

December 8, 2022

Ms. Tracy Zinn
T&B Planning Inc.
3200 El Camino Real, Suite 100
Irvine, CA 92602

SUBJECT: MAJESTIC FREEWAY BUSINESS CENTER BUILDINGS 13, 14, 17 & 18 NOISE ASSESSMENT

Dear Ms. Tracy Zinn:

Urban Crossroads, Inc. is pleased to provide the following Noise Assessment for the Majestic Freeway Business Center Buildings 13, 14, 17 & 18 (referred to as “Project”) located on Harvill Avenue north of Cajalco Expressway and south of Harley Knox Boulevard in the County of Riverside as shown on Exhibit A. The Project includes four separate and independent but adjacent buildings within the Majestic Freeway Business Center (MFBC). The purpose of this Noise Assessment is to describe the combined off-site traffic noise level increases, as well as the operational and construction noise impacts for all four Buildings 13, 14, 17 & 18 since they are adjacent to one another and are expected to be entitled and constructed on similar timeframes. The project development includes:

- MFBC Building 13 (PPT220008): one 322,997 square foot warehouse building
- MFBC Building 14A/14B (PPT220015): two warehouse buildings totaling 354,583 square feet
- MFBC Building 17 (PPT220009): one 268,955 square foot warehouse building.
- MFBC Building 18 (PPT220003): one 333,648 square foot warehouse building.

OFF-SITE TRAFFIC NOISE METHODS AND PROCEDURES

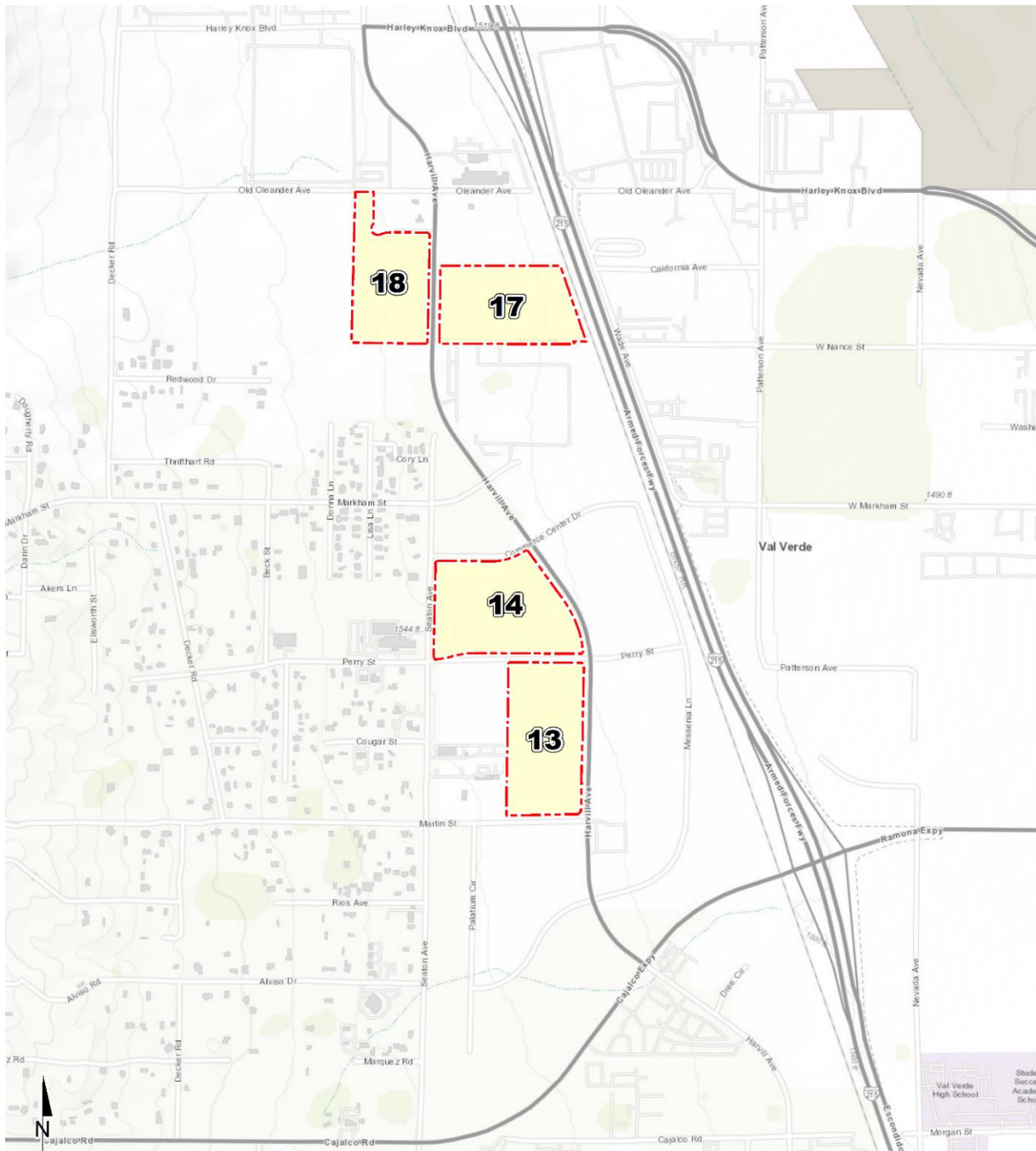
The following section outlines the methods and procedures used to estimate and analyze the future traffic noise environment. Consistent with County of Riverside Noise Guidelines for Land Use Planning (see Exhibit 3-A), all transportation related noise levels are presented in terms of the 24-hour CNEL’s.

FHWA TRAFFIC NOISE PREDICTION MODEL

The expected roadway noise level increases from vehicular traffic were calculated by Urban Crossroads, Inc. using a computer program that replicates the Federal Highway Administration (FHWA) Traffic Noise Prediction Model- FHWA-RD-77-108. (1) 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. (2) Adjustments are then made to the REMEL to account for: the roadway classification (e.g., collector, secondary, major or arterial), the roadway active width (i.e., the distance between the center of the outermost travel lanes on each side of the roadway), the total average daily traffic (ADT), the travel speed, the percentages of automobiles, medium trucks, and heavy trucks in the traffic volume, the roadway grade, the angle of view (e.g., whether the roadway view is blocked), the site conditions

("hard" or "soft" relates to the absorption of the ground, pavement, or landscaping), and the percentage of total ADT which flows each hour throughout a 24-hour period. Research conducted by Caltrans has shown that the use of soft site conditions is appropriate for the application of the FHWA traffic noise prediction model used in this analysis. (3)

EXHIBIT A: LOCATION MAP



OFF-SITE TRAFFIC NOISE PREDICTION MODEL INPUTS

Table 1 presents the roadway parameters used to assess the Project’s off-site transportation noise impacts. Table 1 identifies the 12 off-site study area roadway segments, the distance from the centerline to adjacent land use based on the functional roadway classifications per the County of Riverside General Plan Circulation Element, and the vehicle speeds. The ADT volumes used in this study area presented on Table 6-2 are based on the *MFBC Traffic Analysis*, prepared by Urban Crossroads, Inc. for the following traffic scenarios.

- Existing (E)
- Existing plus Project (E+P)
- Existing plus Ambient Growth plus Cumulative (EAC) without Project Conditions
- Existing plus Ambient Growth plus Cumulative (EAPC) with Project Conditions

The ADT volumes vary for each roadway segment based on the existing traffic volumes and the combination of Majestic Freeway Business Center Buildings 13, 14, 17 & 18 Project trip generation. This analysis relies on a comparative evaluation of the off-site traffic noise impacts at the boundary of the right-of-way of the receiving adjacent land use, without and with project ADT traffic volumes.

TABLE 1: OFF-SITE ROADWAY PARAMETERS

ID	Roadway	Segment	Receiving Land Use ¹	Classification ²	Distance from Centerline to Receiving Land Use (Feet) ³	Vehicle Speed (mph)
1	Harvill Av.	n/o Old Oleander	Non-Sensitive	Major	59'	50
2	Harvill Av.	n/o Commerce Ctr. Dr.	Non-Sensitive	Major	59'	50
3	Harvill Av.	n/o Cajalco Expy	Non-Sensitive	Major	59'	50
4	Harvill Av.	s/o Cajalco Expy	Non-Sensitive	Major	59'	50
5	Harley Knox Blvd	w/o I-215 SB Ramps	Non-Sensitive	Urban Arterial	76'	55
6	Old Oleander Av.	w/o Harvill Av.	Non-Sensitive	Collector	37'	40
7	Cajalco Expy	w/o Harvill Av.	Non-Sensitive	Expressway	92'	50
8	Cajalco Expy	e/o Harvill Av.	Non-Sensitive	Expressway	92'	50
9	Commerce Ctr. Dr.	w/o Harvill Av.	Non-Sensitive	Collector	37'	40
10	Perry St.	w/o Harvill Av.	Non-Sensitive	Collector	37'	40
11	Martin St.	w/o Harvill Av.	Non-Sensitive	Collector	37'	40
12	Peregrine Way	w/o Harvill Av.	Sensitive	Collector	37'	40

¹ Based on a review of existing aerial imagery. Noise sensitive uses limited to adjacent residential land uses.

² County of Riverside General Plan Circulation Element functional roadway classification.

³ Distance to receiving land use is based upon the right-of-way distances.

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 2: AVERAGE DAILY TRAFFIC VOLUMES

ID	Roadway	Segment	Average Daily Traffic Volumes ¹			
			Existing		EAC (2025)	
			Without Project	With Project	Without Project	With Project
1	Harvill Av.	n/o Old Oleander	9,557	9,983	17,524	17,951
2	Harvill Av.	n/o Commerce Ctr. Dr.	9,371	10,142	13,375	14,146
3	Harvill Av.	n/o Cajalco Expy	10,869	11,983	27,315	28,428
4	Harvill Av.	s/o Cajalco Expy	13,086	13,344	28,231	28,490
5	Harley Knox Blvd	w/o I-215 SB Ramps	10,986	11,199	20,410	20,624
6	Old Oleander Av.	w/o Harvill Av.	924	1,000	5,379	5,455
7	Cajalco Expy	w/o Harvill Av.	24,229	24,386	35,605	35,763
8	Cajalco Expy	e/o Harvill Av.	27,043	27,668	53,535	54,160
9	Commerce Ctr. Dr.	w/o Harvill Av.	457	660	633	836
10	Perry St.	w/o Harvill Av.	142	409	872	1,139
11	Martin St.	w/o Harvill Av.	1,712	1,958	1,817	2,063
12	Peregrine Way	w/o Harvill Av.	86	125	91	130

¹ Majestic Freeway Business Center Traffic Analysis, Urban Crossroads, Inc.

Table 3 provides the time of day (daytime, evening, and nighttime) vehicle splits. Table 4 shows the traffic flow by vehicle type (vehicle mix) used for all without Project traffic scenarios, and Tables 5 to 6 show the vehicle mixes used for the with Project (Buildings 13, 14, 17 & 18) traffic scenarios. Due to the added Project truck trips, the increase in Project traffic volumes and the distributions of trucks on the study area road segments, the percentage of autos, medium trucks and heavy trucks will vary for each of the traffic scenarios. This explains why the existing and future traffic volumes and vehicle mixes vary between seemingly identical study area roadway segments.

TABLE 3: TIME OF DAY VEHICLE SPLITS

Vehicle Type	Time of Day Splits ¹			Total of Time of Day Splits
	Daytime	Evening	Nighttime	
Autos	74.72%	7.70%	17.58%	100.00%
Medium Trucks	88.52%	1.11%	10.37%	100.00%
Heavy Trucks	75.08%	7.99%	16.93%	100.00%

¹ Based on the February 8, 2022, 24-hour directional vehicle classification count collected on Harvill Avenue between Peregrine "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 4: WITHOUT PROJECT VEHICLE MIX

Classification	Total % Traffic Flow ¹			Total
	Autos	Medium Trucks	Heavy Trucks	
All Segments	89.28%	3.19%	7.54%	100.00%

¹ Based on the February 8, 2022, 24-hour directional vehicle classification count collected on Harvill Avenue between Peregrine Way (Majestic Freeway Business Center (Building 18) Traffic Analysis, Urban Crossroads, Inc.)

TABLE 5: EXISTING WITH PROJECT VEHICLE MIX

ID	Roadway	Segment	With Project ¹			
			Autos	Medium Trucks	Heavy Trucks	Total ²
1	Harvill Av.	n/o Old Oleander	88.62%	3.23%	8.15%	100.00%
2	Harvill Av.	n/o Commerce Ctr. Dr.	88.70%	3.17%	8.13%	100.00%
3	Harvill Av.	n/o Cajalco Expy	89.59%	3.00%	7.41%	100.00%
4	Harvill Av.	s/o Cajalco Expy	89.32%	3.15%	7.53%	100.00%
5	Harley Knox Blvd	w/o I-215 SB Ramps	88.98%	3.21%	7.81%	100.00%
6	Old Oleander Av.	w/o Harvill Av.	86.40%	3.54%	10.07%	100.00%
7	Cajalco Expy	w/o Harvill Av.	89.34%	3.17%	7.49%	100.00%
8	Cajalco Expy	e/o Harvill Av.	89.25%	3.16%	7.59%	100.00%
9	Commerce Ctr. Dr.	w/o Harvill Av.	86.96%	3.11%	9.93%	100.00%
10	Perry St.	w/o Harvill Av.	78.19%	4.00%	17.81%	100.00%
11	Martin St.	w/o Harvill Av.	89.11%	3.03%	7.86%	100.00%
12	Peregrine Way	w/o Harvill Av.	92.65%	2.18%	5.16%	100.00%

¹ Majestic Freeway Business Center Traffic Analysis, Urban Crossroads, Inc.

² Total of vehicle mix percentage values rounded to the nearest one-hundredth.

TABLE 6: EAC WITH PROJECT VEHICLE MIX

ID	Roadway	Segment	With Project ¹			
			Autos	Medium Trucks	Heavy Trucks	Total ²
1	Harvill Av.	n/o Old Oleander	88.91%	3.21%	7.88%	100.00%
2	Harvill Av.	n/o Commerce Ctr. Dr.	88.87%	3.17%	7.96%	100.00%
3	Harvill Av.	n/o Cajalco Expy	89.41%	3.11%	7.48%	100.00%
4	Harvill Av.	s/o Cajalco Expy	89.29%	3.17%	7.53%	100.00%
5	Harley Knox Blvd	w/o I-215 SB Ramps	89.12%	3.20%	7.68%	100.00%
6	Old Oleander Av.	w/o Harvill Av.	88.75%	3.25%	8.00%	100.00%
7	Cajalco Expy	w/o Harvill Av.	89.32%	3.17%	7.50%	100.00%
8	Cajalco Expy	e/o Harvill Av.	89.26%	3.17%	7.56%	100.00%

ID	Roadway	Segment	With Project ¹			
			Autos	Medium Trucks	Heavy Trucks	Total ²
9	Commerce Ctr. Dr.	w/o Harvill Av.	87.45%	3.12%	9.43%	100.00%
10	Perry St.	w/o Harvill Av.	85.29%	3.48%	11.22%	100.00%
11	Martin St.	w/o Harvill Av.	89.12%	3.04%	7.84%	100.00%
12	Peregrine Way	w/o Harvill Av.	92.52%	2.23%	5.26%	100.00%

¹ Majestic Freeway Business Center Traffic Analysis, Urban Crossroads, Inc.

² Total of vehicle mix percentage values rounded to the nearest one-hundredth.

OFF-SITE TRAFFIC NOISE ANALYSIS

To assess the off-site traffic CNEL noise level impacts associated with the Project, noise contours were developed based on an estimate of without and with (Buildings 13, 14, 17 & 18) Project traffic volumes. Noise contours were used to assess the Project’s incremental 24-hour dBA CNEL traffic-related noise impacts at land uses adjacent to roadways conveying Project traffic. Noise contour boundaries represent the equal levels of noise exposure and are measured in CNEL from the center of the roadway. 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 CNEL 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 8 through 11 present a summary of the exterior dBA CNEL traffic noise levels without barrier attenuation. Appendix A includes a summary of the traffic noise level contours for each of the traffic scenarios.

TABLE 8: EXISTING WITHOUT PROJECT CONTOURS

ID	Road	Segment	Receiving Land Use ¹	CNEL at Nearest Receiving Land Use (dBA) ²	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Harvill Av.	n/o Old Oleander	Non-Sensitive	72.1	81	174	376
2	Harvill Av.	n/o Commerce Ctr. Dr.	Non-Sensitive	72.0	80	172	371
3	Harvill Av.	n/o Cajalco Expy	Non-Sensitive	72.6	88	190	409
4	Harvill Av.	s/o Cajalco Expy	Non-Sensitive	73.4	100	215	463
5	Harley Knox Blvd	w/o I-215 SB Ramps	Non-Sensitive	72.2	107	230	495
6	Old Oleander Av.	w/o Harvill Av.	Non-Sensitive	62.7	RW	RW	RW
7	Cajalco Expy	w/o Harvill Av.	Non-Sensitive	73.8	165	356	767
8	Cajalco Expy	e/o Harvill Av.	Non-Sensitive	74.3	178	383	825
9	Commerce Ctr. Dr.	w/o Harvill Av.	Non-Sensitive	59.6	RW	RW	RW

ID	Road	Segment	Receiving Land Use ¹	CNEL at Nearest Receiving Land Use (dBA) ²	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
10	Perry St.	w/o Harvill Av.	Non-Sensitive	54.5	RW	RW	RW
11	Martin St.	w/o Harvill Av.	Non-Sensitive	65.3	RW	RW	RW
12	Peregrine Way	w/o Harvill Av.	Non-Sensitive	52.3	RW	RW	RW

¹ Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.

² The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest receiving land use.

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

TABLE 9: EXISTING WITH PROJECT CONTOURS

ID	Road	Segment	Receiving Land Use ¹	CNEL at Nearest Receiving Land Use (dBA) ²	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Harvill Av.	n/o Old Oleander	Non-Sensitive	72.5	86	186	400
2	Harvill Av.	n/o Commerce Ctr. Dr.	Non-Sensitive	72.5	87	187	404
3	Harvill Av.	n/o Cajalco Expy	Non-Sensitive	73.0	93	201	432
4	Harvill Av.	s/o Cajalco Expy	Non-Sensitive	73.5	101	218	469
5	Harley Knox Blvd	w/o I-215 SB Ramps	Non-Sensitive	72.4	110	236	509
6	Old Oleander Av.	w/o Harvill Av.	Non-Sensitive	64.0	RW	RW	68
7	Cajalco Expy	w/o Harvill Av.	Non-Sensitive	73.8	165	357	768
8	Cajalco Expy	e/o Harvill Av.	Non-Sensitive	74.4	181	390	840
9	Commerce Ctr. Dr.	w/o Harvill Av.	Non-Sensitive	62.1	RW	RW	RW
10	Perry St.	w/o Harvill Av.	Non-Sensitive	62.1	RW	RW	51
11	Martin St.	w/o Harvill Av.	Non-Sensitive	66.0	RW	RW	94
12	Peregrine Way	w/o Harvill Av.	Non-Sensitive	52.8	RW	RW	RW

¹ Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.

² The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest receiving land use.

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

TABLE 10: EAC WITHOUT PROJECT CONTOURS

ID	Road	Segment	Receiving Land Use ¹	CNEL at Nearest Receiving Land Use (dBA) ²	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Harvill Av.	n/o Old Oleander	Non-Sensitive	74.7	121	261	563
2	Harvill Av.	n/o Commerce Ctr. Dr.	Non-Sensitive	73.5	101	218	470

ID	Road	Segment	Receiving Land Use ¹	CNEL at Nearest Receiving Land Use (dBA) ²	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
3	Harvill Av.	n/o Cajalco Expy	Non-Sensitive	76.6	163	351	756
4	Harvill Av.	s/o Cajalco Expy	Non-Sensitive	76.8	167	359	773
5	Harley Knox Blvd	w/o I-215 SB Ramps	Non-Sensitive	74.9	161	347	748
6	Old Oleander Av.	w/o Harvill Av.	Non-Sensitive	70.3	RW	84	180
7	Cajalco Expy	w/o Harvill Av.	Non-Sensitive	75.5	214	460	992
8	Cajalco Expy	e/o Harvill Av.	Non-Sensitive	77.3	280	604	1301
9	Commerce Ctr. Dr.	w/o Harvill Av.	Non-Sensitive	61.0	RW	RW	RW
10	Perry St.	w/o Harvill Av.	Non-Sensitive	62.4	RW	RW	54
11	Martin St.	w/o Harvill Av.	Non-Sensitive	65.6	RW	RW	RW
12	Peregrine Way	w/o Harvill Av.	Non-Sensitive	52.6	RW	RW	RW

¹ Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.

² The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest receiving land use.

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

TABLE 11: EAC WITH PROJECT CONTOURS

ID	Road	Segment	Receiving Land Use ¹	CNEL at Nearest Receiving Land Use (dBA) ²	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Harvill Av.	n/o Old Oleander	Non-Sensitive	74.9	126	271	583
2	Harvill Av.	n/o Commerce Ctr. Dr.	Non-Sensitive	73.9	108	232	500
3	Harvill Av.	n/o Cajalco Expy	Non-Sensitive	76.8	167	359	773
4	Harvill Av.	s/o Cajalco Expy	Non-Sensitive	76.8	168	361	777
5	Harley Knox Blvd	w/o I-215 SB Ramps	Non-Sensitive	75.0	164	352	759
6	Old Oleander Av.	w/o Harvill Av.	Non-Sensitive	70.6	RW	87	187
7	Cajalco Expy	w/o Harvill Av.	Non-Sensitive	75.5	214	461	992
8	Cajalco Expy	e/o Harvill Av.	Non-Sensitive	77.3	283	610	1313
9	Commerce Ctr. Dr.	w/o Harvill Av.	Non-Sensitive	62.9	RW	RW	RW
10	Perry St.	w/o Harvill Av.	Non-Sensitive	64.9	RW	RW	78
11	Martin St.	w/o Harvill Av.	Non-Sensitive	66.3	RW	RW	97
12	Peregrine Way	w/o Harvill Av.	Non-Sensitive	53.0	RW	RW	RW

¹ Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.

² The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest receiving land use.

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

OFF-SITE TRAFFIC NOISE LEVEL INCREASES

Noise level increases resulting from the Project are evaluated based on the Appendix G CEQA Guidelines described above at the closest sensitive receiver locations. Under CEQA, consideration must be given to the magnitude of the increase, the existing baseline ambient noise levels, and the location of noise-sensitive receivers to determine if a noise increase represents a significant adverse environmental impact. This approach recognizes *that there is no single noise increase that renders a noise impact significant*. (4) This is primarily because of the wide variation in individual thresholds of annoyance and differing individual experiences with noise. Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of it to the existing environment to which one has adapted—the so-called *ambient* environment. In general, the more a new noise level exceeds the previously existing ambient noise level, the less acceptable the new noise level will typically be judged.

The Federal Interagency Committee on Noise (FICON) (5) developed guidance to be used for the assessment of project-generated increases in noise levels that consider the ambient noise level. The FICON recommendations are based on studies that relate aircraft noise levels to the percentage of persons highly annoyed by aircraft noise. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, these recommendations are often used in environmental noise impact assessments involving the use of cumulative noise exposure metrics, such as the average-daily noise level (CNEL) and equivalent continuous noise level (L_{eq}).

As previously stated, the approach used in this noise study recognizes *that there is no single noise increase that renders a noise impact significant*, based on a 2008 California Court of Appeal ruling on *Gray v. County of Madera*. (4) For example, if the ambient noise environment is quiet (<60 dBA) and the new noise source greatly increases the noise levels, an impact may occur if the noise criteria may be exceeded. Therefore, for this analysis, a *readily perceptible* 5 dBA or greater project-related noise level increase is considered a significant impact when the without project noise levels are below 60 dBA. Per the FICON, in areas where the without project noise levels range from 60 to 65 dBA, a 3 dBA *barely perceptible* noise level increase appears to be appropriate for most people. When the without project noise levels already exceed 65 dBA, any increase in community noise louder than 1.5 dBA or greater is considered a significant impact if the noise criteria for a given land use is exceeded, since it likely contributes to an existing noise exposure exceedance. The FICON guidance provides an established source of criteria to assess the impacts of substantial temporary or permanent increase in baseline ambient noise levels. Based on the FICON criteria, the amount to which a given noise level increase is considered acceptable is reduced when the without Project (baseline) noise levels are already shown to exceed certain land-use specific exterior noise level criteria. The specific levels are based on typical responses to noise level increases of 5 dBA or *readily perceptible*, 3 dBA or *barely perceptible*, and 1.5 dBA depending on the underlying without Project noise levels for noise-sensitive uses. These levels of increases and their perceived acceptance are consistent with guidance provided by both the Federal Highway Administration (6 p. 9) and Caltrans (7 p. 2_48).

EXISTING PROJECT TRAFFIC NOISE LEVEL INCREASES

An analysis of existing traffic noise levels plus traffic noise generated by the proposed Project has been included in this report for informational purposes and to fully analyze all the existing traffic scenarios identified in the Traffic Study. However, the analysis of existing off-site 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 2025 conditions. Table 8 shows the Existing without Project conditions CNEL noise levels. The Existing without Project exterior noise levels range from 52.3 to 74.3 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 9 shows the Existing with Project conditions ranging from 52.8 to 74.4 dBA CNEL. Table 14 shows that the Project off-site traffic noise level increases range from 0.0 to 7.6 dBA CNEL on the study area roadway segments. Based on the significance criteria for off-site traffic noise, land uses adjacent to the study area roadway segments would experience *less than significant* noise level impacts due to unmitigated Project-related traffic noise levels.

For an off-site traffic noise level impact to be considered significant, receivers need to perceive an increase of traffic noise levels over time. Therefore, consistent with guidance from the County of Riverside, off-site traffic impacts are limited to noise sensitive residential receivers that are likely to perceive this increase. While the analysis shows that the non-sensitive industrial uses will experience an off-site traffic noise level increase of up to 7.6 dBA CNEL, this is not considered a significant noise level impact since there are no adjacent receivers that will experience this increase over time. In addition, the Project-related off-site traffic noise level increase are largely due to the low traffic volumes that currently exist.

EAC TRAFFIC NOISE LEVEL INCREASES

Table 10 presents the EA 2025 without Project conditions CNEL noise levels. The EA without Project exterior noise levels range from 62.6 to 77.3 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 11 shows that the EA with Project conditions will range from 53.0 to 77.3 dBA CNEL. Table 15 shows that the Project off-site traffic noise level increases range from 0.0 to 2.5 dBA CNEL on the study area roadway segments. Based on the significance criteria for off-site traffic noise, land uses adjacent to the study area roadway segments would experience *less than significant* noise level impacts due to unmitigated Project-related traffic noise levels.

TABLE 12: EXISTING WITH PROJECT TRAFFIC NOISE LEVEL INCREASES

ID	Road	Segment	Receiving Land Use ¹	CNEL at Receiving Land Use (dBA) ²			Incremental Noise Level Increase Threshold ³	
				No Project	With Project	Project Increment	Limit	Exceeded?
1	Harvill Av.	n/o Old Oleander	Non-Sensitive	72.1	72.5	0.4	3.0	No
2	Harvill Av.	n/o Commerce Ctr. Dr.	Non-Sensitive	72.0	72.5	0.5	3.0	No
3	Harvill Av.	n/o Cajalco Expy	Non-Sensitive	72.6	73.0	0.4	3.0	No
4	Harvill Av.	s/o Cajalco Expy	Non-Sensitive	73.4	73.5	0.1	3.0	No
5	Harley Knox Blvd	w/o I-215 SB Ramps	Non-Sensitive	72.2	72.4	0.2	3.0	No
6	Old Oleander Av.	w/o Harvill Av.	Non-Sensitive	62.7	64.0	1.3	n/a	No
7	Cajalco Expy	w/o Harvill Av.	Non-Sensitive	73.8	73.8	0.0	3.0	No
8	Cajalco Expy	e/o Harvill Av.	Non-Sensitive	74.3	74.4	0.1	3.0	No
9	Commerce Ctr. Dr.	w/o Harvill Av.	Non-Sensitive	59.6	62.1	2.5	n/a	No
10	Perry St.	w/o Harvill Av.	Non-Sensitive	54.5	62.1	7.6	n/a	No
11	Martin St.	w/o Harvill Av.	Non-Sensitive	65.3	66.0	0.7	n/a	No
12	Peregrine Way	w/o Harvill Av.	Sensitive	52.3	52.8	0.5	5.0	No

¹ Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.

² The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.

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

"n/a" Per the County of Riverside General Plan Noise Element Table N-1, a barely perceptible 3 dBA or greater noise level increase is considered a significant impact when the ambient non-noise sensitive noise level is greater than the normally acceptable 70 dBA CNEL land use compatibility criteria.

TABLE 13: EAC WITH PROJECT TRAFFIC NOISE LEVEL INCREASES

ID	Road	Segment	Receiving Land Use ¹	CNEL at Receiving Land Use (dBA) ²			Incremental Noise Level Increase Threshold ³	
				No Project	With Project	Project Increment	Limit	Exceeded?
1	Harvill Av.	n/o Old Oleander	Non-Sensitive	74.7	74.9	0.2	3.0	No
2	Harvill Av.	n/o Commerce Ctr. Dr.	Non-Sensitive	73.5	73.9	0.4	3.0	No
3	Harvill Av.	n/o Cajalco Expy	Non-Sensitive	76.6	76.8	0.2	3.0	No
4	Harvill Av.	s/o Cajalco Expy	Non-Sensitive	76.8	76.8	0.0	3.0	No
5	Harley Knox Blvd	w/o I-215 SB Ramps	Non-Sensitive	74.9	75.0	0.1	3.0	No
6	Old Oleander Av.	w/o Harvill Av.	Non-Sensitive	70.3	70.6	0.3	3.0	No
7	Cajalco Expy	w/o Harvill Av.	Non-Sensitive	75.5	75.5	0.0	3.0	No
8	Cajalco Expy	e/o Harvill Av.	Non-Sensitive	77.3	77.3	0.0	3.0	No
9	Commerce Ctr. Dr.	w/o Harvill Av.	Non-Sensitive	61.0	62.9	1.9	n/a	No
10	Perry St.	w/o Harvill Av.	Non-Sensitive	62.4	64.9	2.5	n/a	No
11	Martin St.	w/o Harvill Av.	Non-Sensitive	65.6	66.3	0.7	n/a	No

ID	Road	Segment	Receiving Land Use ¹	CNEL at Receiving Land Use (dBA) ²			Incremental Noise Level Increase Threshold ³	
				No Project	With Project	Project Increment	Limit	Exceeded?
12	Peregrine Way	w/o Harvill Av.	Sensitive	52.6	53.0	0.4	5.0	No

¹ Based on a review of existing aerial imagery. Noise sensitive uses limited to existing residential land uses.

² The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the receiving land use.

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

"n/a" Per the County of Riverside General Plan Noise Element Table N-1, a barely perceptible 3 dBA or greater noise level increase is considered a significant impact when the ambient non-noise sensitive noise level is greater than the normally acceptable 70 dBA CNEL land use compatibility criteria.

NOISE PREDICTION MODEL

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

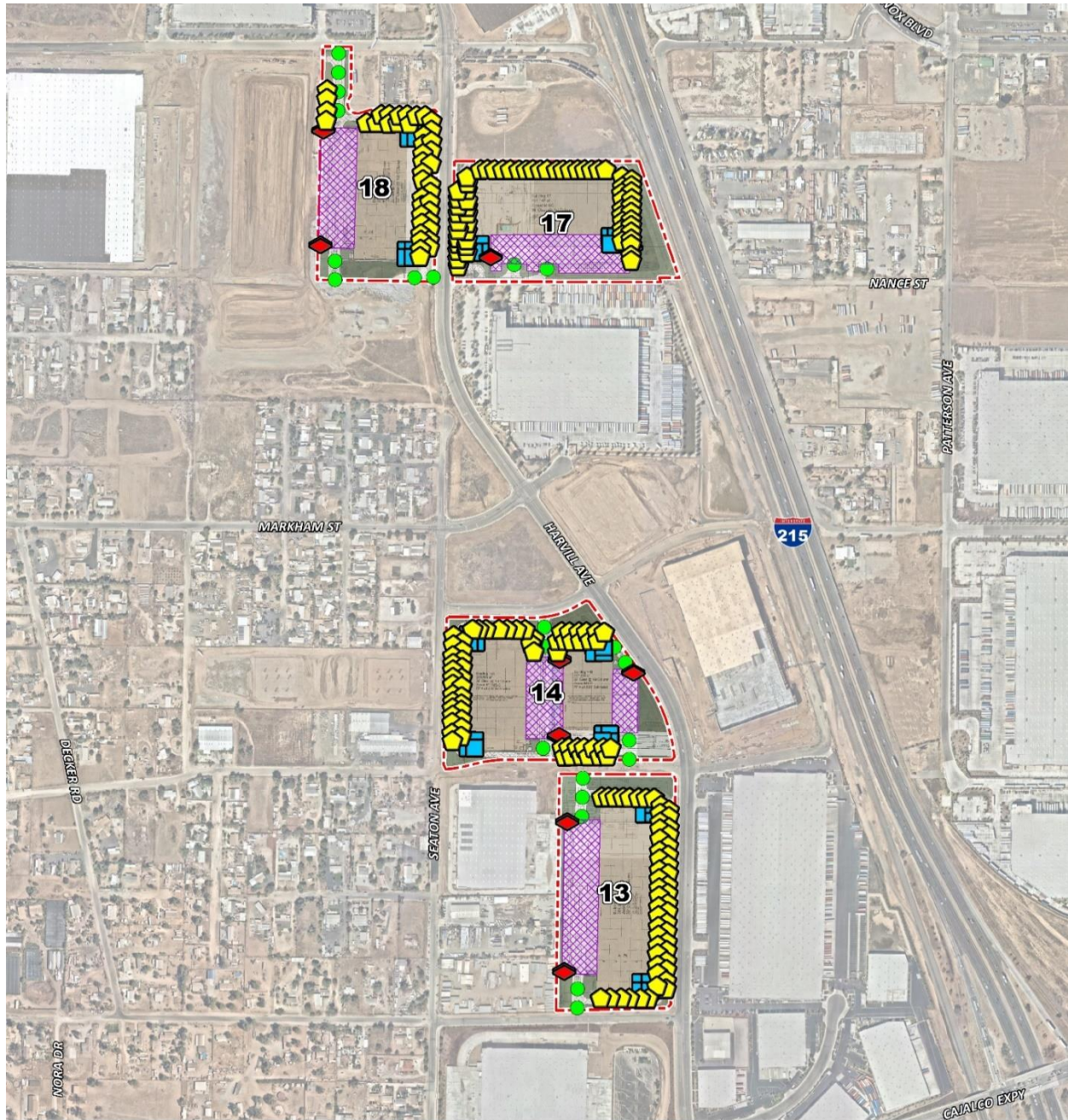
Using the ISO 9613-2 protocol, CadnaA will calculate the distance from each noise source to the noise receiver locations, using the ground absorption, distance, and barrier/building attenuation inputs to provide a summary of noise level at each receiver and the partial noise level contributions by noise source. Consistent with the ISO 9613-2 protocol, the CadnaA noise prediction model relies on the reference sound power level (L_w) to describe individual noise sources. While sound pressure levels (e.g., L_{eq}) quantify in decibels the intensity of given sound sources at a reference distance, sound power levels (L_w) are connected to the sound source and are independent of distance. Sound pressure levels vary substantially with distance from the source and diminish because of intervening obstacles and barriers, air absorption, wind, and other factors. Sound power is the acoustical energy emitted by the sound source and is an absolute value that is not affected by the environment. The operational noise level calculations provided in this noise study account for the distance attenuation provided due to geometric spreading, when sound from a localized stationary source (i.e., a point source) propagates uniformly outward in a spherical pattern. A default ground attenuation factor of 0.5 was used in the CadnaA noise analysis to account for mixed ground representing a combination of hard and soft surfaces.

OPERATIONAL NOISE







This section analyzes the potential stationary-source operational noise impacts at the nearby receiver locations resulting from the operation of the proposed Majestic Freeway Business Center Buildings 13, 14, 17 & 18 Project. This operational noise analysis is intended to describe noise level impacts associated with the expected typical of daytime and nighttime activities from the combined Majestic Freeway Business Center Buildings 13, 14, 17 & 18 Projects. The Project related noise sources are expected to include loading dock activity, roof-top, air-conditioning units, trash enclosure activity,

parking lot vehicle movements, and truck movements. Exhibit B identifies the noise source locations used to assess the operational noise levels.

EXHIBIT B: OPERATIONAL NOISE SOURCE LOCATIONS



LEGEND:

-  Site Boundary
-  Roof-Top Air Conditioning Unit
-  Trash Enclosure Activity
-  Loading Dock Activity
-  Parking Lot Vehicle Movements
-  Truck Movements

OPERATIONAL NOISE LEVEL COMPLIANCE

To demonstrate compliance with local noise regulations, the Project-only operational noise levels are evaluated against exterior noise level thresholds based on the County of Riverside at nearby noise-sensitive receiver locations. Table 14 shows that the operational noise levels associated with Majestic Freeway Business Center Buildings 13, 14, 17 & 18 Project will satisfy the County of Riverside and the City of Rialto daytime and nighttime hourly exterior noise level standards at all nearby receiver locations. Therefore, the operational noise impacts are considered *less than significant* at the nearby noise-sensitive receiver locations. Appendix B includes the detailed noise model inputs and calculations used to estimate the Project operational noise levels presented in this section.

TABLE 14: OPERATIONAL NOISE LEVELS

Receiver Location	Project Operational Noise Levels (dBA Leq) ¹		Noise Level Standards (dBA Leq) ²		Noise Level Standards Exceeded? ³	
	Daytime	Nighttime	Daytime	Nighttime	Daytime	Nighttime
R1	45.5	45.0	55	45	No	No
R2	42.3	42.0	55	45	No	No
R3	43.1	42.7	55	45	No	No
R4	44.0	43.7	55	45	No	No
R5	43.9	43.5	55	45	No	No
R6	43.9	43.4	55	45	No	No
R7	41.2	40.5	55	45	No	No
R8	42.5	42.0	55	45	No	No
R9	42.6	42.1	55	45	No	No
R10	45.4	45.0	55	45	No	No
R11	43.2	42.3	55	45	No	No
R12	42.9	42.5	55	45	No	No
R13	42.7	42.4	55	45	No	No
R14	36.5	35.7	55	45	No	No

¹ Proposed Project operational noise level calculations are included in Appendix B.
² County of Riverside General Plan Municipal Code, Section 9.52.040.
³ Do the estimated Project operational noise source activities exceed the noise level standards?
"Daytime" = 7:00 a.m. - 10:00 p.m.; "Nighttime" = 10:00 p.m. - 7:00 a.m.

PROJECT OPERATIONAL NOISE LEVEL INCREASES

To describe the Project operational noise level increases, the Project operational noise levels are combined with the existing ambient noise levels measurements for the nearby receiver locations potentially impacted by Project operational noise sources. Since the units used to measure noise, decibels (dB), are logarithmic units, the Project-operational and existing ambient noise levels cannot be combined using standard arithmetic equations. (8) Instead, they must be logarithmically added using the following base equation:

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

Where “SPL1,” “SPL2,” etc. are equal to the sound pressure levels being combined, or in this case, the Project-operational and existing ambient noise levels. The difference between the combined Project and ambient noise levels describes the Project noise level increases to the existing ambient noise environment. As indicated on Table 15, the Project will generate a daytime noise operational level increase ranging from 0.0 to 0.7 dBA L_{eq} at the nearest receiver locations. Table 16 shows that the Project will generate a nighttime operational noise level increase ranging from 0.0 to 1.7 dBA L_{eq} at the nearest receiver locations. A review of the operational noise level increases shows that the nighttime increases are somewhat higher than the daytime increases. This is largely due to the lower nighttime ambient conditions that when combined with the Project produce a higher relative increase. The project-related operational noise level increases will satisfy the operational noise level increase significance criteria. Therefore, the incremental Project operational noise level increase is considered *less than significant* at all receiver locations.

TABLE 15: DAYTIME PROJECT OPERATIONAL NOISE LEVEL INCREASES

Receiver Location	Total Project Operational Noise Level ¹	Measurement Location	Reference Ambient Noise Levels	Combined Project and Ambient ²	Project Increase ³	Increase Criteria	Increase Criteria Exceeded?
R1	42.5	L1	57.2	57.3	0.1	5.0	No
R2	42.6	L2	60.0	60.1	0.1	5.0	No
R3	42.3	L3	50.2	50.9	0.7	5.0	No
R4	43.1	L4	58.6	58.7	0.1	5.0	No
R5	44.0	L4	58.6	58.7	0.1	5.0	No
R6	43.9	L5	59.6	59.7	0.1	5.0	No
R7	43.9	L6	55.9	56.2	0.3	5.0	No
R8	41.2	L7	66.2	66.2	0.0	1.5	No
R9	42.5	L8	59.5	59.6	0.1	5.0	No
R10	42.6	L9	66.4	66.4	0.0	1.5	No
R11	45.4	L10	61.8	61.9	0.1	5.0	No
R12	43.2	L10	61.8	61.9	0.1	5.0	No
R13	42.9	L11	61.5	61.6	0.1	5.0	No
R14	42.7	L12	75.8	75.8	0.0	1.5	No

¹ Total Project daytime operational noise levels as shown on Table 14.

² Observed daytime ambient noise levels.

³ Represents the combined ambient conditions plus the Project activities.

⁴ The noise level increase expected with the addition of the proposed Project activities.

TABLE 16: NIGHTTIME OPERATIONAL NOISE LEVEL INCREASES

Receiver Location	Total Project Operational Noise Level ¹	Measurement Location	Reference Ambient Noise Levels	Combined Project and Ambient ²	Project Increase ³	Increase Criteria	Increase Criteria Exceeded?
R1	42.0	L1	55.8	56.0	0.2	5.0	No
R2	42.1	L2	49.4	50.1	0.7	5.0	No
R3	42.0	L3	45.2	46.9	1.7	5.0	No
R4	42.7	L4	50.6	51.3	0.7	5.0	No
R5	43.7	L4	50.6	51.4	0.8	5.0	No
R6	43.5	L5	56.7	56.9	0.2	5.0	No
R7	43.4	L6	52.7	53.2	0.5	5.0	No
R8	40.5	L7	62.7	62.7	0.0	5.0	No
R9	42.0	L8	56.1	56.3	0.2	5.0	No
R10	42.1	L9	53.3	53.6	0.3	5.0	No
R11	45.0	L10	53.4	54.0	0.6	5.0	No
R12	42.3	L10	53.4	53.7	0.3	5.0	No
R13	42.5	L11	60.6	60.7	0.1	5.0	No
R14	42.4	L12	75.5	75.5	0.0	1.5	No

¹ Total Project nighttime operational noise levels as shown on Table 14.

² Observed nighttime ambient noise levels.

³ Represents the combined ambient conditions plus the Project activities.

⁴ The noise level increase expected with the addition of the proposed Project activities.

CONSTRUCTION NOISE

This section analyzes potential impacts resulting from the short-term construction activities associated with the development of the Project. Exhibit C shows the construction activity boundaries in relation to the nearest sensitive receiver locations

CONSTRUCTION NOISE SOURCES

To describe construction noise activities, this construction noise analysis was prepared using reference construction equipment noise levels from the Federal Highway Administration (FHWA) published the Roadway Construction Noise Model (RCNM), which includes a national database of construction equipment reference noise emission levels. (9) The RCNM equipment database, provides a comprehensive list of the noise generating characteristics for specific types of construction equipment. In addition, the database provides an acoustical usage factor to estimate the fraction of time each piece of construction equipment is operating at full power (i.e., its loudest condition) during a construction operation. Using the reference construction equipment noise levels and the CadnaA noise prediction model, calculations of the Project construction noise level impacts at the nearby sensitive receiver locations were completed. As shown on Table 17, the construction noise levels are

expected to range from 55.3 to 74.2 dBA Leq at the nearby receiver locations. Appendix C includes the detailed CadnaA construction noise model inputs.

EXHIBIT C: CONSTRUCTION NOISE SOURCE AND RECEIVER LOCATIONS



CONSTRUCTION NOISE LEVEL COMPLIANCE

To evaluate whether the Project will generate potentially significant short-term noise levels at nearest receiver locations, a construction-related daytime noise level threshold of 80 dBA L_{eq} is used as a reasonable threshold to assess the daytime construction noise level impacts. The construction noise analysis shows that the nearest receiver locations will not exceed the reasonable daytime 80 dBA L_{eq} significance threshold during Project construction activities as shown on Table 17. Therefore, the noise impacts due to Project construction noise are considered *less than significant* at all receiver locations.

TABLE 17: TYPICAL CONSTRUCTION NOISE LEVEL COMPLIANCE

Receiver Location ¹	Construction Noise Levels (dBA L_{eq})		
	Highest Construction Noise Levels ²	Threshold ³	Threshold Exceeded? ⁴
R1	74.2	80	No
R2	62.0	80	No
R3	63.1	80	No
R4	65.1	80	No
R5	65.5	80	No
R6	65.8	80	No
R7	63.6	80	No
R8	65.4	80	No
R9	66.6	80	No
R10	72.6	80	No
R11	68.6	80	No
R12	62.7	80	No
R13	61.5	80	No
R14	55.3	80	No

¹ Construction noise source and receiver locations are shown on Exhibit C.

² Construction noise level calculations are included in Appendix C.

³ Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual.

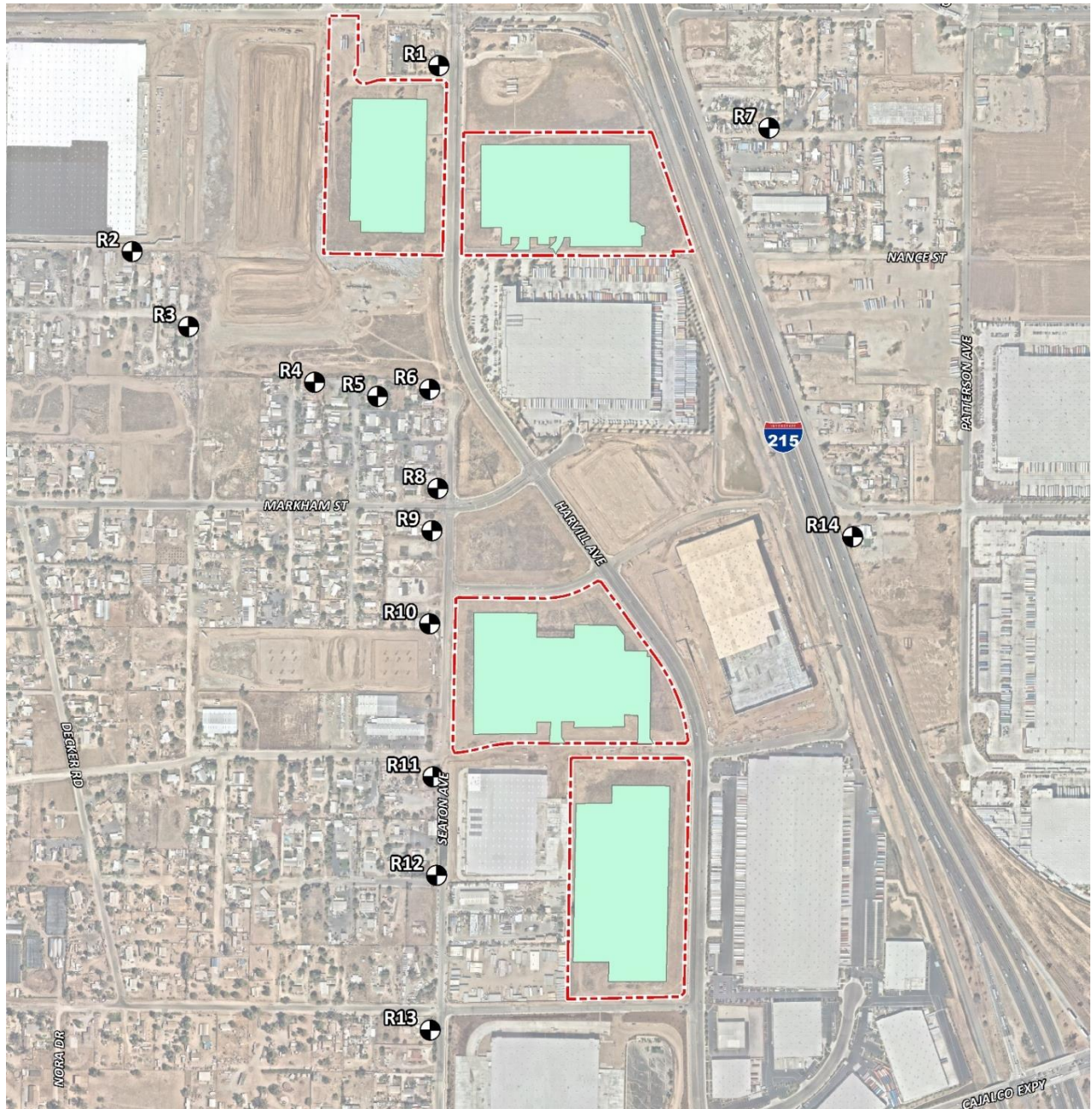
⁴ Do the estimated Project construction noise levels exceed the construction noise level threshold?

NIGHTTIME CONCRETE POUR NOISE ANALYSIS

It is our understanding that nighttime concrete pouring activities will occur as a part of Project building construction activities. Nighttime concrete pouring activities are often used to support reduced concrete mixer truck transit times and lower air temperatures than during the daytime hours and are generally limited to the actual building pad area as shown on Exhibit C. Since the nighttime concrete pours will take place outside the permitted by Riverside County Ordinance No. 847 Regulating Noise Section 2i (Code Section 9.52.020[I]), the Project Applicant will be required to obtain authorization for nighttime work from the County of Riverside. Any nighttime construction noise activities are evaluated

against the FTA nighttime exterior construction noise level threshold of 70 dBA Leq for noise sensitive residential land use (10 p. 179).

EXHIBIT D: NIGHTTIME CONCRETE POUR NOISE SOURCE AND RECEIVER LOCATIONS



NIGHTTIME CONCRETE POUR REFERENCE NOISE LEVEL MEASUREMENTS

To estimate the noise levels due to nighttime concrete pour activities, sample reference noise level measurements were taken during a nighttime concrete pour at a construction site. Urban Crossroads, Inc. collected short-term nighttime concrete pour reference noise level measurements during the noise-sensitive nighttime hours between 1:00 a.m. to 2:00 a.m. at 27334 San Bernardino Avenue in the City of Redlands. The reference noise levels describe the expected concrete pour noise sources that may include concrete mixer truck movements and pouring activities, concrete paving equipment, rear mounted concrete mixer truck backup alarms, engine idling, air brakes, generators, and workers communicating/whistling. To describe the nighttime concrete pour noise levels associated with the construction of the Majestic Freeway Business Center Buildings 13, 14, 17 & 18, this analysis relies on reference sound pressure level of 67.7 dBA L_{eq} at 50 feet representing a sound power level of 100.3 dBA L_w . While the Project noise levels will depend on the actual duration of activities and specific equipment fleet in use at the time of construction, the reference sound power level of 100.3 dBA L_w is used to describe the expected Project nighttime concrete pour noise activities.

NIGHTTIME CONCRETE POUR NOISE LEVEL COMPLIANCE

As shown on Table 18, the noise levels associated with the nighttime concrete pour activities are estimated to range from 40.5 to 55.5 dBA L_{eq} . The analysis shows that the unmitigated nighttime concrete pour activities will not exceed the FTA 70 dBA L_{eq} nighttime residential noise level threshold at all the nearest noise sensitive receiver locations. Therefore, the noise impacts due to Project construction nighttime concrete pour noise activity are considered *less than significant* at all receiver locations with prior authorization for nighttime work from the County of Riverside. Appendix D includes the CadnaA nighttime concrete pour noise model inputs.

TABLE 18: NIGHTTIME CONCRETE POUR NOISE LEVEL COMPLIANCE

Receiver Location ¹	Concrete Pour Construction Noise Levels (dBA L_{eq})		
	Exterior Noise Levels ²	Threshold ³	Threshold Exceeded? ⁴
R1	53.3	70	No
R2	47.1	70	No
R3	47.9	70	No
R4	49.7	70	No
R5	50.2	70	No
R6	50.5	70	No
R7	48.3	70	No
R8	50.1	70	No
R9	51.2	70	No
R10	55.5	70	No
R11	52.0	70	No

Receiver Location ¹	Concrete Pour Construction Noise Levels (dBA L _{eq})		
	Exterior Noise Levels ²	Threshold ³	Threshold Exceeded? ⁴
R12	47.9	70	No
R13	46.8	70	No
R14	40.5	70	No

¹ Construction noise source and receiver locations are shown on Exhibit C.
² Nighttime Concrete Pour noise model inputs are included in Appendix D.
³ Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual.
⁴ Do the estimated Project construction noise levels exceed the construction noise level threshold?

CONSTRUCTION VIBRATION ANALYSIS

Table 19 presents the expected Project related vibration levels at the nearby receiver locations. At distances ranging from 132 to 1,206 feet from Project construction activities, construction vibration velocity levels are estimated to range from 0.001 to 0.017 in/sec PPV. Based on maximum acceptable continuous vibration threshold of 0.3 PPV (in/sec), the typical Project construction vibration levels will fall below the building damage thresholds at all the noise sensitive receiver locations. Therefore, the Project-related vibration impacts are considered *less than significant* during typical construction activities at the Project site.

TABLE 19: PROJECT CONSTRUCTION VIBRATION LEVELS

Location ¹	Distance to Const. Activity (Feet) ²	Typical Construction Vibration Levels PPV (in/sec) ³						Thresholds PPV (in/sec) ⁴	Thresholds Exceeded? ⁵
		Small bulldozer	Jackhammer	Loaded Trucks	Large bulldozer	Vibratory Roller	Highest Vibration Level		
R1	76'	0.001	0.007	0.014	0.017	0.040	0.040	0.3	No
R2	999'	0.000	0.000	0.000	0.000	0.001	0.001	0.3	No
R3	801'	0.000	0.000	0.000	0.000	0.001	0.001	0.3	No
R4	675'	0.000	0.000	0.001	0.001	0.001	0.001	0.3	No
R5	741'	0.000	0.000	0.000	0.001	0.001	0.001	0.3	No
R6	700'	0.000	0.000	0.001	0.001	0.001	0.001	0.3	No
R7	613'	0.000	0.000	0.001	0.001	0.002	0.002	0.3	No
R8	580'	0.000	0.000	0.001	0.001	0.002	0.002	0.3	No
R9	376'	0.000	0.001	0.001	0.002	0.004	0.004	0.3	No
R10	132'	0.000	0.003	0.006	0.007	0.017	0.017	0.3	No
R11	168'	0.000	0.002	0.004	0.005	0.012	0.012	0.3	No
R12	646'	0.000	0.000	0.001	0.001	0.002	0.002	0.3	No
R13	733'	0.000	0.000	0.000	0.001	0.001	0.001	0.3	No
R14	1,206'	0.000	0.000	0.000	0.000	0.001	0.001	0.3	No

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T&B Planning Inc.
December 8, 2022
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¹ Construction noise source and receiver locations are shown on Exhibit C.
² Distance from receiver to Project construction boundary (Project site boundary).
³ Based on the Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual Source Levels.
⁴ Caltrans Transportation and Construction Vibration Guidance Manual, April 2020, Table 19, p. 38.
⁵ Does the peak vibration exceed the acceptable vibration thresholds?
"PPV" = Peak Particle Velocity

CONCLUSIONS

This Noise Assessment demonstrates that the off-site study area roadway segments will experience *less than significant* Project-related traffic noise level increases. In addition, the operational noise levels associated with Majestic Freeway Business Center Buildings 13, 14, 17 & 18 Project will satisfy the County of Riverside exterior noise level standards at all nearby receiver locations. Therefore, the operational noise impacts are considered *less than significant* at the nearby noise-sensitive receiver locations and the Project construction noise is not expected to result in significant noise impacts. If you have any questions, please contact me directly at (949) 584-3148.

Respectfully submitted,

URBAN CROSSROADS, INC.



Bill Lawson, P.E., INCE
Principal



REFERENCES

1. **U.S. Department of Transportation, Federal Highway Administration.** *FHWA Highway Traffic Noise Prediction Model.* December 1978. FHWA-RD-77-108.
2. **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.
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APPENDIX A

OFF-SITE TRAFFIC NOISE CONTOURS

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Harvill Av. Road Segment: n/o Old Oleander					Project Name: MFBC (Bldg. 13,14,17&18) Job Number: 13697				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 9,557 vehicles				Autos: 15					
Peak Hour Percentage: 7.00%				Medium Trucks (2 Axles): 15					
Peak Hour Volume: 669 vehicles				Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 50 mph				Vehicle Mix					
Near/Far Lane Distance: 48 feet				VehicleType		Day	Evening	Night	Daily
Site Data				Autos: 74.7% 7.7% 17.6% 89.28%					
Barrier Height: 0.0 feet				Medium Trucks: 88.5% 1.1% 10.4% 3.19%					
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks: 75.1% 8.0% 16.9% 7.54%					
Centerline Dist. to Barrier: 59.0 feet				Noise Source Elevations (in feet)					
Centerline Dist. to Observer: 59.0 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				Lane Equivalent Distance (in feet)					
Road Elevation: 0.0 feet				Autos: 54.129					
Road Grade: 0.0%				Medium Trucks: 53.966					
Left View: -90.0 degrees				Heavy Trucks: 53.982					
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-4.53	-0.62	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-19.00	-0.60	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-15.27	-0.60	-1.20	-5.35	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:	63.9	63.3	59.5	58.3	65.7	66.0			
Medium Trucks:	60.2	60.4	47.4	52.4	60.8	60.9			
Heavy Trucks:	68.3	67.8	64.1	62.6	70.1	70.4			
Vehicle Noise:	70.1	69.7	65.5	64.3	71.8	72.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			78	167	361	777			
CNEL:			81	174	376	809			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Harvill Av. Road Segment: n/o Old Oleander					Project Name: MFBC (Bldg. 13,14,17&18) Job Number: 13697				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 9,983 vehicles				Autos: 15					
Peak Hour Percentage: 7.00%				Medium Trucks (2 Axles): 15					
Peak Hour Volume: 699 vehicles				Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 50 mph				Vehicle Mix					
Near/Far Lane Distance: 48 feet				VehicleType		Day	Evening	Night	Daily
Site Data				Autos: 74.7% 7.7% 17.6% 88.62%					
Barrier Height: 0.0 feet				Medium Trucks: 88.5% 1.1% 10.4% 3.23%					
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks: 75.1% 8.0% 16.9% 8.15%					
Centerline Dist. to Barrier: 59.0 feet				Noise Source Elevations (in feet)					
Centerline Dist. to Observer: 59.0 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				Lane Equivalent Distance (in feet)					
Road Elevation: 0.0 feet				Autos: 54.129					
Road Grade: 0.0%				Medium Trucks: 53.966					
Left View: -90.0 degrees				Heavy Trucks: 53.982					
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-4.38	-0.62	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-18.76	-0.60	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-14.74	-0.60	-1.20	-5.35	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:	64.0	63.5	59.7	58.5	65.9	66.1			
Medium Trucks:	60.4	60.7	47.7	52.6	61.1	61.1			
Heavy Trucks:	68.8	68.3	64.6	63.1	70.6	70.9			
Vehicle Noise:	70.5	70.1	65.9	64.7	72.2	72.5			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			83	178	384	828			
CNEL:			86	186	400	863			

Thursday, December 8, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: EAC Road Name: Harvill Av. Road Segment: n/o Old Oleander					Project Name: MFBC (Bldg. 13,14,17&18) Job Number: 13697				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 17,524 vehicles				Autos: 15					
Peak Hour Percentage: 7.00%				Medium Trucks (2 Axles): 15					
Peak Hour Volume: 1,227 vehicles				Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 50 mph				Vehicle Mix					
Near/Far Lane Distance: 48 feet				VehicleType		Day	Evening	Night	Daily
Site Data				Autos: 74.7% 7.7% 17.6% 89.28%					
Barrier Height: 0.0 feet				Medium Trucks: 88.5% 1.1% 10.4% 3.19%					
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks: 75.1% 8.0% 16.9% 7.54%					
Centerline Dist. to Barrier: 59.0 feet				Noise Source Elevations (in feet)					
Centerline Dist. to Observer: 59.0 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				Lane Equivalent Distance (in feet)					
Road Elevation: 0.0 feet				Autos: 54.129					
Road Grade: 0.0%				Medium Trucks: 53.966					
Left View: -90.0 degrees				Heavy Trucks: 53.982					
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-1.90	-0.62	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-16.37	-0.60	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-12.64	-0.60	-1.20	-5.35	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:	66.5	66.0	62.1	60.9	68.4	68.6			
Medium Trucks:	62.8	63.1	50.1	55.0	63.4	63.5			
Heavy Trucks:	70.9	70.5	66.7	65.2	72.7	73.0			
Vehicle Noise:	72.7	72.3	68.1	66.9	74.4	74.7			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			116	251	540	1,164			
CNEL:			121	261	563	1,212			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: EAC+P Road Name: Harvill Av. Road Segment: n/o Old Oleander					Project Name: MFBC (Bldg. 13,14,17&18) Job Number: 13697				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 17,951 vehicles				Autos: 15					
Peak Hour Percentage: 7.00%				Medium Trucks (2 Axles): 15					
Peak Hour Volume: 1,257 vehicles				Heavy Trucks (3+ Axles): 15					
Vehicle Speed: 50 mph				Vehicle Mix					
Near/Far Lane Distance: 48 feet				VehicleType		Day	Evening	Night	Daily
Site Data				Autos: 74.7% 7.7% 17.6% 88.91%					
Barrier Height: 0.0 feet				Medium Trucks: 88.5% 1.1% 10.4% 3.21%					
Barrier Type (0-Wall, 1-Berm): 0.0				Heavy Trucks: 75.1% 8.0% 16.9% 7.88%					
Centerline Dist. to Barrier: 59.0 feet				Noise Source Elevations (in feet)					
Centerline Dist. to Observer: 59.0 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				Lane Equivalent Distance (in feet)					
Road Elevation: 0.0 feet				Autos: 54.129					
Road Grade: 0.0%				Medium Trucks: 53.966					
Left View: -90.0 degrees				Heavy Trucks: 53.982					
Right View: 90.0 degrees									
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-1.81	-0.62	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-16.24	-0.60	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-12.34	-0.60	-1.20	-5.35	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:	66.6	66.1	62.2	61.0	68.4	68.7			
Medium Trucks:	63.0	63.2	50.2	55.1	63.6	63.6			
Heavy Trucks:	71.2	70.7	67.0	65.5	73.0	73.3			
Vehicle Noise:	73.0	72.6	68.3	67.1	74.7	74.9			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			121	260	560	1,206			
CNEL:			126	271	583	1,256			

Thursday, December 8, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Harvill Av. Road Segment: n/o Commerce Ctr. Dr.					Project Name: MFBC (Bldg. 13,14,17&18) Job Number: 13697				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 9,371 vehicles Peak Hour Percentage: 7.00% Peak Hour Volume: 656 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 48 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data				Vehicle Mix					
				VehicleType	Day	Evening	Night	Daily	
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 59.0 feet Centerline Dist. to Observer: 59.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 74.7% 7.7% 17.6% 89.28% Medium Trucks: 88.5% 1.1% 10.4% 3.19% Heavy Trucks: 75.1% 8.0% 16.9% 7.54%					
				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)					
				Autos: 54.129 Medium Trucks: 53.966 Heavy Trucks: 53.982					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-4.62	-0.62	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-19.09	-0.60	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-15.35	-0.60	-1.20	-5.35	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:	63.8	63.3	59.4	58.2	65.6	65.9			
Medium Trucks:	60.1	60.3	47.3	52.3	60.7	60.8			
Heavy Trucks:	68.2	67.7	64.0	62.5	70.0	70.3			
Vehicle Noise:	70.0	69.6	65.4	64.2	71.7	72.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			77	165	356	767			
CNEL:			80	172	371	798			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Harvill Av. Road Segment: n/o Commerce Ctr. Dr.					Project Name: MFBC (Bldg. 13,14,17&18) Job Number: 13697				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 10,142 vehicles Peak Hour Percentage: 7.00% Peak Hour Volume: 710 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 48 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data				Vehicle Mix					
				VehicleType	Day	Evening	Night	Daily	
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 59.0 feet Centerline Dist. to Observer: 59.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 74.7% 7.7% 17.6% 88.70% Medium Trucks: 88.5% 1.1% 10.4% 3.17% Heavy Trucks: 75.1% 8.0% 16.9% 8.13%					
				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)					
				Autos: 54.129 Medium Trucks: 53.966 Heavy Trucks: 53.982					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-4.30	-0.62	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-18.77	-0.60	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-14.68	-0.60	-1.20	-5.35	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:	64.1	63.6	59.7	58.5	65.9	66.2			
Medium Trucks:	60.4	60.7	47.7	52.6	61.0	61.1			
Heavy Trucks:	68.9	68.4	64.7	63.2	70.7	70.9			
Vehicle Noise:	70.6	70.2	66.0	64.7	72.3	72.5			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			84	180	388	835			
CNEL:			87	187	404	870			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: EAC Road Name: Harvill Av. Road Segment: n/o Commerce Ctr. Dr.					Project Name: MFBC (Bldg. 13,14,17&18) Job Number: 13697				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 13,375 vehicles Peak Hour Percentage: 7.00% Peak Hour Volume: 936 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 48 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data				Vehicle Mix					
				VehicleType	Day	Evening	Night	Daily	
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 59.0 feet Centerline Dist. to Observer: 59.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 74.7% 7.7% 17.6% 89.28% Medium Trucks: 88.5% 1.1% 10.4% 3.19% Heavy Trucks: 75.1% 8.0% 16.9% 7.54%					
				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)					
				Autos: 54.129 Medium Trucks: 53.966 Heavy Trucks: 53.982					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-3.07	-0.62	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-17.54	-0.60	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-13.81	-0.60	-1.20	-5.35	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:	65.3	64.8	61.0	59.8	67.2	67.4			
Medium Trucks:	61.7	61.9	48.9	53.8	62.3	62.3			
Heavy Trucks:	69.8	69.3	65.6	64.1	71.5	71.8			
Vehicle Noise:	71.6	71.2	66.9	65.7	73.3	73.5			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			97	209	451	972			
CNEL:			101	218	470	1,012			

Thursday, December 8, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: EAC+P Road Name: Harvill Av. Road Segment: n/o Commerce Ctr. Dr.					Project Name: MFBC (Bldg. 13,14,17&18) Job Number: 13697				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 14,146 vehicles Peak Hour Percentage: 7.00% Peak Hour Volume: 990 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 48 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data				Vehicle Mix					
				VehicleType	Day	Evening	Night	Daily	
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 59.0 feet Centerline Dist. to Observer: 59.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 74.7% 7.7% 17.6% 88.87% Medium Trucks: 88.5% 1.1% 10.4% 3.17% Heavy Trucks: 75.1% 8.0% 16.9% 7.96%					
				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)					
				Autos: 54.129 Medium Trucks: 53.966 Heavy Trucks: 53.982					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-2.85	-0.62	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-17.32	-0.60	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-13.33	-0.60	-1.20	-5.35	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:	65.5	65.0	61.2	60.0	67.4	67.7			
Medium Trucks:	61.9	62.1	49.1	54.0	62.5	62.5			
Heavy Trucks:	70.2	69.8	66.1	64.5	72.0	72.3			
Vehicle Noise:	72.0	71.5	67.3	66.1	73.6	73.9			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			103	223	480	1,033			
CNEL:			108	232	500	1,076			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Harvill Av. Road Segment: n/o Cajalco Expy			Project Name: MFBC (Bldg. 13,14,17&18) Job Number: 13697						
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 10,869 vehicles Peak Hour Percentage: 7.00% Peak Hour Volume: 761 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 48 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data				Vehicle Mix					
				VehicleType	Day	Evening	Night	Daily	
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 59.0 feet Centerline Dist. to Observer: 59.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 74.7% 7.7% 17.6% 89.28% Medium Trucks: 88.5% 1.1% 10.4% 3.19% Heavy Trucks: 75.1% 8.0% 16.9% 7.54%					
				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)					
				Autos: 54.129 Medium Trucks: 53.966 Heavy Trucks: 53.982					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-3.97	-0.62	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-18.45	-0.60	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-14.71	-0.60	-1.20	-5.35	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:	64.4	63.9	60.1	58.9	66.3	66.5			
Medium Trucks:	60.8	61.0	48.0	52.9	61.4	61.4			
Heavy Trucks:	68.9	68.4	64.7	63.2	70.6	70.9			
Vehicle Noise:	70.7	70.2	66.0	64.8	72.3	72.6			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			85	182	393	846			
CNEL:			88	190	409	881			

Thursday, December 8, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Harvill Av. Road Segment: n/o Cajalco Expy			Project Name: MFBC (Bldg. 13,14,17&18) Job Number: 13697						
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 11,983 vehicles Peak Hour Percentage: 7.00% Peak Hour Volume: 839 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 48 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data				Vehicle Mix					
				VehicleType	Day	Evening	Night	Daily	
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 59.0 feet Centerline Dist. to Observer: 59.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 74.7% 7.7% 17.6% 89.59% Medium Trucks: 88.5% 1.1% 10.4% 3.00% Heavy Trucks: 75.1% 8.0% 16.9% 7.41%					
				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)					
				Autos: 54.129 Medium Trucks: 53.966 Heavy Trucks: 53.982					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	-3.54	-0.62	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-18.29	-0.60	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-14.36	-0.60	-1.20	-5.35	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:	64.8	64.3	60.5	59.3	66.7	67.0			
Medium Trucks:	60.9	61.1	48.1	53.1	61.5	61.6			
Heavy Trucks:	69.2	68.7	65.0	63.5	71.0	71.3			
Vehicle Noise:	71.0	70.6	66.4	65.2	72.7	73.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			89	193	415	894			
CNEL:			93	201	432	931			

Thursday, December 8, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: EAC Road Name: Harvill Av. Road Segment: n/o Cajalco Expy			Project Name: MFBC (Bldg. 13,14,17&18) Job Number: 13697						
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 27,315 vehicles Peak Hour Percentage: 7.00% Peak Hour Volume: 1,912 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 48 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data				Vehicle Mix					
				VehicleType	Day	Evening	Night	Daily	
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 59.0 feet Centerline Dist. to Observer: 59.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 74.7% 7.7% 17.6% 89.28% Medium Trucks: 88.5% 1.1% 10.4% 3.19% Heavy Trucks: 75.1% 8.0% 16.9% 7.54%					
				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)					
				Autos: 54.129 Medium Trucks: 53.966 Heavy Trucks: 53.982					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	0.03	-0.62	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-14.44	-0.60	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-10.71	-0.60	-1.20	-5.35	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:	68.4	67.9	64.1	62.9	70.3	70.5			
Medium Trucks:	64.8	65.0	52.0	56.9	65.4	65.4			
Heavy Trucks:	72.9	72.4	68.7	67.2	74.6	74.9			
Vehicle Noise:	74.7	74.3	70.0	68.8	76.4	76.6			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			156	337	726	1,564			
CNEL:			163	351	756	1,629			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: EAC+P Road Name: Harvill Av. Road Segment: n/o Cajalco Expy			Project Name: MFBC (Bldg. 13,14,17&18) Job Number: 13697						
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 28,428 vehicles Peak Hour Percentage: 7.00% Peak Hour Volume: 1,990 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 48 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data				Vehicle Mix					
				VehicleType	Day	Evening	Night	Daily	
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 59.0 feet Centerline Dist. to Observer: 59.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 74.7% 7.7% 17.6% 89.41% Medium Trucks: 88.5% 1.1% 10.4% 3.11% Heavy Trucks: 75.1% 8.0% 16.9% 7.48%					
				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)					
				Autos: 54.129 Medium Trucks: 53.966 Heavy Trucks: 53.982					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	70.20	0.21	-0.62	-1.20	-4.69	0.000	0.000		
Medium Trucks:	81.00	-14.38	-0.60	-1.20	-4.88	0.000	0.000		
Heavy Trucks:	85.38	-10.57	-0.60	-1.20	-5.35	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:	68.6	68.1	64.2	63.0	70.5	70.7			
Medium Trucks:	64.8	65.0	52.1	57.0	65.4	65.5			
Heavy Trucks:	73.0	72.5	68.8	67.3	74.8	75.1			
Vehicle Noise:	74.8	74.4	70.2	69.0	76.5	76.8			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			160	345	742	1,599			
CNEL:			167	359	773	1,666			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: E		Project Name: MFBC (Bldg. 13,14,17&18)					
Road Name: Harvill Av.		Job Number: 13697					
Road Segment: s/o Cajalco Expy							
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 13,086 vehicles				Autos: 15			
Peak Hour Percentage: 7.00%				Medium Trucks (2 Axles): 15			
Peak Hour Volume: 916 vehicles				Heavy Trucks (3+ Axles): 15			
Vehicle Speed: 50 mph				Vehicle Mix			
Near/Far Lane Distance: 48 feet				VehicleType			
				Autos: 74.7% 7.7% 17.6% 89.28%			
				Medium Trucks: 88.5% 1.1% 10.4% 3.19%			
				Heavy Trucks: 75.1% 8.0% 16.9% 7.54%			
Site Data				Noise Source Elevations (in feet)			
Barrier Height: 0.0 feet				Autos: 0.000			
Barrier Type (0-Wall, 1-Berm): 0.0				Medium Trucks: 2.297			
Centerline Dist. to Barrier: 59.0 feet				Heavy Trucks: 8.004 Grade Adjustment: 0.0			
Centerline Dist. to Observer: 59.0 feet				Lane Equivalent Distance (in feet)			
Barrier Distance to Observer: 0.0 feet				Autos: 54.129			
Observer Height (Above Pad): 5.0 feet				Medium Trucks: 53.966			
Pad Elevation: 0.0 feet				Heavy Trucks: 53.982			
Road Elevation: 0.0 feet							
Road Grade: 0.0%							
Left View: -90.0 degrees							
Right View: 90.0 degrees							
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.17	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-17.64	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-13.90	-0.60	-1.20	-5.35	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:	65.2	64.7	60.9	59.7	67.1	67.4	
Medium Trucks:	61.6	61.8	48.8	53.7	62.2	62.2	
Heavy Trucks:	69.7	69.2	65.5	64.0	71.4	71.7	
Vehicle Noise:	71.5	71.1	66.8	65.6	73.2	73.4	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			96	206	445	958	
CNEL:			100	215	463	998	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: E+P		Project Name: MFBC (Bldg. 13,14,17&18)					
Road Name: Harvill Av.		Job Number: 13697					
Road Segment: s/o Cajalco Expy							
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 13,344 vehicles				Autos: 15			
Peak Hour Percentage: 7.00%				Medium Trucks (2 Axles): 15			
Peak Hour Volume: 934 vehicles				Heavy Trucks (3+ Axles): 15			
Vehicle Speed: 50 mph				Vehicle Mix			
Near/Far Lane Distance: 48 feet				VehicleType			
				Autos: 74.7% 7.7% 17.6% 89.32%			
				Medium Trucks: 88.5% 1.1% 10.4% 3.15%			
				Heavy Trucks: 75.1% 8.0% 16.9% 7.53%			
Site Data				Noise Source Elevations (in feet)			
Barrier Height: 0.0 feet				Autos: 0.000			
Barrier Type (0-Wall, 1-Berm): 0.0				Medium Trucks: 2.297			
Centerline Dist. to Barrier: 59.0 feet				Heavy Trucks: 8.004 Grade Adjustment: 0.0			
Centerline Dist. to Observer: 59.0 feet				Lane Equivalent Distance (in feet)			
Barrier Distance to Observer: 0.0 feet				Autos: 54.129			
Observer Height (Above Pad): 5.0 feet				Medium Trucks: 53.966			
Pad Elevation: 0.0 feet				Heavy Trucks: 53.982			
Road Elevation: 0.0 feet							
Road Grade: 0.0%							
Left View: -90.0 degrees							
Right View: 90.0 degrees							
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-3.08	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-17.60	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-13.82	-0.60	-1.20	-5.35	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:	65.3	64.8	60.9	59.8	67.2	67.4	
Medium Trucks:	61.6	61.8	48.8	53.8	62.2	62.3	
Heavy Trucks:	69.8	69.3	65.6	64.0	71.5	71.8	
Vehicle Noise:	71.5	71.1	66.9	65.7	73.2	73.5	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			97	209	450	969	
CNEL:			101	218	469	1,010	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: EAC		Project Name: MFBC (Bldg. 13,14,17&18)					
Road Name: Harvill Av.		Job Number: 13697					
Road Segment: s/o Cajalco Expy							
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 28,231 vehicles				Autos: 15			
Peak Hour Percentage: 7.00%				Medium Trucks (2 Axles): 15			
Peak Hour Volume: 1,976 vehicles				Heavy Trucks (3+ Axles): 15			
Vehicle Speed: 50 mph				Vehicle Mix			
Near/Far Lane Distance: 48 feet				VehicleType			
				Autos: 74.7% 7.7% 17.6% 89.28%			
				Medium Trucks: 88.5% 1.1% 10.4% 3.19%			
				Heavy Trucks: 75.1% 8.0% 16.9% 7.54%			
Site Data				Noise Source Elevations (in feet)			
Barrier Height: 0.0 feet				Autos: 0.000			
Barrier Type (0-Wall, 1-Berm): 0.0				Medium Trucks: 2.297			
Centerline Dist. to Barrier: 59.0 feet				Heavy Trucks: 8.004 Grade Adjustment: 0.0			
Centerline Dist. to Observer: 59.0 feet				Lane Equivalent Distance (in feet)			
Barrier Distance to Observer: 0.0 feet				Autos: 54.129			
Observer Height (Above Pad): 5.0 feet				Medium Trucks: 53.966			
Pad Elevation: 0.0 feet				Heavy Trucks: 53.982			
Road Elevation: 0.0 feet							
Road Grade: 0.0%							
Left View: -90.0 degrees							
Right View: 90.0 degrees							
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	0.17	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-14.30	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-10.57	-0.60	-1.20	-5.35	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:	68.6	68.0	64.2	63.0	70.4	70.7	
Medium Trucks:	64.9	65.1	52.1	57.1	65.5	65.6	
Heavy Trucks:	73.0	72.5	68.8	67.3	74.8	75.1	
Vehicle Noise:	74.8	74.4	70.2	69.0	76.5	76.8	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			160	344	742	1,599	
CNEL:			167	359	773	1,666	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: EAC+P		Project Name: MFBC (Bldg. 13,14,17&18)					
Road Name: Harvill Av.		Job Number: 13697					
Road Segment: s/o Cajalco Expy							
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 28,490 vehicles				Autos: 15			
Peak Hour Percentage: 7.00%				Medium Trucks (2 Axles): 15			
Peak Hour Volume: 1,994 vehicles				Heavy Trucks (3+ Axles): 15			
Vehicle Speed: 50 mph				Vehicle Mix			
Near/Far Lane Distance: 48 feet				VehicleType			
				Autos: 74.7% 7.7% 17.6% 89.29%			
				Medium Trucks: 88.5% 1.1% 10.4% 3.17%			
				Heavy Trucks: 75.1% 8.0% 16.9% 7.53%			
Site Data				Noise Source Elevations (in feet)			
Barrier Height: 0.0 feet				Autos: 0.000			
Barrier Type (0-Wall, 1-Berm): 0.0				Medium Trucks: 2.297			
Centerline Dist. to Barrier: 59.0 feet				Heavy Trucks: 8.004 Grade Adjustment: 0.0			
Centerline Dist. to Observer: 59.0 feet				Lane Equivalent Distance (in feet)			
Barrier Distance to Observer: 0.0 feet				Autos: 54.129			
Observer Height (Above Pad): 5.0 feet				Medium Trucks: 53.966			
Pad Elevation: 0.0 feet				Heavy Trucks: 53.982			
Road Elevation: 0.0 feet							
Road Grade: 0.0%							
Left View: -90.0 degrees							
Right View: 90.0 degrees							
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	0.21	-0.62	-1.20	-4.69	0.000	0.000
Medium Trucks:	81.00	-14.28	-0.60	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-10.53	-0.60	-1.20	-5.35	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:	68.6	68.1	64.2	63.1	70.5	70.7	
Medium Trucks:	64.9	65.1	52.2	57.1	65.5	65.6	
Heavy Trucks:	73.0	72.6	68.9	67.3	74.8	75.1	
Vehicle Noise:	74.8	74.4	70.2	69.0	76.5	76.8	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			161	346	746	1,608	
CNEL:			168	361	777	1,675	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: E Road Name: Harley Knox Blvd Road Segment: w/o I-215 SB Ramps				Project Name: MFBC (Bldg. 13,14,17&18) Job Number: 13697			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 10,986 vehicles Peak Hour Percentage: 7.00% Peak Hour Volume: 769 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 78 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
Site Data				Vehicle Mix			
				VehicleType	Day	Evening	Night
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 76.0 feet Centerline Dist. to Observer: 76.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 74.7% 7.7% 17.6% 89.28% Medium Trucks: 88.5% 1.1% 10.4% 3.19% Heavy Trucks: 75.1% 8.0% 16.9% 7.54%			
				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)			
				Autos: 65.422 Medium Trucks: 65.286 Heavy Trucks: 65.299			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	-4.34	-1.85	-1.20	-4.73	0.000	0.000
Medium Trucks:	82.40	-18.81	-1.84	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-15.08	-1.84	-1.20	-5.25	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:	64.4	63.9	60.0	58.8	66.3	66.5	
Medium Trucks:	60.5	60.8	47.8	52.7	61.2	61.2	
Heavy Trucks:	68.3	67.8	64.1	62.6	70.0	70.3	
Vehicle Noise:	70.3	69.8	65.6	64.4	71.9	72.2	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			102	220	475	1,023	
CNEL:			107	230	495	1,066	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: E+P Road Name: Harley Knox Blvd Road Segment: w/o I-215 SB Ramps				Project Name: MFBC (Bldg. 13,14,17&18) Job Number: 13697			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 11,199 vehicles Peak Hour Percentage: 7.00% Peak Hour Volume: 784 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 78 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
Site Data				Vehicle Mix			
				VehicleType	Day	Evening	Night
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 76.0 feet Centerline Dist. to Observer: 76.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 74.7% 7.7% 17.6% 88.98% Medium Trucks: 88.5% 1.1% 10.4% 3.21% Heavy Trucks: 75.1% 8.0% 16.9% 7.81%			
				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)			
				Autos: 65.422 Medium Trucks: 65.286 Heavy Trucks: 65.299			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	-4.27	-1.85	-1.20	-4.73	0.000	0.000
Medium Trucks:	82.40	-18.70	-1.84	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-14.84	-1.84	-1.20	-5.25	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:	64.5	63.9	60.1	58.9	66.3	66.6	
Medium Trucks:	60.7	60.9	47.9	52.8	61.3	61.3	
Heavy Trucks:	68.5	68.0	64.3	62.8	70.3	70.6	
Vehicle Noise:	70.4	70.0	65.8	64.6	72.1	72.4	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			105	227	488	1,052	
CNEL:			110	236	509	1,096	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: EAC Road Name: Harley Knox Blvd Road Segment: w/o I-215 SB Ramps				Project Name: MFBC (Bldg. 13,14,17&18) Job Number: 13697			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 20,410 vehicles Peak Hour Percentage: 7.00% Peak Hour Volume: 1,429 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 78 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
Site Data				Vehicle Mix			
				VehicleType	Day	Evening	Night
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 76.0 feet Centerline Dist. to Observer: 76.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 74.7% 7.7% 17.6% 89.28% Medium Trucks: 88.5% 1.1% 10.4% 3.19% Heavy Trucks: 75.1% 8.0% 16.9% 7.54%			
				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)			
				Autos: 65.422 Medium Trucks: 65.286 Heavy Trucks: 65.299			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	-1.65	-1.85	-1.20	-4.73	0.000	0.000
Medium Trucks:	82.40	-16.12	-1.84	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-12.39	-1.84	-1.20	-5.25	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	67.1	66.6	62.7	61.5	68.9	69.2	
Medium Trucks:	63.2	63.5	50.5	55.4	63.8	63.9	
Heavy Trucks:	71.0	70.5	66.8	65.3	72.7	73.0	
Vehicle Noise:	72.9	72.5	68.3	67.1	74.6	74.9	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			155	333	718	1,546	
CNEL:			161	347	748	1,610	

Thursday, December 8, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: EAC+P Road Name: Harley Knox Blvd Road Segment: w/o I-215 SB Ramps				Project Name: MFBC (Bldg. 13,14,17&18) Job Number: 13697			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 20,624 vehicles Peak Hour Percentage: 7.00% Peak Hour Volume: 1,444 vehicles Vehicle Speed: 55 mph Near/Far Lane Distance: 78 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
Site Data				Vehicle Mix			
				VehicleType	Day	Evening	Night
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 76.0 feet Centerline Dist. to Observer: 76.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 74.7% 7.7% 17.6% 89.12% Medium Trucks: 88.5% 1.1% 10.4% 3.20% Heavy Trucks: 75.1% 8.0% 16.9% 7.68%			
				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)			
				Autos: 65.422 Medium Trucks: 65.286 Heavy Trucks: 65.299			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	71.78	-1.61	-1.85	-1.20	-4.73	0.000	0.000
Medium Trucks:	82.40	-16.06	-1.84	-1.20	-4.88	0.000	0.000
Heavy Trucks:	86.40	-12.26	-1.84	-1.20	-5.25	0.000	0.000
Unmitigated Noise Levels (without Topo and barrier attenuation)							
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL	
Autos:	67.1	66.6	62.8	61.6	69.0	69.3	
Medium Trucks:	63.3	63.5	50.5	55.5	63.9	64.0	
Heavy Trucks:	71.1	70.6	66.9	65.4	72.9	73.2	
Vehicle Noise:	73.0	72.6	68.4	67.2	74.7	75.0	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			157	338	729	1,570	
CNEL:			164	352	759	1,635	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: E		Project Name: MFBC (Bldg. 13,14,17&18)					
Road Name: Old Oleander Av.		Job Number: 13697					
Road Segment: w/o Harvill Av.							
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 924 vehicles				Autos: 15			
Peak Hour Percentage: 7.00%				Medium Trucks (2 Axles): 15			
Peak Hour Volume: 65 vehicles				Heavy Trucks (3+ Axles): 15			
Vehicle Speed: 40 mph				Vehicle Mix			
Near/Far Lane Distance: 12 feet				VehicleType			
				Autos: 74.7% 7.7% 17.6% 89.28%			
				Medium Trucks: 88.5% 1.1% 10.4% 3.19%			
				Heavy Trucks: 75.1% 8.0% 16.9% 7.54%			
Site Data				Noise Source Elevations (in feet)			
Barrier Height: 0.0 feet				Autos: 0.000			
Barrier Type (0-Wall, 1-Berm): 0.0				Medium Trucks: 2.297			
Centerline Dist. to Barrier: 37.0 feet				Heavy Trucks: 8.004 Grade Adjustment: 0.0			
Centerline Dist. to Observer: 37.0 feet				Lane Equivalent Distance (in feet)			
Barrier Distance to Observer: 0.0 feet				Autos: 36.851			
Observer Height (Above Pad): 5.0 feet				Medium Trucks: 36.610			
Pad Elevation: 0.0 feet				Heavy Trucks: 36.634			
Road Elevation: 0.0 feet							
Road Grade: 0.0%							
Left View: -90.0 degrees							
Right View: 90.0 degrees							
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-13.71	1.88	-1.20	-4.56	0.000	0.000
Medium Trucks:	77.72	-28.18	1.93	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-24.45	1.92	-1.20	-5.61	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:	53.5	53.0	49.1	47.9	55.4	55.6	
Medium Trucks:	50.3	50.5	37.5	42.4	50.9	50.9	
Heavy Trucks:	59.3	58.8	55.1	53.6	61.0	61.3	
Vehicle Noise:	60.7	60.3	56.1	54.9	62.4	62.7	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			12	25	53	115	
CNEL:			12	26	56	120	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: E+P		Project Name: MFBC (Bldg. 13,14,17&18)					
Road Name: Old Oleander Av.		Job Number: 13697					
Road Segment: w/o Harvill Av.							
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 1,000 vehicles				Autos: 15			
Peak Hour Percentage: 7.00%				Medium Trucks (2 Axles): 15			
Peak Hour Volume: 70 vehicles				Heavy Trucks (3+ Axles): 15			
Vehicle Speed: 40 mph				Vehicle Mix			
Near/Far Lane Distance: 12 feet				VehicleType			
				Autos: 74.7% 7.7% 17.6% 86.40%			
				Medium Trucks: 88.5% 1.1% 10.4% 3.54%			
				Heavy Trucks: 75.1% 8.0% 16.9% 10.07%			
Site Data				Noise Source Elevations (in feet)			
Barrier Height: 0.0 feet				Autos: 0.000			
Barrier Type (0-Wall, 1-Berm): 0.0				Medium Trucks: 2.297			
Centerline Dist. to Barrier: 37.0 feet				Heavy Trucks: 8.004 Grade Adjustment: 0.0			
Centerline Dist. to Observer: 37.0 feet				Lane Equivalent Distance (in feet)			
Barrier Distance to Observer: 0.0 feet				Autos: 36.851			
Observer Height (Above Pad): 5.0 feet				Medium Trucks: 36.610			
Pad Elevation: 0.0 feet				Heavy Trucks: 36.634			
Road Elevation: 0.0 feet							
Road Grade: 0.0%							
Left View: -90.0 degrees							
Right View: 90.0 degrees							
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-13.51	1.88	-1.20	-4.56	0.000	0.000
Medium Trucks:	77.72	-27.39	1.93	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-22.84	1.92	-1.20	-5.61	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:	53.7	53.2	49.3	48.1	55.6	55.8	
Medium Trucks:	51.1	51.3	38.3	43.2	51.7	51.7	
Heavy Trucks:	60.9	60.4	56.7	55.2	62.6	62.9	
Vehicle Noise:	62.0	61.6	57.5	56.2	63.7	64.0	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			14	30	65	141	
CNEL:			15	32	68	147	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: EAC		Project Name: MFBC (Bldg. 13,14,17&18)					
Road Name: Old Oleander Av.		Job Number: 13697					
Road Segment: w/o Harvill Av.							
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 5,379 vehicles				Autos: 15			
Peak Hour Percentage: 7.00%				Medium Trucks (2 Axles): 15			
Peak Hour Volume: 376 vehicles				Heavy Trucks (3+ Axles): 15			
Vehicle Speed: 40 mph				Vehicle Mix			
Near/Far Lane Distance: 12 feet				VehicleType			
				Autos: 74.7% 7.7% 17.6% 89.28%			
				Medium Trucks: 88.5% 1.1% 10.4% 3.19%			
				Heavy Trucks: 75.1% 8.0% 16.9% 7.54%			
Site Data				Noise Source Elevations (in feet)			
Barrier Height: 0.0 feet				Autos: 0.000			
Barrier Type (0-Wall, 1-Berm): 0.0				Medium Trucks: 2.297			
Centerline Dist. to Barrier: 37.0 feet				Heavy Trucks: 8.004 Grade Adjustment: 0.0			
Centerline Dist. to Observer: 37.0 feet				Lane Equivalent Distance (in feet)			
Barrier Distance to Observer: 0.0 feet				Autos: 36.851			
Observer Height (Above Pad): 5.0 feet				Medium Trucks: 36.610			
Pad Elevation: 0.0 feet				Heavy Trucks: 36.634			
Road Elevation: 0.0 feet							
Road Grade: 0.0%							
Left View: -90.0 degrees							
Right View: 90.0 degrees							
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-6.06	1.88	-1.20	-4.56	0.000	0.000
Medium Trucks:	77.72	-20.53	1.93	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-16.80	1.92	-1.20	-5.61	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:	61.1	60.6	56.8	55.6	63.0	63.3	
Medium Trucks:	57.9	58.1	45.1	50.1	58.5	58.6	
Heavy Trucks:	66.9	66.4	62.7	61.2	68.7	69.0	
Vehicle Noise:	68.3	67.9	63.8	62.5	70.0	70.3	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			37	80	173	372	
CNEL:			39	84	180	388	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: EAC+P		Project Name: MFBC (Bldg. 13,14,17&18)					
Road Name: Old Oleander Av.		Job Number: 13697					
Road Segment: w/o Harvill Av.							
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 5,455 vehicles				Autos: 15			
Peak Hour Percentage: 7.00%				Medium Trucks (2 Axles): 15			
Peak Hour Volume: 382 vehicles				Heavy Trucks (3+ Axles): 15			
Vehicle Speed: 40 mph				Vehicle Mix			
Near/Far Lane Distance: 12 feet				VehicleType			
				Autos: 74.7% 7.7% 17.6% 88.75%			
				Medium Trucks: 88.5% 1.1% 10.4% 3.25%			
				Heavy Trucks: 75.1% 8.0% 16.9% 8.00%			
Site Data				Noise Source Elevations (in feet)			
Barrier Height: 0.0 feet				Autos: 0.000			
Barrier Type (0-Wall, 1-Berm): 0.0				Medium Trucks: 2.297			
Centerline Dist. to Barrier: 37.0 feet				Heavy Trucks: 8.004 Grade Adjustment: 0.0			
Centerline Dist. to Observer: 37.0 feet				Lane Equivalent Distance (in feet)			
Barrier Distance to Observer: 0.0 feet				Autos: 36.851			
Observer Height (Above Pad): 5.0 feet				Medium Trucks: 36.610			
Pad Elevation: 0.0 feet				Heavy Trucks: 36.634			
Road Elevation: 0.0 feet							
Road Grade: 0.0%							
Left View: -90.0 degrees							
Right View: 90.0 degrees							
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-6.03	1.88	-1.20	-4.56	0.000	0.000
Medium Trucks:	77.72	-20.38	1.93	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-16.48	1.92	-1.20	-5.61	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:	61.2	60.7	56.8	55.6	63.0	63.3	
Medium Trucks:	58.1	58.3	45.3	50.2	58.7	58.7	
Heavy Trucks:	67.2	66.8	63.0	61.5	69.0	69.3	
Vehicle Noise:	68.6	68.2	64.0	62.8	70.3	70.6	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			39	83	180	387	
CNEL:			40	87	187	404	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: E Road Name: Cajalco Expy Road Segment: w/o Harvill Av.				Project Name: MFBC (Bldg. 13,14,17&18) Job Number: 13697			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 24,229 vehicles Peak Hour Percentage: 7.00% Peak Hour Volume: 1,696 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 102 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
Site Data				Vehicle Mix			
				VehicleType	Day	Evening	Night
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 92.0 feet Centerline Dist. to Observer: 92.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 74.7% 7.7% 17.6% 89.28% Medium Trucks: 88.5% 1.1% 10.4% 3.19% Heavy Trucks: 75.1% 8.0% 16.9% 7.54%			
				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)			
				Autos: 76.733 Medium Trucks: 76.618 Heavy Trucks: 76.629			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.49	-2.89	-1.20	-4.76	0.000	0.000
Medium Trucks:	81.00	-14.96	-2.88	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-11.23	-2.88	-1.20	-5.18	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:	65.6	65.1	61.3	60.1	67.5	67.8
Medium Trucks:	62.0	62.2	49.2	54.1	62.6	62.6
Heavy Trucks:	70.1	69.6	65.9	64.4	71.8	72.1
Vehicle Noise:	71.9	71.5	67.2	66.0	73.6	73.8

Centerline Distance to Noise Contour (in feet)					
	70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:	159	342	737	1,587	
CNEL:	165	356	767	1,653	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: E+P Road Name: Cajalco Expy Road Segment: w/o Harvill Av.				Project Name: MFBC (Bldg. 13,14,17&18) Job Number: 13697			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 24,386 vehicles Peak Hour Percentage: 7.00% Peak Hour Volume: 1,707 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 102 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
Site Data				Vehicle Mix			
				VehicleType	Day	Evening	Night
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 92.0 feet Centerline Dist. to Observer: 92.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 74.7% 7.7% 17.6% 89.34% Medium Trucks: 88.5% 1.1% 10.4% 3.17% Heavy Trucks: 75.1% 8.0% 16.9% 7.49%			
				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)			
				Autos: 76.733 Medium Trucks: 76.618 Heavy Trucks: 76.629			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.46	-2.89	-1.20	-4.76	0.000	0.000
Medium Trucks:	81.00	-14.96	-2.88	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-11.23	-2.88	-1.20	-5.18	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:	65.6	65.1	61.3	60.1	67.5	67.8
Medium Trucks:	62.0	62.2	49.2	54.1	62.6	62.6
Heavy Trucks:	70.1	69.6	65.9	64.4	71.8	72.1
Vehicle Noise:	71.9	71.5	67.2	66.0	73.6	73.8

Centerline Distance to Noise Contour (in feet)					
	70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:	159	342	737	1,589	
CNEL:	165	357	768	1,655	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: EAC Road Name: Cajalco Expy Road Segment: w/o Harvill Av.				Project Name: MFBC (Bldg. 13,14,17&18) Job Number: 13697			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 35,605 vehicles Peak Hour Percentage: 7.00% Peak Hour Volume: 2,492 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 102 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
Site Data				Vehicle Mix			
				VehicleType	Day	Evening	Night
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 92.0 feet Centerline Dist. to Observer: 92.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 74.7% 7.7% 17.6% 89.28% Medium Trucks: 88.5% 1.1% 10.4% 3.19% Heavy Trucks: 75.1% 8.0% 16.9% 7.54%			
				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)			
				Autos: 76.733 Medium Trucks: 76.618 Heavy Trucks: 76.629			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	1.18	-2.89	-1.20	-4.76	0.000	0.000
Medium Trucks:	81.00	-13.29	-2.88	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-9.56	-2.88	-1.20	-5.18	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.3	66.8	62.9	61.7	69.2	69.4
Medium Trucks:	63.6	63.9	50.9	55.8	64.2	64.3
Heavy Trucks:	71.7	71.2	67.5	66.0	73.5	73.8
Vehicle Noise:	73.5	73.1	68.9	67.7	75.2	75.5

Centerline Distance to Noise Contour (in feet)					
	70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:	205	442	952	2,051	
CNEL:	214	460	992	2,136	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: EAC+P Road Name: Cajalco Expy Road Segment: w/o Harvill Av.				Project Name: MFBC (Bldg. 13,14,17&18) Job Number: 13697			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 35,763 vehicles Peak Hour Percentage: 7.00% Peak Hour Volume: 2,503 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 102 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
Site Data				Vehicle Mix			
				VehicleType	Day	Evening	Night
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 92.0 feet Centerline Dist. to Observer: 92.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 74.7% 7.7% 17.6% 89.32% Medium Trucks: 88.5% 1.1% 10.4% 3.17% Heavy Trucks: 75.1% 8.0% 16.9% 7.50%			
				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)			
				Autos: 76.733 Medium Trucks: 76.618 Heavy Trucks: 76.629			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	1.20	-2.89	-1.20	-4.76	0.000	0.000
Medium Trucks:	81.00	-13.29	-2.88	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-9.56	-2.88	-1.20	-5.18	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)						
VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	67.3	66.8	63.0	61.8	69.2	69.4
Medium Trucks:	63.6	63.9	50.9	55.8	64.2	64.3
Heavy Trucks:	71.7	71.2	67.5	66.0	73.5	73.8
Vehicle Noise:	73.5	73.1	68.9	67.7	75.2	75.5

Centerline Distance to Noise Contour (in feet)					
	70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:	205	442	953	2,053	
CNEL:	214	461	992	2,138	

Thursday, December 8, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: E Road Name: Cajalco Expy Road Segment: e/o Harvill Av.				Project Name: MFBC (Bldg. 13,14,17&18) Job Number: 13697			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 27,043 vehicles Peak Hour Percentage: 7.00% Peak Hour Volume: 1,893 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 102 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
Site Data				Vehicle Mix			
				VehicleType	Day	Evening	Night
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 92.0 feet Centerline Dist. to Observer: 92.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 74.7% 7.7% 17.6% 89.28% Medium Trucks: 88.5% 1.1% 10.4% 3.19% Heavy Trucks: 75.1% 8.0% 16.9% 7.54%			
				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)			
				Autos: 76.733 Medium Trucks: 76.618 Heavy Trucks: 76.629			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	-0.02	-2.89	-1.20	-4.76	0.000	0.000
Medium Trucks:	81.00	-14.49	-2.88	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-10.75	-2.88	-1.20	-5.18	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:	66.1	65.6	61.7	60.6	68.0	68.2	
Medium Trucks:	62.4	62.7	49.7	54.6	63.0	63.1	
Heavy Trucks:	70.5	70.1	66.3	64.8	72.3	72.6	
Vehicle Noise:	72.3	71.9	67.7	66.5	74.0	74.3	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			171	368	793	1,707	
CNEL:			178	383	825	1,778	

Thursday, December 8, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: E+P Road Name: Cajalco Expy Road Segment: e/o Harvill Av.				Project Name: MFBC (Bldg. 13,14,17&18) Job Number: 13697			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 27,668 vehicles Peak Hour Percentage: 7.00% Peak Hour Volume: 1,937 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 102 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
Site Data				Vehicle Mix			
				VehicleType	Day	Evening	Night
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 92.0 feet Centerline Dist. to Observer: 92.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 74.7% 7.7% 17.6% 89.25% Medium Trucks: 88.5% 1.1% 10.4% 3.16% Heavy Trucks: 75.1% 8.0% 16.9% 7.59%			
				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)			
				Autos: 76.733 Medium Trucks: 76.618 Heavy Trucks: 76.629			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	0.08	-2.89	-1.20	-4.76	0.000	0.000
Medium Trucks:	81.00	-14.43	-2.88	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-10.62	-2.88	-1.20	-5.18	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:	66.2	65.7	61.8	60.7	68.1	68.3	
Medium Trucks:	62.5	62.7	49.7	54.7	63.1	63.2	
Heavy Trucks:	70.7	70.2	66.5	65.0	72.4	72.7	
Vehicle Noise:	72.5	72.0	67.8	66.6	74.1	74.4	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			174	375	807	1,738	
CNEL:			181	390	840	1,811	

Thursday, December 8, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: EAC Road Name: Cajalco Expy Road Segment: e/o Harvill Av.				Project Name: MFBC (Bldg. 13,14,17&18) Job Number: 13697			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 53,535 vehicles Peak Hour Percentage: 7.00% Peak Hour Volume: 3,747 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 102 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
Site Data				Vehicle Mix			
				VehicleType	Day	Evening	Night
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 92.0 feet Centerline Dist. to Observer: 92.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 74.7% 7.7% 17.6% 89.28% Medium Trucks: 88.5% 1.1% 10.4% 3.19% Heavy Trucks: 75.1% 8.0% 16.9% 7.54%			
				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)			
				Autos: 76.733 Medium Trucks: 76.618 Heavy Trucks: 76.629			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	2.95	-2.89	-1.20	-4.76	0.000	0.000
Medium Trucks:	81.00	-11.52	-2.88	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-7.79	-2.88	-1.20	-5.18	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:	69.1	68.6	64.7	63.5	70.9	71.2	
Medium Trucks:	65.4	65.6	52.6	57.6	66.0	66.1	
Heavy Trucks:	73.5	73.0	69.3	67.8	75.3	75.6	
Vehicle Noise:	75.3	74.9	70.7	69.5	77.0	77.3	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			269	580	1,249	2,692	
CNEL:			280	604	1,301	2,804	

Thursday, December 8, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: EAC+P Road Name: Cajalco Expy Road Segment: e/o Harvill Av.				Project Name: MFBC (Bldg. 13,14,17&18) Job Number: 13697			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 54,160 vehicles Peak Hour Percentage: 7.00% Peak Hour Volume: 3,791 vehicles Vehicle Speed: 50 mph Near/Far Lane Distance: 102 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
Site Data				Vehicle Mix			
				VehicleType	Day	Evening	Night
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 92.0 feet Centerline Dist. to Observer: 92.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 74.7% 7.7% 17.6% 89.26% Medium Trucks: 88.5% 1.1% 10.4% 3.17% Heavy Trucks: 75.1% 8.0% 16.9% 7.56%			
				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)			
				Autos: 76.733 Medium Trucks: 76.618 Heavy Trucks: 76.629			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	70.20	3.00	-2.89	-1.20	-4.76	0.000	0.000
Medium Trucks:	81.00	-11.49	-2.88	-1.20	-4.88	0.000	0.000
Heavy Trucks:	85.38	-7.72	-2.88	-1.20	-5.18	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:	69.1	68.6	64.8	63.6	71.0	71.2	
Medium Trucks:	65.4	65.7	52.7	57.6	66.0	66.1	
Heavy Trucks:	73.6	73.1	69.4	67.9	75.3	75.6	
Vehicle Noise:	75.4	75.0	70.7	69.5	77.1	77.3	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			272	585	1,261	2,717	
CNEL:			283	610	1,313	2,830	

Thursday, December 8, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: E Road Name: Commerce Ctr. Dr. Road Segment: w/o Harvill Av.				Project Name: MFBC (Bldg. 13,14,17&18) Job Number: 13697			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 457 vehicles Peak Hour Percentage: 7.00% Peak Hour Volume: 32 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 12 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
Site Data				Vehicle Mix			
				VehicleType	Day	Evening	Night
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 37.0 feet Centerline Dist. to Observer: 37.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 74.7% 7.7% 17.6% 89.28% Medium Trucks: 88.5% 1.1% 10.4% 3.19% Heavy Trucks: 75.1% 8.0% 16.9% 7.54%			
				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)			
				Autos: 36.851 Medium Trucks: 36.610 Heavy Trucks: 36.634			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-16.77	1.88	-1.20	-4.56	0.000	0.000
Medium Trucks:	77.72	-31.24	1.93	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-27.50	1.92	-1.20	-5.61	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:	50.4	49.9	46.1	44.9	52.3	52.6	
Medium Trucks:	47.2	47.4	34.4	39.4	47.8	47.9	
Heavy Trucks:	56.2	55.7	52.0	50.5	58.0	58.3	
Vehicle Noise:	57.6	57.2	53.1	51.8	59.3	59.6	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			7	16	33	72	
CNEL:			8	16	35	75	

Thursday, December 8, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: E+P Road Name: Commerce Ctr. Dr. Road Segment: w/o Harvill Av.				Project Name: MFBC (Bldg. 13,14,17&18) Job Number: 13697			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 660 vehicles Peak Hour Percentage: 7.00% Peak Hour Volume: 46 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 12 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
Site Data				Vehicle Mix			
				VehicleType	Day	Evening	Night
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 37.0 feet Centerline Dist. to Observer: 37.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 74.7% 7.7% 17.6% 86.96% Medium Trucks: 88.5% 1.1% 10.4% 3.11% Heavy Trucks: 75.1% 8.0% 16.9% 9.93%			
				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)			
				Autos: 36.851 Medium Trucks: 36.610 Heavy Trucks: 36.634			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-15.29	1.88	-1.20	-4.56	0.000	0.000
Medium Trucks:	77.72	-29.76	1.93	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-24.71	1.92	-1.20	-5.61	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:	51.9	51.4	47.6	46.4	53.8	54.0	
Medium Trucks:	48.7	48.9	35.9	40.8	49.3	49.3	
Heavy Trucks:	59.0	58.5	54.8	53.3	60.8	61.1	
Vehicle Noise:	60.1	59.7	55.6	54.3	61.8	62.1	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			11	23	49	105	
CNEL:			11	24	51	110	

Thursday, December 8, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: EAC Road Name: Commerce Ctr. Dr. Road Segment: w/o Harvill Av.				Project Name: MFBC (Bldg. 13,14,17&18) Job Number: 13697			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 633 vehicles Peak Hour Percentage: 7.00% Peak Hour Volume: 44 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 12 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
Site Data				Vehicle Mix			
				VehicleType	Day	Evening	Night
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 37.0 feet Centerline Dist. to Observer: 37.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 74.7% 7.7% 17.6% 89.28% Medium Trucks: 88.5% 1.1% 10.4% 3.19% Heavy Trucks: 75.1% 8.0% 16.9% 7.54%			
				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)			
				Autos: 36.851 Medium Trucks: 36.610 Heavy Trucks: 36.634			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-15.35	1.88	-1.20	-4.56	0.000	0.000
Medium Trucks:	77.72	-29.82	1.93	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-26.09	1.92	-1.20	-5.61	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:	51.8	51.3	47.5	46.3	53.7	54.0	
Medium Trucks:	48.6	48.8	35.9	40.8	49.2	49.3	
Heavy Trucks:	57.6	57.1	53.4	51.9	59.4	59.7	
Vehicle Noise:	59.1	58.6	54.5	53.2	60.8	61.0	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			9	19	42	89	
CNEL:			9	20	43	93	

Thursday, December 8, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: EAC+P Road Name: Commerce Ctr. Dr. Road Segment: w/o Harvill Av.				Project Name: MFBC (Bldg. 13,14,17&18) Job Number: 13697			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 836 vehicles Peak Hour Percentage: 7.00% Peak Hour Volume: 58 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 12 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
Site Data				Vehicle Mix			
				VehicleType	Day	Evening	Night
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 37.0 feet Centerline Dist. to Observer: 37.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 74.7% 7.7% 17.6% 87.45% Medium Trucks: 88.5% 1.1% 10.4% 3.12% Heavy Trucks: 75.1% 8.0% 16.9% 9.43%			
				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)			
				Autos: 36.851 Medium Trucks: 36.610 Heavy Trucks: 36.634			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-14.24	1.88	-1.20	-4.56	0.000	0.000
Medium Trucks:	77.72	-28.71	1.93	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-23.91	1.92	-1.20	-5.61	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:	53.0	52.4	48.6	47.4	54.8	55.1	
Medium Trucks:	49.7	50.0	37.0	41.9	50.3	50.4	
Heavy Trucks:	59.8	59.3	55.6	54.1	61.6	61.9	
Vehicle Noise:	61.0	60.5	56.4	55.2	62.7	62.9	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			12	26	56	120	
CNEL:			13	27	58	125	

Thursday, December 8, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Perry St. Road Segment: w/o Harvill Av.					Project Name: MFBC (Bldg. 13,14,17&18) Job Number: 13697				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 142 vehicles Peak Hour Percentage: 7.00% Peak Hour Volume: 10 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 12 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data				Vehicle Mix					
				VehicleType	Day	Evening	Night	Daily	
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 37.0 feet Centerline Dist. to Observer: 37.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 74.7% 7.7% 17.6% 89.28% Medium Trucks: 88.5% 1.1% 10.4% 3.19% Heavy Trucks: 75.1% 8.0% 16.9% 7.54%					
				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)					
				Autos: 36.851 Medium Trucks: 36.610 Heavy Trucks: 36.634					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-21.84	1.88	-1.20	-4.56	0.000	0.000		
Medium Trucks:	77.72	-36.32	1.93	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-32.58	1.92	-1.20	-5.61	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:	45.4	44.8	41.0	39.8	47.2	47.5			
Medium Trucks:	42.1	42.4	29.4	34.3	42.7	42.8			
Heavy Trucks:	51.1	50.6	46.9	45.4	52.9	53.2			
Vehicle Noise:	52.6	52.1	48.0	46.7	54.3	54.5			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			3	7	15	33			
CNEL:			3	7	16	34			

Thursday, December 8, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Perry St. Road Segment: w/o Harvill Av.					Project Name: MFBC (Bldg. 13,14,17&18) Job Number: 13697				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 409 vehicles Peak Hour Percentage: 7.00% Peak Hour Volume: 29 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 12 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data				Vehicle Mix					
				VehicleType	Day	Evening	Night	Daily	
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 37.0 feet Centerline Dist. to Observer: 37.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 74.7% 7.7% 17.6% 78.19% Medium Trucks: 88.5% 1.1% 10.4% 4.00% Heavy Trucks: 75.1% 8.0% 16.9% 17.81%					
				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)					
				Autos: 36.851 Medium Trucks: 36.610 Heavy Trucks: 36.634					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-17.83	1.88	-1.20	-4.56	0.000	0.000		
Medium Trucks:	77.72	-30.73	1.93	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-24.25	1.92	-1.20	-5.61	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:	49.4	48.9	45.0	43.8	51.2	51.5			
Medium Trucks:	47.7	47.9	34.9	39.9	48.3	48.4			
Heavy Trucks:	59.5	59.0	55.3	53.8	61.2	61.5			
Vehicle Noise:	60.1	59.7	55.7	54.3	61.8	62.1			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			11	23	49	106			
CNEL:			11	24	51	110			

Thursday, December 8, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: EAC Road Name: Perry St. Road Segment: w/o Harvill Av.					Project Name: MFBC (Bldg. 13,14,17&18) Job Number: 13697				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 872 vehicles Peak Hour Percentage: 7.00% Peak Hour Volume: 61 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 12 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data				Vehicle Mix					
				VehicleType	Day	Evening	Night	Daily	
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 37.0 feet Centerline Dist. to Observer: 37.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 74.7% 7.7% 17.6% 85.29% Medium Trucks: 88.5% 1.1% 10.4% 3.19% Heavy Trucks: 75.1% 8.0% 16.9% 7.54%					
				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)					
				Autos: 36.851 Medium Trucks: 36.610 Heavy Trucks: 36.634					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-13.96	1.88	-1.20	-4.56	0.000	0.000		
Medium Trucks:	77.72	-28.43	1.93	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-24.70	1.92	-1.20	-5.61	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:	53.2	52.7	48.9	47.7	55.1	55.4			
Medium Trucks:	50.0	50.2	37.2	42.2	50.6	50.7			
Heavy Trucks:	59.0	58.5	54.8	53.3	60.8	61.1			
Vehicle Noise:	60.4	60.0	55.9	54.6	62.1	62.4			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			11	24	51	111			
CNEL:			12	25	54	115			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: EAC+P Road Name: Perry St. Road Segment: w/o Harvill Av.					Project Name: MFBC (Bldg. 13,14,17&18) Job Number: 13697				
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 1,139 vehicles Peak Hour Percentage: 7.00% Peak Hour Volume: 80 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 12 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data				Vehicle Mix					
				VehicleType	Day	Evening	Night	Daily	
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 37.0 feet Centerline Dist. to Observer: 37.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 74.7% 7.7% 17.6% 85.29% Medium Trucks: 88.5% 1.1% 10.4% 3.48% Heavy Trucks: 75.1% 8.0% 16.9% 11.22%					
				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)					
				Autos: 36.851 Medium Trucks: 36.610 Heavy Trucks: 36.634					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-13.00	1.88	-1.20	-4.56	0.000	0.000		
Medium Trucks:	77.72	-26.89	1.93	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-21.81	1.92	-1.20	-5.61	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:	54.2	53.7	49.8	48.7	56.1	56.3			
Medium Trucks:	51.6	51.8	38.8	43.7	52.2	52.2			
Heavy Trucks:	61.9	61.4	57.7	56.2	63.7	64.0			
Vehicle Noise:	62.9	62.5	58.4	57.1	64.6	64.9			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			16	35	75	162			
CNEL:			17	36	78	169			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: E Road Name: Martin St. Road Segment: w/o Harvill Av.				Project Name: MFBC (Bldg. 13,14,17&18) Job Number: 13697			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 1,712 vehicles Peak Hour Percentage: 7.00% Peak Hour Volume: 120 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 12 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
Site Data				Vehicle Mix			
				VehicleType	Day	Evening	Night
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 37.0 feet Centerline Dist. to Observer: 37.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 74.7% 7.7% 17.6% 89.28% Medium Trucks: 88.5% 1.1% 10.4% 3.19% Heavy Trucks: 75.1% 8.0% 16.9% 7.54%			
				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)			
				Autos: 36.851 Medium Trucks: 36.610 Heavy Trucks: 36.634			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-11.03	1.88	-1.20	-4.56	0.000	0.000
Medium Trucks:	77.72	-25.50	1.93	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-21.77	1.92	-1.20	-5.61	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:	56.2	55.7	51.8	50.6	58.0	58.3	
Medium Trucks:	52.9	53.2	40.2	45.1	53.5	53.6	
Heavy Trucks:	61.9	61.5	57.8	56.2	63.7	64.0	
Vehicle Noise:	63.4	63.0	58.8	57.5	65.1	65.3	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			17	37	81	174	
CNEL:			18	39	84	181	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: E+P Road Name: Martin St. Road Segment: w/o Harvill Av.				Project Name: MFBC (Bldg. 13,14,17&18) Job Number: 13697			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 1,958 vehicles Peak Hour Percentage: 7.00% Peak Hour Volume: 137 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 12 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
Site Data				Vehicle Mix			
				VehicleType	Day	Evening	Night
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 37.0 feet Centerline Dist. to Observer: 37.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 74.7% 7.7% 17.6% 89.11% Medium Trucks: 88.5% 1.1% 10.4% 3.03% Heavy Trucks: 75.1% 8.0% 16.9% 7.86%			
				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)			
				Autos: 36.851 Medium Trucks: 36.610 Heavy Trucks: 36.634			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-10.46	1.88	-1.20	-4.56	0.000	0.000
Medium Trucks:	77.72	-25.14	1.93	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-21.00	1.92	-1.20	-5.61	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:	56.7	56.2	52.4	51.2	58.6	58.9	
Medium Trucks:	53.3	53.5	40.5	45.5	53.9	54.0	
Heavy Trucks:	62.7	62.2	58.5	57.0	64.5	64.8	
Vehicle Noise:	64.1	63.6	59.5	58.3	65.8	66.0	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			19	42	90	193	
CNEL:			20	43	94	202	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: EAC Road Name: Martin St. Road Segment: w/o Harvill Av.				Project Name: MFBC (Bldg. 13,14,17&18) Job Number: 13697			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 1,817 vehicles Peak Hour Percentage: 7.00% Peak Hour Volume: 127 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 12 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
Site Data				Vehicle Mix			
				VehicleType	Day	Evening	Night
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 37.0 feet Centerline Dist. to Observer: 37.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 74.7% 7.7% 17.6% 89.28% Medium Trucks: 88.5% 1.1% 10.4% 3.19% Heavy Trucks: 75.1% 8.0% 16.9% 7.54%			
				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)			
				Autos: 36.851 Medium Trucks: 36.610 Heavy Trucks: 36.634			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-10.78	1.88	-1.20	-4.56	0.000	0.000
Medium Trucks:	77.72	-25.25	1.93	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-21.51	1.92	-1.20	-5.61	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:	56.4	55.9	52.1	50.9	58.3	58.6	
Medium Trucks:	53.2	53.4	40.4	45.4	53.8	53.9	
Heavy Trucks:	62.2	61.7	58.0	56.5	64.0	64.3	
Vehicle Noise:	63.6	63.2	59.1	57.8	65.3	65.6	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			18	39	84	181	
CNEL:			19	41	87	188	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)							
Scenario: EAC+P Road Name: Martin St. Road Segment: w/o Harvill Av.				Project Name: MFBC (Bldg. 13,14,17&18) Job Number: 13697			
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS			
Highway Data				Site Conditions (Hard = 10, Soft = 15)			
Average Daily Traffic (Adt): 2,063 vehicles Peak Hour Percentage: 7.00% Peak Hour Volume: 144 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 12 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15			
Site Data				Vehicle Mix			
				VehicleType	Day	Evening	Night
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 37.0 feet Centerline Dist. to Observer: 37.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 74.7% 7.7% 17.6% 89.12% Medium Trucks: 88.5% 1.1% 10.4% 3.04% Heavy Trucks: 75.1% 8.0% 16.9% 7.84%			
				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)			
				Autos: 36.851 Medium Trucks: 36.610 Heavy Trucks: 36.634			
FHWA Noise Model Calculations							
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-10.23	1.88	-1.20	-4.56	0.000	0.000
Medium Trucks:	77.72	-24.90	1.93	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-20.79	1.92	-1.20	-5.61	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:	57.0	56.5	52.6	51.4	58.8	59.1	
Medium Trucks:	53.5	53.8	40.8	45.7	54.1	54.2	
Heavy Trucks:	62.9	62.4	58.7	57.2	64.7	65.0	
Vehicle Noise:	64.3	63.9	59.7	58.5	66.0	66.3	
Centerline Distance to Noise Contour (in feet)							
			70 dBA	65 dBA	60 dBA	55 dBA	
Ldn:			20	43	93	200	
CNEL:			21	45	97	208	

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E Road Name: Peregrine Way Road Segment: w/o Harvill Av.				Project Name: MFBC (Bldg. 13,14,17&18) Job Number: 13697					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 86 vehicles Peak Hour Percentage: 7.00% Peak Hour Volume: 6 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 12 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data				Vehicle Mix					
				VehicleType	Day	Evening	Night	Daily	
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 37.0 feet Centerline Dist. to Observer: 37.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 74.7% 7.7% 17.6% 89.28% Medium Trucks: 88.5% 1.1% 10.4% 3.19% Heavy Trucks: 75.1% 8.0% 16.9% 7.54%					
				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)					
				Autos: 36.851 Medium Trucks: 36.610 Heavy Trucks: 36.634					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-24.04	1.88	-1.20	-4.56	0.000	0.000		
Medium Trucks:	77.72	-38.51	1.93	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-34.77	1.92	-1.20	-5.61	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:	43.2	42.7	38.8	37.6	45.0	45.3			
Medium Trucks:	39.9	40.2	27.2	32.1	40.5	40.6			
Heavy Trucks:	48.9	48.5	44.7	43.2	50.7	51.0			
Vehicle Noise:	50.4	50.0	45.8	44.5	52.1	52.3			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			2	5	11	24			
CNEL:			2	5	11	25			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: E+P Road Name: Peregrine Way Road Segment: w/o Harvill Av.				Project Name: MFBC (Bldg. 13,14,17&18) Job Number: 13697					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 125 vehicles Peak Hour Percentage: 7.00% Peak Hour Volume: 9 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 12 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data				Vehicle Mix					
				VehicleType	Day	Evening	Night	Daily	
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 37.0 feet Centerline Dist. to Observer: 37.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 74.7% 7.7% 17.6% 92.65% Medium Trucks: 88.5% 1.1% 10.4% 2.18% Heavy Trucks: 75.1% 8.0% 16.9% 5.16%					
				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)					
				Autos: 36.851 Medium Trucks: 36.610 Heavy Trucks: 36.634					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-22.23	1.88	-1.20	-4.56	0.000	0.000		
Medium Trucks:	77.72	-38.51	1.93	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-34.77	1.92	-1.20	-5.61	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:	45.0	44.5	40.6	39.4	46.8	47.1			
Medium Trucks:	39.9	40.2	27.2	32.1	40.5	40.6			
Heavy Trucks:	48.9	48.5	44.7	43.2	50.7	51.0			
Vehicle Noise:	50.8	50.3	46.2	45.0	52.5	52.8			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			3	5	12	25			
CNEL:			3	6	12	26			

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: EAC Road Name: Peregrine Way Road Segment: w/o Harvill Av.				Project Name: MFBC (Bldg. 13,14,17&18) Job Number: 13697					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 91 vehicles Peak Hour Percentage: 7.00% Peak Hour Volume: 6 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 12 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data				Vehicle Mix					
				VehicleType	Day	Evening	Night	Daily	
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 37.0 feet Centerline Dist. to Observer: 37.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 74.7% 7.7% 17.6% 89.28% Medium Trucks: 88.5% 1.1% 10.4% 3.19% Heavy Trucks: 75.1% 8.0% 16.9% 7.54%					
				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)					
				Autos: 36.851 Medium Trucks: 36.610 Heavy Trucks: 36.634					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-23.78	1.88	-1.20	-4.56	0.000	0.000		
Medium Trucks:	77.72	-38.25	1.93	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-34.52	1.92	-1.20	-5.61	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:	43.4	42.9	39.1	37.9	45.3	45.6			
Medium Trucks:	40.2	40.4	27.4	32.4	40.8	40.9			
Heavy Trucks:	49.2	48.7	45.0	43.5	51.0	51.3			
Vehicle Noise:	50.6	50.2	46.1	44.8	52.3	52.6			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			2	5	11	25			
CNEL:			3	6	12	26			

Thursday, December 8, 2022

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL (9/12/2021)									
Scenario: EAC+P Road Name: Peregrine Way Road Segment: w/o Harvill Av.				Project Name: MFBC (Bldg. 13,14,17&18) Job Number: 13697					
SITE SPECIFIC INPUT DATA				NOISE MODEL INPUTS					
Highway Data				Site Conditions (Hard = 10, Soft = 15)					
Average Daily Traffic (Adt): 130 vehicles Peak Hour Percentage: 7.00% Peak Hour Volume: 9 vehicles Vehicle Speed: 40 mph Near/Far Lane Distance: 12 feet				Autos: 15 Medium Trucks (2 Axles): 15 Heavy Trucks (3+ Axles): 15					
Site Data				Vehicle Mix					
				VehicleType	Day	Evening	Night	Daily	
Barrier Height: 0.0 feet Barrier Type (0-Wall, 1-Berm): 0.0 Centerline Dist. to Barrier: 37.0 feet Centerline Dist. to Observer: 37.0 feet Barrier Distance to Observer: 0.0 feet Observer Height (Above Pad): 5.0 feet Pad Elevation: 0.0 feet Road Elevation: 0.0 feet Road Grade: 0.0% Left View: -90.0 degrees Right View: 90.0 degrees				Autos: 74.7% 7.7% 17.6% 92.52% Medium Trucks: 88.5% 1.1% 10.4% 2.23% Heavy Trucks: 75.1% 8.0% 16.9% 5.26%					
				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)					
				Autos: 36.851 Medium Trucks: 36.610 Heavy Trucks: 36.634					
FHWA Noise Model Calculations									
VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten		
Autos:	66.51	-22.06	1.88	-1.20	-4.56	0.000	0.000		
Medium Trucks:	77.72	-38.25	1.93	-1.20	-4.87	0.000	0.000		
Heavy Trucks:	82.99	-34.52	1.92	-1.20	-5.61	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:	45.1	44.6	40.8	39.6	47.0	47.3			
Medium Trucks:	40.2	40.4	27.4	32.4	40.8	40.9			
Heavy Trucks:	49.2	48.7	45.0	43.5	51.0	51.3			
Vehicle Noise:	51.0	50.6	46.5	45.2	52.7	53.0			
Centerline Distance to Noise Contour (in feet)									
			70 dBA	65 dBA	60 dBA	55 dBA			
Ldn:			3	6	12	26			
CNEL:			3	6	13	27			

Thursday, December 8, 2022

APPENDIX B

OPERATIONAL NOISE LEVEL CALCULATIONS

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13697 - MFBC Building 13, 14, 17 & 18

CadnaA Noise Prediction Model: 13697-02 all.cna

Date: 01.12.22

Analyst: B. Lawson

Calculation Configuration

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

Receiver Noise Levels

Name	M.	ID	Level Lr			Limit. Value			Land Use			Height	Coordinates			
			Day	Night	CNEL	Day	Night	CNEL	Type	Auto	Noise Type		X	Y	Z	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)	(ft)	(ft)	(ft)	
R1		R01	45.5	45.0	51.6	55.0	45.0	0.0				5.00	a	6254523.18	2257379.43	5.00
R2		R02	42.3	42.0	48.7	55.0	45.0	0.0				5.00	a	6252919.34	2256408.68	5.00
R3		R03	43.1	42.7	49.4	55.0	45.0	0.0				5.00	a	6253214.27	2256016.68	5.00
R4		R04	44.0	43.7	50.3	55.0	45.0	0.0				5.00	a	6253873.08	2255725.53	5.00
R5		R05	43.9	43.5	50.2	55.0	45.0	0.0				5.00	a	6254202.08	2255653.20	5.00
R6		R06	43.9	43.4	50.1	55.0	45.0	0.0				5.00	a	6254474.43	2255690.47	5.00
R7		R07	41.2	40.5	47.2	55.0	45.0	0.0				5.00	a	6256247.45	2257053.56	5.00
R8		R08	42.5	42.0	48.7	55.0	45.0	0.0				5.00	a	6254517.31	2255171.52	5.00
R9		R09	42.6	42.1	48.8	55.0	45.0	0.0				5.00	a	6254486.46	2254951.44	5.00
R10		R10	45.4	45.0	51.6	55.0	45.0	0.0				5.00	a	6254475.01	2254463.48	5.00
R11		R11	43.2	42.3	49.0	55.0	45.0	0.0				5.00	a	6254492.11	2253665.28	5.00
R12		R12	42.9	42.5	49.2	55.0	45.0	0.0				5.00	a	6254510.72	2253151.17	5.00
R13		R13	42.7	42.4	49.0	55.0	45.0	0.0				5.00	a	6254477.46	2252343.85	5.00
R14		R14	36.5	35.7	42.4	55.0	45.0	0.0				5.00	a	6256684.69	2254919.58	5.00

Point Source(s)

Name	M.	ID	Result. PWL			Lw / Li		Operating Time			Height	Coordinates			
			Day	Evening	Night	Type	Value	norm.	Day	Special		Night	X	Y	Z
			(dBA)	(dBA)	(dBA)		dB(A)	(min)	(min)	(min)	(ft)	(ft)	(ft)	(ft)	
BLDG13		AC01	88.9	88.9	88.9	Lw	88.9	585.00	0.00	252.00	5.00	g	6255693.58	2252607.26	50.00
BLDG13		AC02	88.9	88.9	88.9	Lw	88.9	585.00	0.00	252.00	5.00	g	6255644.46	2252608.26	50.00
BLDG13		AC03	88.9	88.9	88.9	Lw	88.9	585.00	0.00	252.00	5.00	g	6255694.58	2252654.38	50.00
BLDG13		AC04	88.9	88.9	88.9	Lw	88.9	585.00	0.00	252.00	5.00	g	6255643.46	2252654.38	50.00

Name	M.	ID	Result. PWL			Lw / Li			Operating Time			Height		Coordinates		
			Day	Evening	Night	Type	Value	norm.	Day	Special	Night	(ft)	X (ft)	Y (ft)	Z (ft)	
			(dBA)	(dBA)	(dBA)		dB(A)		(min)	(min)	(min)					
BLDG13		AC05	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6255712.62	2253602.67	50.00
BLDG13		AC06	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6255713.63	2253553.55	50.00
BLDG13		AC07	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6255662.50	2253552.55	50.00
BLDG13		AC08	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6255663.51	2253600.66	50.00
BLDG13		CAR01	81.1	81.1	81.1	Lw	81.1					5.00	a	6255430.21	2252572.57	5.00
BLDG13		CAR02	81.1	81.1	81.1	Lw	81.1					5.00	a	6255480.41	2252572.57	5.00
BLDG13		CAR03	81.1	81.1	81.1	Lw	81.1					5.00	a	6255539.14	2252572.57	5.00
BLDG13		CAR04	81.1	81.1	81.1	Lw	81.1					5.00	a	6255582.71	2252571.63	5.00
BLDG13		CAR05	81.1	81.1	81.1	Lw	81.1					5.00	a	6255641.44	2252569.73	5.00
BLDG13		CAR06	81.1	81.1	81.1	Lw	81.1					5.00	a	6255684.07	2252569.73	5.00
BLDG13		CAR07	81.1	81.1	81.1	Lw	81.1					5.00	a	6255730.48	2252636.98	5.00
BLDG13		CAR08	81.1	81.1	81.1	Lw	81.1					5.00	a	6255778.79	2252621.83	5.00
BLDG13		CAR09	81.1	81.1	81.1	Lw	81.1					5.00	a	6255779.73	2252664.45	5.00
BLDG13		CAR10	81.1	81.1	81.1	Lw	81.1					5.00	a	6255734.27	2252703.29	5.00
BLDG13		CAR11	81.1	81.1	81.1	Lw	81.1					5.00	a	6255780.68	2252725.07	5.00
BLDG13		CAR12	81.1	81.1	81.1	Lw	81.1					5.00	a	6255734.27	2252747.81	5.00
BLDG13		CAR13	81.1	81.1	81.1	Lw	81.1					5.00	a	6255780.68	2252768.65	5.00
BLDG13		CAR14	81.1	81.1	81.1	Lw	81.1					5.00	a	6255735.21	2252808.43	5.00
BLDG13		CAR15	81.1	81.1	81.1	Lw	81.1					5.00	a	6255782.58	2252826.43	5.00
BLDG13		CAR16	81.1	81.1	81.1	Lw	81.1					5.00	a	6255736.16	2252852.00	5.00
BLDG13		CAR17	81.1	81.1	81.1	Lw	81.1					5.00	a	6255784.47	2252871.89	5.00
BLDG13		CAR18	81.1	81.1	81.1	Lw	81.1					5.00	a	6255738.06	2252906.94	5.00
BLDG13		CAR19	81.1	81.1	81.1	Lw	81.1					5.00	a	6255782.58	2252927.78	5.00
BLDG13		CAR20	81.1	81.1	81.1	Lw	81.1					5.00	a	6255738.06	2252953.35	5.00
BLDG13		CAR21	81.1	81.1	81.1	Lw	81.1					5.00	a	6255784.47	2252973.24	5.00
BLDG13		CAR22	81.1	81.1	81.1	Lw	81.1					5.00	a	6255739.00	2253011.13	5.00
BLDG13		CAR23	81.1	81.1	81.1	Lw	81.1					5.00	a	6255788.26	2253031.97	5.00
BLDG13		CAR24	81.1	81.1	81.1	Lw	81.1					5.00	a	6255739.95	2253059.44	5.00
BLDG13		CAR25	81.1	81.1	81.1	Lw	81.1					5.00	a	6255788.26	2253075.54	5.00
BLDG13		CAR26	81.1	81.1	81.1	Lw	81.1					5.00	a	6255742.79	2253116.27	5.00
BLDG13		CAR27	81.1	81.1	81.1	Lw	81.1					5.00	a	6255788.26	2253130.48	5.00
BLDG13		CAR28	81.1	81.1	81.1	Lw	81.1					5.00	a	6255742.79	2253159.85	5.00
BLDG13		CAR29	81.1	81.1	81.1	Lw	81.1					5.00	a	6255788.26	2253173.11	5.00
BLDG13		CAR30	81.1	81.1	81.1	Lw	81.1					5.00	a	6255742.79	2253208.15	5.00
BLDG13		CAR31	81.1	81.1	81.1	Lw	81.1					5.00	a	6255790.15	2253234.68	5.00
BLDG13		CAR32	81.1	81.1	81.1	Lw	81.1					5.00	a	6255743.74	2253254.57	5.00
BLDG13		CAR33	81.1	81.1	81.1	Lw	81.1					5.00	a	6255790.15	2253281.09	5.00
BLDG13		CAR34	81.1	81.1	81.1	Lw	81.1					5.00	a	6255744.69	2253314.24	5.00
BLDG13		CAR35	81.1	81.1	81.1	Lw	81.1					5.00	a	6255790.15	2253334.13	5.00
BLDG13		CAR36	81.1	81.1	81.1	Lw	81.1					5.00	a	6255745.63	2253356.87	5.00
BLDG13		CAR37	81.1	81.1	81.1	Lw	81.1					5.00	a	6255791.10	2253383.39	5.00
BLDG13		CAR38	81.1	81.1	81.1	Lw	81.1					5.00	a	6255746.58	2253420.33	5.00
BLDG13		CAR39	81.1	81.1	81.1	Lw	81.1					5.00	a	6255792.99	2253442.12	5.00
BLDG13		CAR40	81.1	81.1	81.1	Lw	81.1					5.00	a	6255746.58	2253474.32	5.00
BLDG13		CAR41	81.1	81.1	81.1	Lw	81.1					5.00	a	6255793.94	2253480.00	5.00
BLDG13		CAR42	81.1	81.1	81.1	Lw	81.1					5.00	a	6255747.53	2253510.31	5.00
BLDG13		CAR43	81.1	81.1	81.1	Lw	81.1					5.00	a	6255793.94	2253539.68	5.00
BLDG13		CAR44	81.1	81.1	81.1	Lw	81.1					5.00	a	6255748.48	2253556.73	5.00
BLDG13		CAR45	81.1	81.1	81.1	Lw	81.1					5.00	a	6255794.89	2253573.78	5.00
BLDG13		CAR46	81.1	81.1	81.1	Lw	81.1					5.00	a	6255752.26	2253597.46	5.00
BLDG13		CAR47	81.1	81.1	81.1	Lw	81.1					5.00	a	6255716.27	2253637.24	5.00
BLDG13		CAR48	81.1	81.1	81.1	Lw	81.1					5.00	a	6255673.65	2253637.24	5.00
BLDG13		CAR49	81.1	81.1	81.1	Lw	81.1					5.00	a	6255633.86	2253639.14	5.00
BLDG13		CAR50	81.1	81.1	81.1	Lw	81.1					5.00	a	6255585.56	2253640.08	5.00
BLDG13		CAR51	81.1	81.1	81.1	Lw	81.1					5.00	a	6255550.51	2253641.98	5.00
BLDG13		CAR52	81.1	81.1	81.1	Lw	81.1					5.00	a	6255507.88	2253641.98	5.00
BLDG13		CAR53	81.1	81.1	81.1	Lw	81.1					5.00	a	6255471.89	2253642.92	5.00
BLDG13		CAR54	81.1	81.1	81.1	Lw	81.1					5.00	a	6255435.90	2253643.87	5.00
BLDG13		TRASH01	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	a	6255236.47	2252706.50	5.00
BLDG13		TRASH02	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	a	6255236.47	2252720.54	5.00
BLDG13		TRASH03	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	a	6255251.51	2253503.43	5.00
BLDG13		TRASH04	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	a	6255251.51	2253518.46	5.00
BLDG14		AC01	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6255445.30	2254441.92	50.00
BLDG14		AC02	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6255445.99	2254412.06	50.00
BLDG14		AC03	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6255395.30	2254411.36	50.00
BLDG14		AC04	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6255394.60	2254444.00	50.00
BLDG14		AC05	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6255439.74	2253939.14	50.00
BLDG14		AC06	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6255477.24	2253937.06	50.00
BLDG14		AC07	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6255477.94	2253975.95	50.00
BLDG14		AC08	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6255442.52	2253975.95	50.00
BLDG14		AC09	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6254727.24	2254466.23	50.00
BLDG14		AC10	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6254764.74	2254466.23	50.00
BLDG14		AC11	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6254764.74	2254506.50	50.00
BLDG14		AC12	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6254725.85	2254507.89	50.00
BLDG14		AC13	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6254759.19	2253903.73	50.00
BLDG14		AC14	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6254722.38	2253905.11	50.00
BLDG14		AC15	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6254758.49	2253941.92	50.00

Name	M.	ID	Result. PWL			Lw / Li		Operating Time			Height		Coordinates			
			Day	Evening	Night	Type	Value	norm.	Day	Special	Night		X	Y	Z	
			(dBA)	(dBA)	(dBA)					(min)	(min)	(min)	(ft)	(ft)	(ft)	(ft)
BLDG14		AC16	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6254723.07	2253942.61	50.00
BLDG14		CAR01	81.1	81.1	81.1	Lw	81.1					5.00	a	6255483.49	2253905.11	5.00
BLDG14		CAR02	81.1	81.1	81.1	Lw	81.1					5.00	a	6255466.82	2253861.36	5.00
BLDG14		CAR03	81.1	81.1	81.1	Lw	81.1					5.00	a	6255444.60	2253905.81	5.00
BLDG14		CAR04	81.1	81.1	81.1	Lw	81.1					5.00	a	6255426.55	2253862.06	5.00
BLDG14		CAR05	81.1	81.1	81.1	Lw	81.1					5.00	a	6255391.82	2253906.50	5.00
BLDG14		CAR06	81.1	81.1	81.1	Lw	81.1					5.00	a	6255365.44	2253862.06	5.00
BLDG14		CAR07	81.1	81.1	81.1	Lw	81.1					5.00	a	6255342.52	2253905.81	5.00
BLDG14		CAR08	81.1	81.1	81.1	Lw	81.1					5.00	a	6255327.24	2253863.45	5.00
BLDG14		CAR09	81.1	81.1	81.1	Lw	81.1					5.00	a	6255306.41	2253905.81	5.00
BLDG14		CAR10	81.1	81.1	81.1	Lw	81.1					5.00	a	6255276.55	2253862.06	5.00
BLDG14		CAR11	81.1	81.1	81.1	Lw	81.1					5.00	a	6255261.27	2253907.20	5.00
BLDG14		CAR12	81.1	81.1	81.1	Lw	81.1					5.00	a	6255239.05	2253860.67	5.00
BLDG14		CAR13	81.1	81.1	81.1	Lw	81.1					5.00	a	6255225.16	2253906.50	5.00
BLDG14		CAR14	81.1	81.1	81.1	Lw	81.1					5.00	a	6254640.44	2253943.31	5.00
BLDG14		CAR15	81.1	81.1	81.1	Lw	81.1					5.00	a	6254686.96	2253966.92	5.00
BLDG14		CAR16	81.1	81.1	81.1	Lw	81.1					5.00	a	6254637.66	2253983.59	5.00
BLDG14		CAR17	81.1	81.1	81.1	Lw	81.1					5.00	a	6254689.05	2254013.45	5.00
BLDG14		CAR18	81.1	81.1	81.1	Lw	81.1					5.00	a	6254639.05	2254040.53	5.00
BLDG14		CAR19	81.1	81.1	81.1	Lw	81.1					5.00	a	6254689.05	2254056.50	5.00
BLDG14		CAR20	81.1	81.1	81.1	Lw	81.1					5.00	a	6254641.13	2254079.42	5.00
BLDG14		CAR21	81.1	81.1	81.1	Lw	81.1					5.00	a	6254686.96	2254106.50	5.00
BLDG14		CAR22	81.1	81.1	81.1	Lw	81.1					5.00	a	6254641.13	2254117.61	5.00
BLDG14		CAR23	81.1	81.1	81.1	Lw	81.1					5.00	a	6254688.35	2254139.14	5.00
BLDG14		CAR24	81.1	81.1	81.1	Lw	81.1					5.00	a	6254642.52	2254151.64	5.00
BLDG14		CAR25	81.1	81.1	81.1	Lw	81.1					5.00	a	6254689.05	2254177.34	5.00
BLDG14		CAR26	81.1	81.1	81.1	Lw	81.1					5.00	a	6254642.52	2254189.84	5.00
BLDG14		CAR27	81.1	81.1	81.1	Lw	81.1					5.00	a	6254690.44	2254233.59	5.00
BLDG14		CAR28	81.1	81.1	81.1	Lw	81.1					5.00	a	6254642.52	2254244.00	5.00
BLDG14		CAR29	81.1	81.1	81.1	Lw	81.1					5.00	a	6254642.52	2254280.11	5.00
BLDG14		CAR30	81.1	81.1	81.1	Lw	81.1					5.00	a	6254691.13	2254277.34	5.00
BLDG14		CAR31	81.1	81.1	81.1	Lw	81.1					5.00	a	6254643.21	2254320.39	5.00
BLDG14		CAR32	81.1	81.1	81.1	Lw	81.1					5.00	a	6254691.82	2254333.59	5.00
BLDG14		CAR33	81.1	81.1	81.1	Lw	81.1					5.00	a	6254643.91	2254355.11	5.00
BLDG14		CAR34	81.1	81.1	81.1	Lw	81.1					5.00	a	6254692.52	2254374.56	5.00
BLDG14		CAR35	81.1	81.1	81.1	Lw	81.1					5.00	a	6254643.21	2254396.09	5.00
BLDG14		CAR36	81.1	81.1	81.1	Lw	81.1					5.00	a	6254693.21	2254423.86	5.00
BLDG14		CAR37	81.1	81.1	81.1	Lw	81.1					5.00	a	6254645.30	2254454.42	5.00
BLDG14		CAR38	81.1	81.1	81.1	Lw	81.1					5.00	a	6254693.91	2254471.78	5.00
BLDG14		CAR39	81.1	81.1	81.1	Lw	81.1					5.00	a	6254645.99	2254503.03	5.00
BLDG14		CAR40	81.1	81.1	81.1	Lw	81.1					5.00	a	6254747.38	2254537.06	5.00
BLDG14		CAR41	81.1	81.1	81.1	Lw	81.1					5.00	a	6254779.32	2254536.36	5.00
BLDG14		CAR42	81.1	81.1	81.1	Lw	81.1					5.00	a	6254818.21	2254536.36	5.00
BLDG14		CAR43	81.1	81.1	81.1	Lw	81.1					5.00	a	6254887.66	2254537.06	5.00
BLDG14		CAR44	81.1	81.1	81.1	Lw	81.1					5.00	a	6254930.02	2254536.36	5.00
BLDG14		CAR45	81.1	81.1	81.1	Lw	81.1					5.00	a	6254981.41	2254535.67	5.00
BLDG14		CAR46	81.1	81.1	81.1	Lw	81.1					5.00	a	6255026.55	2254535.67	5.00
BLDG14		CAR47	81.1	81.1	81.1	Lw	81.1					5.00	a	6255449.46	2254521.78	5.00
BLDG14		CAR48	81.1	81.1	81.1	Lw	81.1					5.00	a	6255416.13	2254475.95	5.00
BLDG14		CAR49	81.1	81.1	81.1	Lw	81.1					5.00	a	6255410.57	2254524.56	5.00
BLDG14		CAR50	81.1	81.1	81.1	Lw	81.1					5.00	a	6255374.46	2254475.95	5.00
BLDG14		CAR51	81.1	81.1	81.1	Lw	81.1					5.00	a	6255354.32	2254523.17	5.00
BLDG14		CAR52	81.1	81.1	81.1	Lw	81.1					5.00	a	6255323.77	2254475.25	5.00
BLDG14		CAR53	81.1	81.1	81.1	Lw	81.1					5.00	a	6255314.05	2254523.17	5.00
BLDG14		CAR54	81.1	81.1	81.1	Lw	81.1					5.00	a	6255277.94	2254474.56	5.00
BLDG14		CAR55	81.1	81.1	81.1	Lw	81.1					5.00	a	6255264.05	2254523.86	5.00
BLDG14		CAR56	81.1	81.1	81.1	Lw	81.1					5.00	a	6255243.91	2254475.95	5.00
BLDG14		CAR57	81.1	81.1	81.1	Lw	81.1					5.00	a	6255222.38	2254524.56	5.00
BLDG14		CAR58	81.1	81.1	81.1	Lw	81.1					5.00	a	6255201.55	2254475.95	5.00
BLDG14		CAR59	81.1	81.1	81.1	Lw	81.1					5.00	a	6255200.85	2254416.23	5.00
BLDG14		CAR60	81.1	81.1	81.1	Lw	81.1					5.00	a	6255075.16	2254417.61	5.00
BLDG14		CAR61	81.1	81.1	81.1	Lw	81.1					5.00	a	6255059.19	2254459.98	5.00
BLDG14		CAR62	81.1	81.1	81.1	Lw	81.1					5.00	a	6255076.55	2254485.67	5.00
BLDG14		TRASH01	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	a	6255605.02	2254300.95	5.00
BLDG14		TRASH02	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	a	6255603.63	2254311.36	5.00
BLDG14		TRASH03	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	a	6255210.57	2254366.92	5.00
BLDG14		TRASH04	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	a	6255211.27	2254381.50	5.00
BLDG14		TRASH05	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	a	6255207.80	2253973.17	5.00
BLDG14		TRASH06	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	a	6255207.10	2253962.06	5.00
BLDG17		AC01	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6255482.53	2256588.98	50.00
BLDG17		AC02	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6255512.80	2256587.23	50.00
BLDG17		AC03	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6255512.80	2256627.98	50.00
BLDG17		AC04	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6255480.21	2256627.98	50.00
BLDG17		AC05	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6254753.27	2256544.75	50.00
BLDG17		AC06	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6254788.19	2256545.91	50.00
BLDG17		AC07	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6254787.61	2256585.49	50.00
BLDG17		AC08	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6254752.11	2256585.49	50.00

Name	M.	ID	Result. PWL			Lw / Li		Operating Time			Height		Coordinates			
			Day	Evening	Night	Type	Value	norm.	Day	Special	Night		X	Y	Z	
			(dBA)	(dBA)	(dBA)					(min)	(min)	(min)	(ft)	(ft)	(ft)	(ft)
BLDG17		CAR01	81.1	81.1	81.1	Lw	81.1					5.00	a	6255593.70	2256502.26	5.00
BLDG17		CAR02	81.1	81.1	81.1	Lw	81.1					5.00	a	6255591.95	2256530.20	5.00
BLDG17		CAR03	81.1	81.1	81.1	Lw	81.1					5.00	a	6255593.70	2256587.23	5.00
BLDG17		CAR04	81.1	81.1	81.1	Lw	81.1					5.00	a	6255593.12	2256616.33	5.00
BLDG17		CAR05	81.1	81.1	81.1	Lw	81.1					5.00	a	6255544.81	2256606.44	5.00
BLDG17		CAR06	81.1	81.1	81.1	Lw	81.1					5.00	a	6255593.12	2256654.17	5.00
BLDG17		CAR07	81.1	81.1	81.1	Lw	81.1					5.00	a	6255544.81	2256637.87	5.00
BLDG17		CAR08	81.1	81.1	81.1	Lw	81.1					5.00	a	6255593.70	2256688.50	5.00
BLDG17		CAR09	81.1	81.1	81.1	Lw	81.1					5.00	a	6255544.81	2256670.46	5.00
BLDG17		CAR10	81.1	81.1	81.1	Lw	81.1					5.00	a	6255593.12	2256719.35	5.00
BLDG17		CAR11	81.1	81.1	81.1	Lw	81.1					5.00	a	6255545.97	2256710.62	5.00
BLDG17		CAR12	81.1	81.1	81.1	Lw	81.1					5.00	a	6255593.70	2256758.93	5.00
BLDG17		CAR13	81.1	81.1	81.1	Lw	81.1					5.00	a	6255544.23	2256743.21	5.00
BLDG17		CAR14	81.1	81.1	81.1	Lw	81.1					5.00	a	6255594.86	2256793.27	5.00
BLDG17		CAR15	81.1	81.1	81.1	Lw	81.1					5.00	a	6255545.39	2256776.97	5.00
BLDG17		CAR16	81.1	81.1	81.1	Lw	81.1					5.00	a	6255595.44	2256831.68	5.00
BLDG17		CAR17	81.1	81.1	81.1	Lw	81.1					5.00	a	6255546.56	2256827.02	5.00
BLDG17		CAR18	81.1	81.1	81.1	Lw	81.1					5.00	a	6255594.28	2256868.93	5.00
BLDG17		CAR19	81.1	81.1	81.1	Lw	81.1					5.00	a	6255544.23	2256861.36	5.00
BLDG17		CAR20	81.1	81.1	81.1	Lw	81.1					5.00	a	6255594.86	2256900.94	5.00
BLDG17		CAR21	81.1	81.1	81.1	Lw	81.1					5.00	a	6255545.97	2256895.12	5.00
BLDG17		CAR22	81.1	81.1	81.1	Lw	81.1					5.00	a	6255596.03	2256932.37	5.00
BLDG17		CAR23	81.1	81.1	81.1	Lw	81.1					5.00	a	6255545.39	2256948.08	5.00
BLDG17		CAR24	81.1	81.1	81.1	Lw	81.1					5.00	a	6255457.51	2256985.33	5.00
BLDG17		CAR25	81.1	81.1	81.1	Lw	81.1					5.00	a	6255420.26	2256985.33	5.00
BLDG17		CAR26	81.1	81.1	81.1	Lw	81.1					5.00	a	6255380.68	2256984.75	5.00
BLDG17		CAR27	81.1	81.1	81.1	Lw	81.1					5.00	a	6255344.60	2256985.91	5.00
BLDG17		CAR28	81.1	81.1	81.1	Lw	81.1					5.00	a	6255308.51	2256985.91	5.00
BLDG17		CAR29	81.1	81.1	81.1	Lw	81.1					5.00	a	6255267.77	2256984.75	5.00
BLDG17		CAR30	81.1	81.1	81.1	Lw	81.1					5.00	a	6255230.52	2256984.17	5.00
BLDG17		CAR31	81.1	81.1	81.1	Lw	81.1					5.00	a	6255196.18	2256984.17	5.00
BLDG17		CAR32	81.1	81.1	81.1	Lw	81.1					5.00	a	6255144.97	2256985.33	5.00
BLDG17		CAR33	81.1	81.1	81.1	Lw	81.1					5.00	a	6255109.46	2256984.17	5.00
BLDG17		CAR34	81.1	81.1	81.1	Lw	81.1					5.00	a	6255069.30	2256985.33	5.00
BLDG17		CAR35	81.1	81.1	81.1	Lw	81.1					5.00	a	6255032.64	2256984.17	5.00
BLDG17		CAR36	81.1	81.1	81.1	Lw	81.1					5.00	a	6254996.55	2256984.75	5.00
BLDG17		CAR37	81.1	81.1	81.1	Lw	81.1					5.00	a	6254948.83	2256986.50	5.00
BLDG17		CAR38	81.1	81.1	81.1	Lw	81.1					5.00	a	6254909.25	2256986.50	5.00
BLDG17		CAR39	81.1	81.1	81.1	Lw	81.1					5.00	a	6254865.60	2256986.50	5.00
BLDG17		CAR40	81.1	81.1	81.1	Lw	81.1					5.00	a	6254826.61	2256987.08	5.00
BLDG17		CAR41	81.1	81.1	81.1	Lw	81.1					5.00	a	6254790.52	2256986.50	5.00
BLDG17		CAR42	81.1	81.1	81.1	Lw	81.1					5.00	a	6254718.35	2256946.92	5.00
BLDG17		CAR43	81.1	81.1	81.1	Lw	81.1					5.00	a	6254719.51	2256914.91	5.00
BLDG17		CAR44	81.1	81.1	81.1	Lw	81.1					5.00	a	6254670.63	2256874.75	5.00
BLDG17		CAR45	81.1	81.1	81.1	Lw	81.1					5.00	a	6254717.77	2256879.40	5.00
BLDG17		CAR46	81.1	81.1	81.1	Lw	81.1					5.00	a	6254719.51	2256822.95	5.00
BLDG17		CAR47	81.1	81.1	81.1	Lw	81.1					5.00	a	6254671.79	2256832.84	5.00
BLDG17		CAR48	81.1	81.1	81.1	Lw	81.1					5.00	a	6254671.79	2256795.01	5.00
BLDG17		CAR49	81.1	81.1	81.1	Lw	81.1					5.00	a	6254718.93	2256789.19	5.00
BLDG17		CAR50	81.1	81.1	81.1	Lw	81.1					5.00	a	6254719.51	2256754.27	5.00
BLDG17		CAR51	81.1	81.1	81.1	Lw	81.1					5.00	a	6254670.63	2256755.44	5.00
BLDG17		CAR52	81.1	81.1	81.1	Lw	81.1					5.00	a	6254671.79	2256710.04	5.00
BLDG17		CAR53	81.1	81.1	81.1	Lw	81.1					5.00	a	6254671.21	2256666.39	5.00
BLDG17		CAR54	81.1	81.1	81.1	Lw	81.1					5.00	a	6254718.35	2256701.31	5.00
BLDG17		CAR55	81.1	81.1	81.1	Lw	81.1					5.00	a	6254717.77	2256659.99	5.00
BLDG17		CAR56	81.1	81.1	81.1	Lw	81.1					5.00	a	6254716.60	2256612.26	5.00
BLDG17		CAR57	81.1	81.1	81.1	Lw	81.1					5.00	a	6254715.44	2256580.25	5.00
BLDG17		CAR58	81.1	81.1	81.1	Lw	81.1					5.00	a	6254718.35	2256545.33	5.00
BLDG17		CAR59	81.1	81.1	81.1	Lw	81.1					5.00	a	6254670.63	2256623.32	5.00
BLDG17		CAR60	81.1	81.1	81.1	Lw	81.1					5.00	a	6254670.04	2256592.47	5.00
BLDG17		CAR61	81.1	81.1	81.1	Lw	81.1					5.00	a	6254669.46	2256554.64	5.00
BLDG17		CAR62	81.1	81.1	81.1	Lw	81.1					5.00	a	6254669.46	2256511.57	5.00
BLDG17		CAR63	81.1	81.1	81.1	Lw	81.1					5.00	a	6254670.04	2256472.00	5.00
BLDG17		TRASH01	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	a	6255593.70	2256563.95	5.00
BLDG17		TRASH02	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	a	6255593.12	2256574.43	5.00
BLDG17		TRASH03	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	a	6254844.34	2256513.36	5.00
BLDG17		TRASH04	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	a	6254844.19	2256524.42	5.00
BLDG18		AC01	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6254431.15	2256517.87	50.00
BLDG18		AC02	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6254392.39	2256516.64	50.00
BLDG18		AC03	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6254432.38	2256555.39	50.00
BLDG18		AC04	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6254393.62	2256555.39	50.00
BLDG18		AC05	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6254444.69	2257153.99	50.00
BLDG18		AC06	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6254408.39	2257152.76	50.00
BLDG18		AC07	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6254446.53	2257190.29	50.00
BLDG18		AC08	88.9	88.9	88.9	Lw	88.9		585.00	0.00	252.00	5.00	g	6254408.39	2257190.90	50.00
BLDG18		CAR01	81.1	81.1	81.1	Lw	81.1					5.00	a	6254468.02	2256523.56	5.00
BLDG18		CAR02	81.1	81.1	81.1	Lw	81.1					5.00	a	6254470.16	2256562.12	5.00

Name	M.	ID	Result. PWL			Lw / Li		Operating Time			Height	Coordinates				
			Day	Evening	Night	Type	Value	norm.	Day	Special		Night	X	Y	Z	
			(dBA)	(dBA)	(dBA)		dB(A)	(min)	(min)	(min)	(ft)	(ft)	(ft)	(ft)		
BLDG18		CAR03	81.1	81.1	81.1	Lw	81.1				5.00	a	6254516.22	2256572.83	5.00	
BLDG18		CAR04	81.1	81.1	81.1	Lw	81.1				5.00	a	6254471.23	2256609.25	5.00	
BLDG18		CAR05	81.1	81.1	81.1	Lw	81.1				5.00	a	6254516.22	2256610.32	5.00	
BLDG18		CAR06	81.1	81.1	81.1	Lw	81.1				5.00	a	6254471.23	2256644.60	5.00	
BLDG18		CAR07	81.1	81.1	81.1	Lw	81.1				5.00	a	6254518.44	2256669.72	5.00	
BLDG18		CAR08	81.1	81.1	81.1	Lw	81.1				5.00	a	6254476.59	2256700.30	5.00	
BLDG18		CAR09	81.1	81.1	81.1	Lw	81.1				5.00	a	6254518.37	2256711.01	5.00	
BLDG18		CAR10	81.1	81.1	81.1	Lw	81.1				5.00	a	6254475.52	2256745.29	5.00	
BLDG18		CAR11	81.1	81.1	81.1	Lw	81.1				5.00	a	6254518.37	2256765.65	5.00	
BLDG18		CAR12	81.1	81.1	81.1	Lw	81.1				5.00	a	6254520.51	2256813.85	5.00	
BLDG18		CAR13	81.1	81.1	81.1	Lw	81.1				5.00	a	6254478.73	2256796.71	5.00	
BLDG18		CAR14	81.1	81.1	81.1	Lw	81.1				5.00	a	6254478.73	2256837.42	5.00	
BLDG18		CAR15	81.1	81.1	81.1	Lw	81.1				5.00	a	6254522.65	2256866.34	5.00	
BLDG18		CAR16	81.1	81.1	81.1	Lw	81.1				5.00	a	6254523.72	2256905.97	5.00	
BLDG18		CAR17	81.1	81.1	81.1	Lw	81.1				5.00	a	6254481.95	2256932.75	5.00	
BLDG18		CAR18	81.1	81.1	81.1	Lw	81.1				5.00	a	6254479.80	2256970.24	5.00	
BLDG18		CAR19	81.1	81.1	81.1	Lw	81.1				5.00	a	6254524.79	2257019.52	5.00	
BLDG18		CAR20	81.1	81.1	81.1	Lw	81.1				5.00	a	6254481.95	2257029.16	5.00	
BLDG18		CAR21	81.1	81.1	81.1	Lw	81.1				5.00	a	6254483.02	2257070.94	5.00	
BLDG18		CAR22	81.1	81.1	81.1	Lw	81.1				5.00	a	6254526.94	2257087.00	5.00	
BLDG18		CAR23	81.1	81.1	81.1	Lw	81.1				5.00	a	6254529.08	2257138.42	5.00	
BLDG18		CAR24	81.1	81.1	81.1	Lw	81.1				5.00	a	6254485.16	2257122.35	5.00	
BLDG18		CAR25	81.1	81.1	81.1	Lw	81.1				5.00	a	6254486.23	2257167.34	5.00	
BLDG18		CAR26	81.1	81.1	81.1	Lw	81.1				5.00	a	6254528.01	2257196.26	5.00	
BLDG18		CAR27	81.1	81.1	81.1	Lw	81.1				5.00	a	6254529.08	2257245.54	5.00	
BLDG18		CAR28	81.1	81.1	81.1	Lw	81.1				5.00	a	6254454.60	2257226.76	5.00	
BLDG18		CAR29	81.1	81.1	81.1	Lw	81.1				5.00	a	6254448.74	2257274.46	5.00	
BLDG18		CAR30	81.1	81.1	81.1	Lw	81.1				5.00	a	6254412.32	2257231.61	5.00	
BLDG18		CAR31	81.1	81.1	81.1	Lw	81.1				5.00	a	6254400.54	2257277.68	5.00	
BLDG18		CAR32	81.1	81.1	81.1	Lw	81.1				5.00	a	6254357.69	2257275.53	5.00	
BLDG18		CAR33	81.1	81.1	81.1	Lw	81.1				5.00	a	6254350.19	2257234.83	5.00	
BLDG18		CAR34	81.1	81.1	81.1	Lw	81.1				5.00	a	6254303.06	2257232.69	5.00	
BLDG18		CAR35	81.1	81.1	81.1	Lw	81.1				5.00	a	6254304.13	2257279.82	5.00	
BLDG18		CAR36	81.1	81.1	81.1	Lw	81.1				5.00	a	6254261.28	2257279.82	5.00	
BLDG18		CAR37	81.1	81.1	81.1	Lw	81.1				5.00	a	6254235.57	2257236.97	5.00	
BLDG18		CAR38	81.1	81.1	81.1	Lw	81.1				5.00	a	6254183.08	2257236.97	5.00	
BLDG18		CAR39	81.1	81.1	81.1	Lw	81.1				5.00	a	6253966.70	2257248.75	5.00	
BLDG18		CAR40	81.1	81.1	81.1	Lw	81.1				5.00	a	6253969.92	2257299.10	5.00	
BLDG18		CAR41	81.1	81.1	81.1	Lw	81.1				5.00	a	6253970.99	2257365.51	5.00	
BLDG18		CAR42	81.1	81.1	81.1	Lw	81.1				5.00	a	6253972.06	2257411.57	5.00	
BLDG18		TRASH01	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	a	6253935.91	2256578.16	5.00
BLDG18		TRASH02	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	a	6253936.53	2256591.08	5.00
BLDG18		TRASH03	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	a	6253951.91	2257189.06	5.00
BLDG18		TRASH04	89.0	89.0	89.0	Lw	89		900.00	0.00	270.00	5.00	a	6253953.14	2257200.75	5.00

Line Source(s)

Name	M.	ID	Result. PWL			Result. PWL'			Lw / Li		Operating Time			Moving Pt. Src			Height		
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	Number			Speed	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)		dB(A)	(min)	(min)	(min)	Day	Evening	Night	(mph)	(ft)
BLDG13		TRUCK03	93.2	93.2	93.2	74.5	74.5	74.5	Lw	93.2								8	a
BLDG13		TRUCK04	93.2	93.2	93.2	75.5	75.5	75.5	Lw	93.2								8	a
BLDG14		TRUCK01	93.2	93.2	93.2	75.2	75.2	75.2	Lw	93.2								8	a
BLDG14		TRUCK02	93.2	93.2	93.2	77.8	77.8	77.8	Lw	93.2								8	a
BLDG14		TRUCK03	93.2	93.2	93.2	76.7	76.7	76.7	Lw	93.2								8	a
BLDG14		TRUCK04	93.2	93.2	93.2	71.0	71.0	71.0	Lw	93.2								8	a
BLDG14		TRUCK05	93.2	93.2	93.2	81.9	81.9	81.9	Lw	93.2								8	a
BLDG17		TRUCK01	93.2	93.2	93.2	79.6	79.6	79.6	Lw	93.2								8	a
BLDG17		TRUCK02	93.2	93.2	93.2	79.5	79.5	79.5	Lw	93.2								8	a
BLDG18		TRUCK01	93.2	93.2	93.2	72.0	72.0	72.0	Lw	93.2								8	a
BLDG18		TRUCK02	93.2	93.2	93.2	76.1	76.1	76.1	Lw	93.2								8	a
BLDG18		TRUCK03	93.2	93.2	93.2	76.5	76.5	76.5	Lw	93.2								8	a

Name	Height		Coordinates			
	Begin	End	x	y	z	Ground
	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
BLDG13	8.00	a	6255328.08	2253521.54	8.00	0.00
			6255335.18	2253764.32	8.00	0.00
BLDG13	8.00	a	6255309.17	2252699.02	8.00	0.00
			6255305.78	2252506.49	8.00	0.00
BLDG14	8.00	a	6255126.55	2254389.24	8.00	0.00
			6255129.32	2254598.17	8.00	0.00
BLDG14	8.00	a	6255122.38	2253953.88	8.00	0.00
			6255121.69	2253841.23	8.00	0.00
BLDG14	8.00	a	6255582.14	2253985.14	8.00	0.00
			6255582.10	2253837.06	8.00	0.00
BLDG14	8.00	a	6255128.02	2254499.54	8.00	0.00

Name	Height		Coordinates			
	Begin (ft)	End (ft)	x (ft)	y (ft)	z (ft)	Ground (ft)
			6255451.55	2254499.56	8.00	0.00
			6255466.13	2254490.53	8.00	0.00
			6255579.32	2254334.28	8.00	0.00
			6255579.36	2254323.66	8.00	0.00
BLDG14	8.00	a	6255536.55	2254393.32	8.00	0.00
			6255572.38	2254419.70	8.00	0.00
BLDG17	8.00	a	6254969.80	2256484.20	8.00	0.00
			6254969.78	2256408.56	8.00	0.00
BLDG17	8.00	a	6255157.20	2256483.00	8.00	0.00
			6255119.94	2256416.70	8.00	0.00
BLDG18	8.00	a	6254028.69	2257208.28	8.00	0.00
			6254034.19	2257638.60	8.00	0.00
BLDG18	8.00	a	6254013.81	2256565.68	8.00	0.00
			6254012.71	2256397.19	8.00	0.00
BLDG18	8.00	a	6254541.24	2256413.14	8.00	0.00
			6254423.03	2256410.01	8.00	0.00
			6254395.14	2256391.28	8.00	0.00

Area Source(s)

Name	M.	ID	Result. PWL			Result. PWL"			Lw / Li			Operating Time			Height (ft)	
			Day (dBA)	Evening (dBA)	Night (dBA)	Day (dBA)	Evening (dBA)	Night (dBA)	Type	Value	norm.	Day (min)	Special (min)	Night (min)		
BLDG13		DOCK03	103.4	103.4	103.4	61.9	61.9	61.9	Lw	103.4					8	a
BLDG14		DOCK01	103.4	103.4	103.4	64.4	64.4	64.4	Lw	103.4					8	a
BLDG14		DOCK02	103.4	103.4	103.4	67.2	67.2	67.2	Lw	103.4					8	a
BLDG17		DOCK01	103.4	103.4	103.4	62.6	62.6	62.6	Lw	103.4					8	a
BLDG18		DOCK01	103.4	103.4	103.4	62.8	62.8	62.8	Lw	103.4					8	a

Name	Height		Coordinates			
	Begin (ft)	End (ft)	x (ft)	y (ft)	z (ft)	Ground (ft)
BLDG13	8.00	a	6255236.47	2253523.48	8.00	0.00
			6255425.93	2253519.47	8.00	0.00
			6255408.89	2252698.48	8.00	0.00
			6255224.45	2252699.48	8.00	0.00
BLDG14	8.00	a	6255036.10	2254388.97	8.00	0.00
			6255231.71	2254389.56	8.00	0.00
			6255227.61	2253953.86	8.00	0.00
			6255032.21	2253953.90	8.00	0.00
BLDG14	8.00	a	6255494.23	2254322.33	8.00	0.00
			6255614.48	2254324.21	8.00	0.00
			6255613.85	2254295.32	8.00	0.00
			6255628.92	2254295.00	8.00	0.00
			6255627.04	2253984.72	8.00	0.00
			6255492.02	2253985.98	8.00	0.00
BLDG17	8.00	a	6254844.65	2256638.45	8.00	0.00
			6255469.73	2256637.87	8.00	0.00
			6255467.98	2256564.54	8.00	0.00
			6255552.38	2256563.95	8.00	0.00
			6255584.97	2256553.48	8.00	0.00
			6255584.39	2256434.16	8.00	0.00
			6255206.66	2256433.58	8.00	0.00
			6255204.91	2256482.47	8.00	0.00
			6255098.99	2256483.64	8.00	0.00
			6255100.73	2256442.89	8.00	0.00
			6255035.55	2256444.64	8.00	0.00
			6255036.13	2256483.64	8.00	0.00
			6254899.36	2256484.80	8.00	0.00
			6254899.94	2256444.64	8.00	0.00
			6254845.23	2256445.22	8.00	0.00
			6254844.07	2256534.27	8.00	0.00
BLDG18	8.00	a	6253940.22	2257209.97	8.00	0.00
			6254133.29	2257206.27	8.00	0.00
			6254114.31	2256564.08	8.00	0.00
			6253925.45	2256567.08	8.00	0.00

Barrier(s)

Name	M.	ID	Absorption		Z-Ext. (ft)	Cantilever		Height		Coordinates			
			left	right		horz. (ft)	vert. (ft)	Begin (ft)	End (ft)	x (ft)	y (ft)	z (ft)	Ground (ft)
BLDG13		0						12.00	a	6255425.68	2253523.32	12.00	0.00
										6255354.05	2253525.47	12.00	0.00
BLDG13		0						12.00	a	6255293.62	2253526.85	12.00	0.00
										6255240.39	2253526.85	12.00	0.00
BLDG13		0						12.00	a	6255237.77	2252695.29	12.00	0.00

Name	M.	ID	Absorption		Z-Ext.	Cantilever		Height		Coordinates			
			left	right		horz.	vert.	Begin	End	x	y	z	Ground
					(ft)	(ft)	(ft)	(ft)		(ft)	(ft)	(ft)	(ft)
BLDG13		0						12.00	a	6255278.11	2252694.85	12.00	0.00
										6255338.63	2252693.55	12.00	0.00
										6255410.32	2252692.47	12.00	0.00
BLDG14		0						12.00	a	6255036.12	2254391.05	12.00	0.00
										6255108.34	2254391.22	12.00	0.00
BLDG14		0						12.00	a	6255168.75	2254391.64	12.00	0.00
										6255226.08	2254391.55	12.00	0.00
BLDG14		0						12.00	a	6255032.19	2253951.59	12.00	0.00
										6255103.79	2253951.42	12.00	0.00
BLDG14		0						12.00	a	6255218.46	2253950.89	12.00	0.00
										6255164.03	2253950.80	12.00	0.00
BLDG14		0						12.00	a	6255492.01	2253984.85	12.00	0.00
										6255563.70	2253984.63	12.00	0.00
BLDG14		0						12.00	a	6255494.28	2254323.08	12.00	0.00
										6255524.90	2254323.08	12.00	0.00
										6255524.96	2254324.39	12.00	0.00
										6255564.53	2254324.33	12.00	0.00
BLDG14		0						14.00	a	6255597.41	2254324.46	14.00	0.00
										6255615.19	2254324.58	14.00	0.00
										6255614.56	2254295.78	14.00	0.00
										6255630.28	2254295.40	14.00	0.00
										6255627.71	2253983.32	14.00	0.00
BLDG17		0						12.00	a	6254833.72	2256507.51	12.00	0.00
										6254844.42	2256507.52	12.00	0.00
										6254844.62	2256443.45	12.00	0.00
BLDG18		0						12.00	a	6254133.32	2257207.25	12.00	0.00
										6254042.46	2257208.86	12.00	0.00
BLDG18		0						12.00	a	6253940.33	2257211.37	12.00	0.00
										6253996.64	2257210.46	12.00	0.00
BLDG18		0						12.00	a	6254114.29	2256563.51	12.00	0.00
										6254042.20	2256564.04	12.00	0.00
BLDG18		0						12.00	a	6253980.77	2256565.06	12.00	0.00
										6253924.43	2256566.33	12.00	0.00
parapet		0						6.00	g	6254771.00	2254514.01	51.00	0.00
										6254717.73	2254513.09	51.00	0.00
										6254716.69	2254453.57	51.00	0.00
										6254716.35	2254429.02	51.00	0.00

Building(s)

Name	M.	ID	RB	Residents	Absorption	Height	Coordinates				
							Begin	x	y	z	Ground
						(ft)	(ft)	(ft)	(ft)	(ft)	
BUILDING		BUILDING00011	x	0		45.00	a	6254841.43	2256230.72	45.00	0.00
								6254926.76	2256230.72	45.00	0.00
								6254926.76	2256141.02	45.00	0.00
								6255633.45	2256136.64	45.00	0.00
								6255624.69	2256399.99	45.00	0.00
								6254841.43	2256399.99	45.00	0.00
BUILDING		BUILDING00012	x	0		45.00	a	6255760.34	2254869.85	45.00	0.00
								6256165.11	2255005.50	45.00	0.00
								6256482.35	2254134.71	45.00	0.00
								6256066.65	2253990.31	45.00	0.00
BUILDING		BUILDING00013	x	0		45.00	a	6254669.13	2253683.65	45.00	0.00
								6255082.33	2253676.71	45.00	0.00
								6255078.86	2253555.18	45.00	0.00
								6255023.30	2253555.18	45.00	0.00
								6255023.30	2253159.35	45.00	0.00
								6254655.24	2253159.35	45.00	0.00
BUILDING		BUILDING00014	x	0		45.00	a	6256134.41	2253756.57	45.00	0.00
								6256623.99	2253766.99	45.00	0.00
								6256613.58	2252565.60	45.00	0.00
								6256103.16	2252569.07	45.00	0.00
BUILDING		BUILDING00015	x	0		45.00	a	6254797.61	2252305.18	45.00	0.00
								6255360.11	2252308.65	45.00	0.00
								6255321.91	2250343.37	45.00	0.00
								6255242.05	2250270.46	45.00	0.00
								6254759.41	2250277.40	45.00	0.00
BLDG13		BUILDING00016	x	0		45.00	a	6255427.86	2253619.67	45.00	0.00
								6255729.96	2253616.51	45.00	0.00
								6255708.91	2252594.44	45.00	0.00
								6255408.92	2252599.70	45.00	0.00
BLDG14		BUILDING00009	x	0		45.00	a	6254713.14	2254517.98	45.00	0.00
								6255037.25	2254516.73	45.00	0.00
								6255031.64	2253890.33	45.00	0.00
								6254706.28	2253888.46	45.00	0.00

Name	M.	ID	RB	Residents	Absorption	Height	Coordinates			
							Begin	x	y	z
						(ft)	(ft)	(ft)	(ft)	(ft)
BLDG14		BUILDING00010	x	0		45.00	a 6255232.34	2254456.90	45.00	0.00
							6255453.61	2254455.65	45.00	0.00
							6255494.74	2254400.80	45.00	0.00
							6255491.63	2253926.48	45.00	0.00
							6255227.35	2253925.85	45.00	0.00
BLDG17		BUILDING00008	x	0		45.00	a 6254741.05	2256964.38	45.00	0.00
							6255523.27	2256964.96	45.00	0.00
							6255522.11	2256575.59	45.00	0.00
							6255469.73	2256576.18	45.00	0.00
							6255469.73	2256637.87	45.00	0.00
							6254844.65	2256638.45	45.00	0.00
							6254844.07	2256534.27	45.00	0.00
							6254739.30	2256531.94	45.00	0.00
BLDG18		BUILDING00001	x	0		45.00	a 6254133.41	2257210.57	45.00	0.00
							6254463.06	2257204.52	45.00	0.00
							6254447.49	2256502.83	45.00	0.00
							6254112.65	2256508.02	45.00	0.00
BLDG18		BUILDING00001	x	0		12.00	a 6254133.41	2257210.57	12.00	0.00
							6254463.06	2257204.52	12.00	0.00
							6254447.49	2256502.83	12.00	0.00
							6254112.65	2256508.02	12.00	0.00
BLDG18		BUILDING00002	x	0		12.00	a 6254259.22	2257389.20	12.00	0.00
							6254278.81	2257388.56	12.00	0.00
							6254279.44	2257347.17	12.00	0.00
							6254258.90	2257347.49	12.00	0.00
BLDG18		BUILDING00003	x	0		12.00	a 6254257.95	2257435.01	12.00	0.00
							6254278.17	2257435.64	12.00	0.00
							6254280.07	2257407.21	12.00	0.00
							6254257.64	2257406.89	12.00	0.00
BLDG18		BUILDING00004	x	0		12.00	a 6254269.33	2257535.17	12.00	0.00
							6254294.61	2257542.76	12.00	0.00
							6254294.61	2257501.68	12.00	0.00
							6254268.70	2257509.26	12.00	0.00
BLDG18		BUILDING00005	x	0		12.00	a 6254376.76	2257408.47	12.00	0.00
							6254390.66	2257407.52	12.00	0.00
							6254390.66	2257362.65	12.00	0.00
							6254376.44	2257362.34	12.00	0.00
BLDG18		BUILDING00006	x	0		12.00	a 6254375.49	2257456.50	12.00	0.00
							6254394.77	2257456.50	12.00	0.00
							6254394.77	2257417.32	12.00	0.00
							6254375.49	2257416.37	12.00	0.00
BLDG18		BUILDING00007	x	0		12.00	a 6254460.01	2257408.50	12.00	0.00
							6254520.69	2257409.98	12.00	0.00
							6254520.69	2257371.59	12.00	0.00
							6254460.64	2257374.58	12.00	0.00

APPENDIX C

CONSTRUCTION NOISE LEVEL CALCULATIONS

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13697 - MFBC Building 13, 14, 17 & 18

CadnaA Noise Prediction Model: 13697-02 Construction.cna

Date: 02.12.22

Analyst: B. Lawson

Calculation Configuration

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

Receiver Noise Levels

Name	M.	ID	Level Lr			Limit. Value			Land Use			Height	Coordinates			
			Day	Night	CNEL	Day	Night	CNEL	Type	Auto	Noise Type		X	Y	Z	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)	(ft)	(ft)	(ft)	
R1		R01	74.2	73.4	80.2	55.0	45.0	0.0				5.00	a	6254523.18	2257379.43	5.00
R2		R02	62.0	58.6	65.8	55.0	45.0	0.0				5.00	a	6252919.34	2256408.68	5.00
R3		R03	63.1	60.0	67.1	55.0	45.0	0.0				5.00	a	6253214.27	2256016.68	5.00
R4		R04	65.1	62.3	69.3	55.0	45.0	0.0				5.00	a	6253873.08	2255725.53	5.00
R5		R05	65.5	62.7	69.8	55.0	45.0	0.0				5.00	a	6254202.08	2255653.20	5.00
R6		R06	65.8	63.1	70.1	55.0	45.0	0.0				5.00	a	6254474.43	2255690.47	5.00
R7		R07	63.6	59.8	67.1	55.0	45.0	0.0				5.00	a	6256247.45	2257053.56	5.00
R8		R08	65.4	62.7	69.8	55.0	45.0	0.0				5.00	a	6254517.31	2255171.52	5.00
R9		R09	66.6	64.3	71.3	55.0	45.0	0.0				5.00	a	6254486.46	2254951.44	5.00
R10		R10	72.6	71.4	78.2	55.0	45.0	0.0				5.00	a	6254475.01	2254463.48	5.00
R11		R11	68.6	67.0	73.8	55.0	45.0	0.0				5.00	a	6254492.11	2253665.28	5.00
R12		R12	62.7	60.0	67.0	55.0	45.0	0.0				5.00	a	6254510.72	2253151.17	5.00
R13		R13	61.5	58.1	65.3	55.0	45.0	0.0				5.00	a	6254477.46	2252343.85	5.00
R14		R14	55.3	50.5	58.0	55.0	45.0	0.0				5.00	a	6256684.69	2254919.58	5.00

Point Source(s)

Name	M.	ID	Result. PWL			Lw / Li		Operating Time			Height	Coordinates			
			Day	Evening	Night	Type	Value	norm.	Day	Special		Night	X	Y	Z
			(dBA)	(dBA)	(dBA)		dB(A)	(min)	(min)	(min)	(ft)		(ft)	(ft)	(ft)
		CONS01	115.0	115.0	115.0	Lw	115				8.00	a	6255276.05	2253605.26	8.00
		CONS02	115.0	115.0	115.0	Lw	115				8.00	a	6255767.45	2253634.66	8.00
		CONS03	115.0	115.0	115.0	Lw	115				8.00	a	6255259.25	2252567.86	8.00
		CONS01	115.0	115.0	115.0	Lw	115				8.00	a	6254649.08	2254407.03	8.00

Name	M.	ID	Result. PWL			Lw / Li		Operating Time			Height	Coordinates			
			Day	Evening	Night	Type	Value	norm.	Day	Special		Night	X	Y	Z
			(dBA)	(dBA)	(dBA)		dB(A)	(min)	(min)	(min)	(ft)	(ft)	(ft)	(ft)	
		CONS02	115.0	115.0	115.0	Lw	115				8.00	a	6254653.23	2254571.12	8.00
		CONS03	115.0	115.0	115.0	Lw	115				8.00	a	6254651.16	2253837.91	8.00
		CONS04	115.0	115.0	115.0	Lw	115				8.00	a	6255563.00	2254346.79	8.00
		CONS01	115.0	115.0	115.0	Lw	115				8.00	a	6254679.82	2256995.93	8.00
		CONS02	115.0	115.0	115.0	Lw	115				8.00	a	6255624.51	2256961.75	8.00
		CONS03	115.0	115.0	115.0	Lw	115				8.00	a	6254682.26	2256432.04	8.00
		Construction01	115.0	115.0	115.0	Lw	115				8.00	a	6254523.91	2257263.62	8.00
		Construction02	115.0	115.0	115.0	Lw	115				8.00	a	6254486.73	2256440.73	8.00
		Construction03	115.0	115.0	115.0	Lw	115				8.00	a	6254216.57	2256448.17	8.00
		Construction04	115.0	115.0	115.0	Lw	115				8.00	a	6253956.31	2256467.99	8.00

Area Source(s)

Name	M.	ID	Result. PWL			Result. PWL"			Lw / Li		Operating Time			Height		
			Day	Evening	Night	Day	Evening	Night	Type	Value	norm.	Day	Special	Night	(ft)	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)		dB(A)	(min)	(min)	(min)			
SITEBOUNDARY		CONSTRUCTION	122.0	15.0	15.0	73.5	-33.5	-33.5	PWL-Pt	115					8	a
SITEBOUNDARY		CONSTRUCTION	122.0	15.0	15.0	73.1	-33.9	-33.9	PWL-Pt	115					8	a
SITEBOUNDARY		CONSTRUCTION	122.0	15.0	15.0	73.8	-33.2	-33.2	PWL-Pt	115					8	a
SITEBOUNDARY		CONSTRUCTION	122.0	15.0	15.0	74.4	-32.6	-32.6	PWL-Pt	115					8	a

Name	ID	Height		Coordinates			
		Begin	End	x	y	z	Ground
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
SITEBOUNDARY	CONSTRUCTION	8.00	a	6255211.67	2253765.11	8.00	0.00
				6255816.19	2253761.25	8.00	0.00
				6255829.64	2253738.24	8.00	0.00
				6255803.39	2252537.34	8.00	0.00
				6255783.60	2252517.02	8.00	0.00
				6255192.97	2252504.00	8.00	0.00
SITEBOUNDARY	CONSTRUCTION	8.00	a	6254618.69	2254602.47	8.00	0.00
				6255075.46	2254597.13	8.00	0.00
				6255107.55	2254599.10	8.00	0.00
				6255139.46	2254603.11	8.00	0.00
				6255171.04	2254609.16	8.00	0.00
				6255202.17	2254617.21	8.00	0.00
				6255232.72	2254627.23	8.00	0.00
				6255262.57	2254639.19	8.00	0.00
				6255307.29	2254662.91	8.00	0.00
				6255351.33	2254687.90	8.00	0.00
				6255369.34	2254683.78	8.00	0.00
				6255667.73	2254270.70	8.00	0.00
				6255693.19	2254232.05	8.00	0.00
				6255716.62	2254192.16	8.00	0.00
				6255737.98	2254151.11	8.00	0.00
				6255757.20	2254109.02	8.00	0.00
				6255774.24	2254066.00	8.00	0.00
				6255789.05	2254022.16	8.00	0.00
				6255801.59	2253977.63	8.00	0.00
				6255811.83	2253932.50	8.00	0.00
				6255824.37	2253856.67	8.00	0.00
				6255808.92	2253838.61	8.00	0.00
				6255163.22	2253840.83	8.00	0.00
				6254928.15	2253841.53	8.00	0.00
				6254890.06	2253840.39	8.00	0.00
				6254852.10	2253837.03	8.00	0.00
				6254814.40	2253831.45	8.00	0.00
				6254777.09	2253823.69	8.00	0.00
				6254740.30	2253813.75	8.00	0.00
				6254706.64	2253805.44	8.00	0.00
				6254672.63	2253798.73	8.00	0.00
				6254638.34	2253793.62	8.00	0.00
				6254603.85	2253790.14	8.00	0.00
				6254593.78	2253814.45	8.00	0.00
				6254601.76	2254206.11	8.00	0.00
				6254609.40	2254560.28	8.00	0.00
				6254609.70	2254594.00	8.00	0.00
SITEBOUNDARY	CONSTRUCTION	8.00	a	6254650.62	2257029.73	8.00	0.00
				6255635.05	2257031.71	8.00	0.00
				6255848.73	2256408.34	8.00	0.00
				6255742.18	2256409.43	8.00	0.00
				6255750.89	2256385.30	8.00	0.00
				6254639.79	2256388.75	8.00	0.00
SITEBOUNDARY	CONSTRUCTION	8.00	a	6254540.66	2256389.02	8.00	0.00
				6253918.70	2256398.65	8.00	0.00
				6253949.93	2257640.37	8.00	0.00
				6254101.81	2257638.66	8.00	0.00

Name	ID	Height		Coordinates			
		Begin	End	x	y	z	Ground
		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
				6254097.08	2257375.37	8.00	0.00
				6254090.98	2257368.69	8.00	0.00
				6254086.13	2257361.05	8.00	0.00
				6254082.68	2257352.68	8.00	0.00
				6254080.73	2257343.85	8.00	0.00
				6254080.34	2257334.81	8.00	0.00
				6254081.53	2257325.84	8.00	0.00
				6254084.24	2257317.21	8.00	0.00
				6254088.41	2257309.18	8.00	0.00
				6254093.91	2257302.00	8.00	0.00
				6254100.57	2257295.87	8.00	0.00
				6254108.19	2257291.00	8.00	0.00
				6254116.54	2257287.51	8.00	0.00
				6254125.37	2257285.52	8.00	0.00
				6254134.40	2257285.09	8.00	0.00
				6254148.10	2257287.67	8.00	0.00
				6254161.53	2257291.39	8.00	0.00
				6254200.59	2257302.67	8.00	0.00
				6254216.82	2257304.60	8.00	0.00
				6254233.14	2257305.28	8.00	0.00
				6254546.29	2257302.89	8.00	0.00
				6254562.09	2257285.80	8.00	0.00

Building(s)

Name	Sel.	M.	ID	RB	Residents	Absorption	Height	Coordinates				
								Begin	x	y	z	Ground
								(ft)	(ft)	(ft)	(ft)	(ft)
BUILDING			BUILDING00011	x	0	45.00	a	6254841.43	2256230.72	45.00	0.00	
								6254926.76	2256230.72	45.00	0.00	
								6254926.76	2256141.02	45.00	0.00	
								6255633.45	2256136.64	45.00	0.00	
								6255624.69	2255639.99	45.00	0.00	
								6254841.43	2255639.99	45.00	0.00	
BUILDING			BUILDING00012	x	0	45.00	a	6255760.34	2254869.85	45.00	0.00	
								6256165.11	2255005.50	45.00	0.00	
								6256482.35	2254134.71	45.00	0.00	
								6256066.65	2253990.31	45.00	0.00	
BUILDING			BUILDING00013	x	0	45.00	a	6254669.13	2253683.65	45.00	0.00	
								6255082.33	2253676.71	45.00	0.00	
								6255078.86	2253555.18	45.00	0.00	
								6255023.30	2253555.18	45.00	0.00	
								6255023.30	2253159.35	45.00	0.00	
								6254655.24	2253159.35	45.00	0.00	
BUILDING			BUILDING00014	x	0	45.00	a	6256134.41	2253756.57	45.00	0.00	
								6256623.99	2253766.99	45.00	0.00	
								6256613.58	2252565.60	45.00	0.00	
								6256103.16	2252569.07	45.00	0.00	
BUILDING			BUILDING00015	x	0	45.00	a	6254797.61	2252305.18	45.00	0.00	
								6255360.11	2252308.65	45.00	0.00	
								6255321.91	2250343.37	45.00	0.00	
								6255242.05	2250270.46	45.00	0.00	
								6254759.41	2250277.40	45.00	0.00	
BLDG18			BUILDING00002	x	0	12.00	a	6254259.22	2257389.20	12.00	0.00	
								6254278.81	2257388.56	12.00	0.00	
								6254279.44	2257347.17	12.00	0.00	
								6254258.90	2257347.49	12.00	0.00	
BLDG18			BUILDING00003	x	0	12.00	a	6254257.95	2257435.01	12.00	0.00	
								6254278.17	2257435.64	12.00	0.00	
								6254280.07	2257407.21	12.00	0.00	
								6254257.64	2257406.89	12.00	0.00	
BLDG18			BUILDING00004	x	0	12.00	a	6254269.33	2257535.17	12.00	0.00	
								6254294.61	2257542.76	12.00	0.00	
								6254294.61	2257501.68	12.00	0.00	
								6254268.70	2257509.26	12.00	0.00	
BLDG18			BUILDING00005	x	0	12.00	a	6254376.76	2257408.47	12.00	0.00	
								6254390.66	2257407.52	12.00	0.00	
								6254390.66	2257362.65	12.00	0.00	
								6254376.44	2257362.34	12.00	0.00	
BLDG18			BUILDING00006	x	0	12.00	a	6254375.49	2257456.50	12.00	0.00	
								6254394.77	2257456.50	12.00	0.00	
								6254394.77	2257417.32	12.00	0.00	
								6254375.49	2257416.37	12.00	0.00	
BLDG18			BUILDING00007	x	0	12.00	a	6254460.01	2257408.50	12.00	0.00	
								6254520.69	2257409.98	12.00	0.00	
								6254520.69	2257371.59	12.00	0.00	
								6254460.64	2257374.58	12.00	0.00	

APPENDIX D

CADNAA CONCRETE POUR NOISE MODEL INPUTS

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13697 - MFBC Building 13, 14, 17 & 18

CadnaA Noise Prediction Model: 13697-02 Concrete.cna

Date: 02.12.22

Analyst: B. Lawson

Calculation Configuration

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

Receiver Noise Levels

Name	M.	ID	Level Lr			Limit. Value			Land Use			Height	Coordinates			
			Day	Night	CNEL	Day	Night	CNEL	Type	Auto	Noise Type		X	Y	Z	
			(dBA)	(dBA)	(dBA)	(dBA)	(dBA)	(dBA)				(ft)	(ft)	(ft)	(ft)	
R1		R01	53.3	50.6	57.7	55.0	45.0	0.0				5.00	a	6254523.18	2257379.43	5.00
R2		R02	47.1	43.5	50.7	55.0	45.0	0.0				5.00	a	6252919.34	2256408.68	5.00
R3		R03	47.9	44.4	51.6	55.0	45.0	0.0				5.00	a	6253214.27	2256016.68	5.00
R4		R04	49.7	46.3	53.5	55.0	45.0	0.0				5.00	a	6253873.08	2255725.53	5.00
R5		R05	50.2	46.9	54.1	55.0	45.0	0.0				5.00	a	6254202.08	2255653.20	5.00
R6		R06	50.5	47.2	54.4	55.0	45.0	0.0				5.00	a	6254474.43	2255690.47	5.00
R7		R07	48.3	44.4	51.7	55.0	45.0	0.0				5.00	a	6256247.45	2257053.56	5.00
R8		R08	50.1	47.2	54.3	55.0	45.0	0.0				5.00	a	6254517.31	2255171.52	5.00
R9		R09	51.2	48.5	55.6	55.0	45.0	0.0				5.00	a	6254486.46	2254951.44	5.00
R10		R10	55.5	53.8	60.7	55.0	45.0	0.0				5.00	a	6254475.01	2254463.48	5.00
R11		R11	52.0	49.6	56.6	55.0	45.0	0.0				5.00	a	6254492.11	2253665.28	5.00
R12		R12	47.9	45.1	52.2	55.0	45.0	0.0				5.00	a	6254510.72	2253151.17	5.00
R13		R13	46.8	43.1	50.4	55.0	45.0	0.0				5.00	a	6254477.46	2252343.85	5.00
R14		R14	40.5	35.8	43.3	55.0	45.0	0.0				5.00	a	6256684.69	2254919.58	5.00

Point Source(s)

Name	M.	ID	Result. PWL			Lw / Li		Operating Time			Height	Coordinates			
			Day	Evening	Night	Type	Value	norm.	Day	Special		Night	X	Y	Z
			(dBA)	(dBA)	(dBA)		dB(A)	(min)	(min)	(min)	(ft)		(ft)	(ft)	(ft)
		CONCRETE01	100.3	100.3	100.3	Lw	100.3				8.00	a	6255683.45	2253567.46	8.00
		CONCRETE02	100.3	100.3	100.3	Lw	100.3				8.00	a	6255263.45	2253416.26	8.00
		CONCRETE03	100.3	100.3	100.3	Lw	100.3				8.00	a	6255263.45	2252765.26	8.00
		CONS01	100.3	100.3	100.3	Lw	100.3				8.00	a	6254734.81	2254361.53	8.00

Name	M.	ID	Result. PWL			Lw / Li		Operating Time			Height		Coordinates			
			Day (dBA)	Evening (dBA)	Night (dBA)	Type	Value dB(A)	norm.	Day (min)	Special (min)	Night (min)	(ft)		X (ft)	Y (ft)	Z (ft)
		CONS03	100.3	100.3	100.3	Lw	100.3					8.00	a	6254727.82	2253916.06	8.00
		CONS04	100.3	100.3	100.3	Lw	100.3					8.00	a	6255585.25	2254268.33	8.00
		CONS02	100.3	100.3	100.3	Lw	100.3					8.00	a	6254731.72	2254491.46	8.00
		CONCRETE01	100.3	100.3	100.3	Lw	100.3					8.00	a	6254761.76	2256938.96	8.00
		CONCRETE02	100.3	100.3	100.3	Lw	100.3					8.00	a	6255490.43	2256934.01	8.00
		CONCRETE03	100.3	100.3	100.3	Lw	100.3					8.00	a	6254870.82	2256475.49	8.00
		concrete01	100.3	100.3	100.3	Lw	100.3					8.00	a	6254437.16	2257186.79	8.00
		concrete02	100.3	100.3	100.3	Lw	100.3					8.00	a	6254409.90	2256542.35	8.00
		concrete03	100.3	100.3	100.3	Lw	100.3					8.00	a	6254077.76	2256604.32	8.00
		concrete04	100.3	100.3	100.3	Lw	100.3					8.00	a	6254097.59	2257169.44	8.00

Area Source(s)

Name	M.	ID	Result. PWL			Result. PWL*			Lw / Li			Operating Time			Height		
			Day (dBA)	Evening (dBA)	Night (dBA)	Day (dBA)	Evening (dBA)	Night (dBA)	Type	Value dB(A)	norm.	Day (min)	Special (min)	Night (min)	(ft)		
CONCRETE		CONCRETE	107.3	0.3	0.3	60.9	-46.0	-46.0	PWL-Pt	100.3						8	a
CONCRETE		CONCRETE	107.3	0.3	0.3	60.7	-46.3	-46.3	PWL-Pt	100.3						8	a
CONCRETE		CONCRETE	107.3	0.3	0.3	61.5	-45.5	-45.5	PWL-Pt	100.3						8	a
CONCRETE		0	107.3	0.3	0.3	63.3	-43.7	-43.7	PWL-Pt	100.3						8	a

Name	ID	Height		Coordinates			
		Begin (ft)	End (ft)	x (ft)	y (ft)	z (ft)	Ground (ft)
CONCRETE	CONCRETE	8.00	a	6255426.69	2253622.23	8.00	0.00
				6255729.46	2253618.32	8.00	0.00
				6255709.88	2252595.16	8.00	0.00
				6255408.42	2252596.47	8.00	0.00
				6255409.72	2252698.26	8.00	0.00
				6255223.10	2252698.26	8.00	0.00
				6255238.76	2253525.66	8.00	0.00
				6255425.38	2253526.96	8.00	0.00
CONCRETE	CONCRETE	8.00	a	6254704.00	2254523.40	8.00	0.00
				6255036.01	2254520.68	8.00	0.00
				6255033.29	2254394.94	8.00	0.00
				6255227.80	2254391.32	8.00	0.00
				6255228.70	2254459.17	8.00	0.00
				6255449.44	2254456.45	8.00	0.00
				6255492.86	2254401.27	8.00	0.00
				6255492.86	2254324.37	8.00	0.00
				6255612.28	2254322.56	8.00	0.00
				6255610.47	2254293.61	8.00	0.00
				6255628.56	2254293.61	8.00	0.00
				6255624.94	2253867.52	8.00	0.00
				6255643.91	2253839.18	8.00	0.00
				6255559.78	2253839.47	8.00	0.00
				6255562.52	2253985.12	8.00	0.00
				6255491.05	2253989.65	8.00	0.00
				6255493.77	2253926.32	8.00	0.00
				6255226.89	2253921.80	8.00	0.00
				6255227.80	2253952.56	8.00	0.00
				6255163.56	2253952.56	8.00	0.00
				6255162.66	2253872.04	8.00	0.00
				6255184.36	2253840.76	8.00	0.00
				6255098.42	2253841.03	8.00	0.00
				6255104.76	2253928.13	8.00	0.00
				6255107.48	2253950.75	8.00	0.00
				6255033.29	2253950.75	8.00	0.00
				6255033.29	2253891.04	8.00	0.00
				6254703.09	2253887.42	8.00	0.00
CONCRETE	CONCRETE	8.00	a	6254741.50	2256965.38	8.00	0.00
				6255522.42	2256965.38	8.00	0.00
				6255522.76	2256563.32	8.00	0.00
				6255552.83	2256563.32	8.00	0.00
				6255584.40	2256543.03	8.00	0.00
				6255600.19	2256541.52	8.00	0.00
				6255599.44	2256494.16	8.00	0.00
				6255581.81	2256489.57	8.00	0.00
				6255582.15	2256433.27	8.00	0.00
				6255204.77	2256433.27	8.00	0.00
				6255206.28	2256482.14	8.00	0.00
				6255176.21	2256481.38	8.00	0.00
				6255173.20	2256467.10	8.00	0.00
				6255158.92	2256436.28	8.00	0.00
				6255140.12	2256411.47	8.00	0.00
				6255133.36	2256392.68	8.00	0.00
				6255128.09	2256406.21	8.00	0.00

Name	ID	Height		Coordinates			
		Begin (ft)	End (ft)	x (ft)	y (ft)	z (ft)	Ground (ft)
				6255116.82	2256422.00	8.00	0.00
				6255095.02	2256428.76	8.00	0.00
				6255113.81	2256444.55	8.00	0.00
				6255130.35	2256461.84	8.00	0.00
				6255136.36	2256484.39	8.00	0.00
				6255100.28	2256481.38	8.00	0.00
				6255101.78	2256444.55	8.00	0.00
				6255036.38	2256446.05	8.00	0.00
				6255036.38	2256483.64	8.00	0.00
				6254997.29	2256482.89	8.00	0.00
				6254997.29	2256415.98	8.00	0.00
				6254904.07	2256416.73	8.00	0.00
				6254925.12	2256433.27	8.00	0.00
				6254937.15	2256454.32	8.00	0.00
				6254939.41	2256483.64	8.00	0.00
				6254898.81	2256482.89	8.00	0.00
				6254898.81	2256444.55	8.00	0.00
				6254844.69	2256443.80	8.00	0.00
				6254849.08	2256534.30	8.00	0.00
				6254740.77	2256532.84	8.00	0.00
CONCRETE	0	8.00	a	6254068.52	2257208.84	8.00	0.00
				6254461.33	2257204.52	8.00	0.00
				6254447.49	2256504.56	8.00	0.00
				6254112.65	2256509.75	8.00	0.00
				6254111.78	2256566.85	8.00	0.00
				6254054.68	2256568.58	8.00	0.00

Building(s)

Name	Sel.	M.	ID	RB	Residents	Absorption	Height	Coordinates				
								Begin (ft)	x (ft)	y (ft)	z (ft)	Ground (ft)
BUILDING			BUILDING00011	x	0		45.00	a	6254841.43	2256230.72	45.00	0.00
									6254926.76	2256230.72	45.00	0.00
									6254926.76	2256141.02	45.00	0.00
									6255633.45	2256136.64	45.00	0.00
									6255624.69	2255639.99	45.00	0.00
									6254841.43	2255639.99	45.00	0.00
BUILDING			BUILDING00012	x	0		45.00	a	6255760.34	2254869.85	45.00	0.00
									6256165.11	2255005.50	45.00	0.00
									6256482.35	2254134.71	45.00	0.00
									6256066.65	2253990.31	45.00	0.00
BUILDING			BUILDING00013	x	0		45.00	a	6254669.13	2253683.65	45.00	0.00
									6255082.33	2253676.71	45.00	0.00
									6255078.86	2253555.18	45.00	0.00
									6255023.30	2253555.18	45.00	0.00
									6255023.30	2253159.35	45.00	0.00
									6254655.24	2253159.35	45.00	0.00
BUILDING			BUILDING00014	x	0		45.00	a	6256134.41	2253756.57	45.00	0.00
									6256623.99	2253766.99	45.00	0.00
									6256613.58	2252565.60	45.00	0.00
									6256103.16	2252569.07	45.00	0.00
BUILDING			BUILDING00015	x	0		45.00	a	6254797.61	2252305.18	45.00	0.00
									6255360.11	2252308.65	45.00	0.00
									6255321.91	2250343.37	45.00	0.00
									6255242.05	2250270.46	45.00	0.00
									6254759.41	2250277.40	45.00	0.00
BLDG18			BUILDING00002	x	0		12.00	a	6254259.22	2257389.20	12.00	0.00
									6254278.81	2257388.56	12.00	0.00
									6254279.44	2257347.17	12.00	0.00
									6254258.90	2257347.49	12.00	0.00
BLDG18			BUILDING00003	x	0		12.00	a	6254257.95	2257435.01	12.00	0.00
									6254278.17	2257435.64	12.00	0.00
									6254280.07	2257407.21	12.00	0.00
									6254257.64	2257406.89	12.00	0.00
BLDG18			BUILDING00004	x	0		12.00	a	6254269.33	2257535.17	12.00	0.00
									6254294.61	2257542.76	12.00	0.00
									6254294.61	2257501.68	12.00	0.00
									6254268.70	2257509.26	12.00	0.00
BLDG18			BUILDING00005	x	0		12.00	a	6254376.76	2257408.47	12.00	0.00
									6254390.66	2257407.52	12.00	0.00
									6254390.66	2257362.65	12.00	0.00
									6254376.44	2257362.34	12.00	0.00
BLDG18			BUILDING00006	x	0		12.00	a	6254375.49	2257456.50	12.00	0.00
									6254394.77	2257456.50	12.00	0.00
									6254394.77	2257417.32	12.00	0.00
									6254375.49	2257416.37	12.00	0.00

Name	Sel.	M.	ID	RB	Residents	Absorption	Coordinates					
							Height	x	y	z	Ground	
							Begin					
							(ft)	(ft)	(ft)	(ft)	(ft)	
BLDG18			BUILDING00007	x	0		12.00	a	6254460.01	2257408.50	12.00	0.00
									6254520.69	2257409.98	12.00	0.00
									6254520.69	2257371.59	12.00	0.00
									6254460.64	2257374.58	12.00	0.00