: RECEIVERS											
PROJECT/CONTRACT:		Mission Blvd Warehouse									
RUN:		Future + Project									
Receiver											
Name	No.	#DUs	Coordinates (ground)			Height above Ground	Input Sound Levels and Criteria				Active in Calc.
			X	Y	Z		Existing LAeq1h	Impact Criteria LAeq1h	Sub'l	NR Goal	
			ft	ft	ft	ft	dBA	dBA	dB	dB	
ST1	1	1	6,653,765.0	1,842,777.6	0.00	4.92	74.33	66	10.0	8.0	Y
ST2	2	1	6,653,312.0	1,842,939.5	0.00	4.92	74.14	66	10.0	8.0	Y
ST3	3	1	6,653,022.0	1,843,328.4	0.00	4.92	70.18	66	10.0	8.0	Y
M1 - South	5	1	6,653,650.0	1,842,951.9	0.00	4.92	0.00	66	10.0	8.0	Y
M2 - West	6	1	6,653,410.5	1,843,115.5	0.00	4.92	0.00	66	10.0	8.0	Y
M3 - North	7	1	6,653,614.0	1,843,222.1	0.00	4.92	0.00	66	10.0	8.0	Y
M4- East	8	1	6,653,815.0	1,843,119.6	0.00	4.92	0.00	66	10.0	8.0	Y

INPUT: BARRIERS

Mission Blvd Warehouse

Dudek CB			13 October 2021 TNM 2.5															
INPUT: BARRIERS																		
PROJECT/CONTRACT:			Mission Blvd Warehouse															
RUN:			Future + Project															
Barrier									Points									
Name	Type	Height	If Wall	If Berm	Add'tnl	Name	No.	Coordinates	(bottom)	Height	Segment	Seg	Ht	Perturbs	On	Important		
		Min	Max	\$ per Unit	\$ per Unit	Top Width	Run:Rise	\$ per Unit	X	Y	Z	at Point	Incre-	#Up	#Dn	Struct?	Reflec-tions?	
		ft	ft	\$/sq ft	\$/cu yd	ft	ft:ft	\$/ft	ft	ft	ft	ft	ft					
Barrier1	W	0.00	99.99	0.00				0.00	point1	1	6,653,499.5	1,843,258.0	0.00	45.00	0.00	0	0	
									point2	2	6,653,499.5	1,843,219.2	0.00	45.00	0.00	0	0	
									point3	3	6,653,808.0	1,843,218.1	0.00	45.00	0.00	0	0	
									point4	4	6,653,810.5	1,843,009.6	0.00	45.00	0.00	0	0	
									point5	5	6,653,753.5	1,843,006.5	0.00	45.00	0.00	0	0	
									point6	6	6,653,752.5	1,842,956.8	0.00	45.00	0.00	0	0	
									point7	7	6,653,477.5	1,842,954.5	0.00	45.00	0.00	0	0	
									point8	8	6,653,473.5	1,843,003.2	0.00	45.00	0.00	0	0	
									point9	9	6,653,418.5	1,843,005.1	0.00	45.00	0.00	0	0	
									point10	10	6,653,414.5	1,843,276.6	0.00	45.00	0.00	0	0	
									point11	11	6,653,499.5	1,843,278.8	0.00	45.00				

**RESULTS: SOUND LEVELS**

**Mission Blvd Warehouse**

Dudek													13 October 2021	
CB													TNM 2.5	
													Calculated with TNM 2.5	
<b>RESULTS: SOUND LEVELS</b>														
<b>PROJECT/CONTRACT:</b>													Mission Blvd Warehouse	
<b>RUN:</b>													Future + Project	
<b>BARRIER DESIGN:</b>													INPUT HEIGHTS	
													Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.	
<b>ATMOSPHERICS:</b>													68 deg F, 50% RH	
<b>Receiver</b>														
<b>Name</b>		<b>No.</b>	<b>#DUs</b>	<b>Existing LAeq1h</b>	<b>No Barrier LAeq1h</b>	<b>Increase over existing</b>		<b>Type</b>	<b>With Barrier</b>		<b>Noise Reduction</b>			
					<b>Calculated</b>	<b>Crit'n</b>	<b>Calculated</b>	<b>Crit'n</b>	<b>Impact</b>	<b>Calculated LAeq1h</b>	<b>Calculated</b>	<b>Goal</b>	<b>Calculated minus Goal</b>	
				dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB	
ST1		1	1	74.3	70.7	66	-3.6	10	Snd Lvl	70.7	0.0	8	-8.0	
ST2		2	1	74.1	70.6	66	-3.5	10	Snd Lvl	70.6	0.0	8	-8.0	
ST3		3	1	70.2	66.6	66	-3.6	10	Snd Lvl	66.6	0.0	8	-8.0	
M1 - South		5	1	0.0	69.7	66	69.7	10	Snd Lvl	69.7	0.0	8	-8.0	
M2 - West		6	1	0.0	62.9	66	62.9	10	----	62.9	0.0	8	-8.0	
M3 - North		7	1	0.0	49.1	66	49.1	10	----	49.1	0.0	8	-8.0	
M4- East		8	1	0.0	61.6	66	61.6	10	----	61.6	0.0	8	-8.0	
<b>Dwelling Units</b>			<b># DUs</b>	<b>Noise Reduction</b>										
				<b>Min</b>	<b>Avg</b>	<b>Max</b>								
				<b>dB</b>	<b>dB</b>	<b>dB</b>								
All Selected			7	0.0	0.0	0.0								
All Impacted			4	0.0	0.0	0.0								
All that meet NR Goal			0	0.0	0.0	0.0								