APPENDIX E
NOISE ANALYSIS FIGURES AND TABLES

I-375 NOISE ANALYSIS FIGURES AND TABLES

July 2, 2020

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Appendix A: Traffic Noise Analysis Exhibits

Table 1. Measured Existing Noise Levels

Table 1. Measured Existing Noise Levels

Field Site #	Site Description	Date	Start Time	Duration	Traffic[1]							Noise Level, dB(A) Leq(h)
					Direction	Auto	Med Truck	Heavy Truck	Buses	MC	Speed mph	
1	Garden Lofts at Woodward Place (residential). 14 feet se of mid-point of building, on edge of sidewalk along north side of E. Fisher Service Dr.	10/26/17	8:53 am	15 min	E. Fisher Service Dr. (southbound)	17	0	0	0	0	35	71.8
					I-75 Fisher Fwy NB @ John R	662	23	85	1	0	50	
					I-75 Fisher Fwy SB @ John R	558	18	49	9	0	60	
2	Vacant land. 233 feet southeast of the west side of St. Antoine St. On back edge of sidewalk on north side of Chrysler Service Dr. East of Winder St.	10/26/17	9:50 am	15 min	Chrysler Service Dr. (southbound)	8	0	1	0	0	35	61.3
					I-75 Fisher Fwy NB @ John R	582	19	67	5	1	60	
					I-75 Fisher Fwy SB @ John R	377	22	41	4	0	60	
3	Brewster Homes (residential). 520 feet southeast of Mack Ave. and I-75 Frontage Rd. corner. On back of sidewalk (west side) where sidewalk expands from 10 feet to 16 feet.	10/26/17	10:40 am	15 min	I-75 Frontage Rd. (southbound)	33	4	2	0	0	45	67.4
					I-75 Chrysler Fwy NB @ Mack	536	34	58	1	0	60	
					I-75 Chrysler Fwy NB @ Mack	557	10	35	2	0	60	
4	Sacred Heart Church (place of worship). Back of sidewalk on east side of Chrysler Service Dr., in line with southeastern edge of Sacred Heart parking lot.	10/26/17	11:02 am	15 min	Chrysler Service Dr. (northbound)	14	3	2	0	0	35	72.2
					I-75 Chrysler Fwy NB @ Mack	585	20	70	2	1	60	
					I-75 Chrysler Fwy NB @ Mack	562	7	42	1	0	60	
5	Supino Pizzeria (retail). On metal tree grate in front of Suprino Pizzeria. 4 feet west of Russell St. and 30 feet north of E. Fisher Service Dr.	10/26/17	11:41 am	15 min	Russell St. NB	66	1	0	1	0	15	62.6
					Russell St. SB	41	0	0	0	0	15	
					I-75 Fisher Fwy NB @ Russell	206	3	11	1	0	50	
					I-75 Fisher Fwy SB @ Russell	162	4	4	1	0	50	
6	St. Joseph Oratory (place of worship). At the northwest corner of the St. Joseph surface parking lot on the corner of Jay St. and Orleans St. Back of sidewalk on west side of Orleans St. 33 feet southeast of Gratiot Ave.	10/26/17	12:08 pm	15 min	Gratiot Ave. NB	75	10	0	2	0	35	68.8
					Gratiot Ave. SB	60	2	1	0	0	35	
					I-75 Fisher Fwy NB @ Ped Bridge	180	7	12	0	0	45	
					I-75 Fisher Fwy SB @ Ped Bridge	183	3	8	0	0	50	
7	St. John St. Luke United Church (place of worship). Back of sidewalk on southeast corner of Russell St. and Gratiot Ave. At base of traffic signal pole.	10/26/17	12:42 pm	15 min	Russell St. west of Gratiot Ave.	60	0	2	0	0	20	66.2
					Russell St. east of Gratiot Ave.	9	1	0	0	0	20	
					Gratiot Ave. NB	81	0	2	1	0	35	

Table 1. Measured Existing Noise Levels

Field Site #	Site Description	Date	Start Time	Duration	Traffic[1]							Noise Level, dB(A) Leq(h)
					Direction	Auto	Med Truck	Heavy Truck	Buses	MC	Speed mph	
					Gratiot Ave. SB	85	4	1	3	0	35	
8	Historic Trinity Lutheran Church (place of worship). Back of curb in line with southwest side of church.	10/26/17	12:54 pm	15 min	Gratiot Ave. NB	91	0	1	1	0	35	67.3
					Gratiot Ave. SB	112	0	1	1	0	35	
9	Jean Rivard Apartments (residential). Back of curb on east side of Chrysler Dr. NB., at southern end of parking lot entrance (~299 feet southeast of Lafayette St.).	10/26/17	2:11 pm	15 min	Chrysler Dr. (northbound)	7	0	0	0	0	30	62.3
					I-375 NB @ Lafayette	326	8	2	3	0	60	
					I-375 SB @ Lafayette	198	2	3	1	0	60	
10	Christ Church (place of worship). Edge of sidewalk (south side of E. Jefferson Ave.) on western edge of parking lot. 2 feet north of Christ Church digital sign.	10/26/17	3:03 pm	15 min	E. Jefferson (eastbound)	271	3	3	4	0	25	69.8
					I-375 NB @ Larned	752	4	12	0	0	50	
					I-375 SB @ Larned	60	1	2	0	0	50	
11	St. Peter & Paul Jesuit Church (place of worship). In line with front of church. 15 feet west of southwest corner.	10/26/17	3:23 pm	15 min	E. Jefferson (westbound)	248	6	2	3	0	40	67.8
					I-375 NB @ Larned	161	0	1	1	0	50	
					I-375 SB @ Larned	256	0	4	8	0	50	
12	Holy Family Church (place of worship). 35 feet north of north corner of church. Back of sidewalk (west side) and north point of service drive to church.	10/26/17	2:31 pm	15 min	Chrysler Service Dr. (southbound)	24	0	0	0	0	30	62.3
					I-375 NB @ Lafayette	121	1	1	1	0	60	
					I-375 SB @ Lafayette	213	3	1	3	0	60	
13	St. John's Church (place of worship). 52 feet northeast of the northeast corner of the church. On back of sidewalk at the corner of E. Fisher Service Dr. and Witherell St.	10/26/17	9:22 am	15 min	E. Fisher Service Dr. (northbound)	30	1	0	0	0	30	72.3
					I-75 Fisher Fwy NB @ John R	641	19	115	8	1	60	
					I-75 Fisher Fwy SB @ John R	439	13	44	3	0	60	

Source: HNTB Corporation, October 26, 2017

Notes: 1) Autos defined as 2-axle, 4-tire; medium trucks as 2-axle, 6-tire; heavy trucks as 3 or more axles; buses as vehicles designed to carry more than 9 passengers; and motorcycles as vehicles with two or three axles. 2) Duration of measurement was 15 minutes. However, half of the data was removed due to lawn mower interference during portions of the measurement.

Table 2. Impact Analysis Results, dB(A) L_{eq}(1h)

Receiver ID	Noise Abatement Criteria (NAC)			Receptors	Noise Level – dB(A) L_{eq}(1h)			
	Description	Category	Criteria, L_{eq}(h)		Existing	Future Recommended Preferred Alternative		
						NL	Change from Existing	Impact (Y/N)
CNE A								
A1.2	**RESIDENTIAL**	B	67	1	68.2	69.1	0.9	**Yes**
A2.2	RESIDENTIAL	B	67	1	60.9	61.7	0.8	No
A3.2	RESIDENTIAL	B	67	1	59.4	60.0	0.6	No
A4.2	RESIDENTIAL	B	67	1	56.8	56.7	-0.1	No
A5.2	RESIDENTIAL	B	67	1	56.1	55.9	-0.2	No
A6.2	RESIDENTIAL	B	67	1	53.5	53.3	-0.2	No
A7.2	**RESIDENTIAL**	B	67	1	68.3	69.0	0.7	**Yes**
A8.2	**RESIDENTIAL**	B	67	1	71.0	71.8	0.8	**Yes**
A9.2	**RESIDENTIAL**	B	67	1	70.9	71.9	1.0	**Yes**
A10.2	**RESIDENTIAL**	B	67	1	67.7	69.0	1.3	**Yes**
A11.2	RESIDENTIAL	B	67	1	56.5	56.1	-0.4	No
A12.2	RESIDENTIAL	B	67	2	55.7	55.8	0.1	No
A13.2	RESIDENTIAL	B	67	1	55.0	55.0	0.0	No
A15.2	RESIDENTIAL	B	67	1	55.4	55.5	0.1	No
A16.2	RESIDENTIAL	B	67	2	56.6	57.0	0.4	No

Table 2. Impact Analysis Results, dB(A) L_{eq}(1h) Continued

Receiver ID	Noise Abatement Criteria (NAC)			Receptors	Noise Level – dB(A) L_{eq}(1h)			
	Description	Category	Criteria, L_{eq}(h)		Existing	Future Recommended Preferred Alternative		
						NL	Change from Existing	Impact (Y/N)
A17.2	RESIDENTIAL	B	67	1	59.5	59.8	0.3	No
A18.2	RESIDENTIAL	B	67	1	49.8	48.8	-1.0	No
A19.2	RESIDENTIAL	B	67	1	46.3	43.9	-2.4	No
A20.2	RESIDENTIAL	B	67	1	46.1	43.6	-2.5	No
A21.2	RESIDENTIAL	B	67	1	46.6	44.7	-1.9	No
A22.2	RESIDENTIAL	B	67	1	47.9	47.2	-0.7	No
A23.2	RESIDENTIAL	B	67	1	53.3	53.4	0.1	No
A24	PLACE OF WORSHIP (NO EXTERIOR USE)	D[2]	52	1	42.0	42.8	0.8	No
A25	RESIDENTIAL	B	67	1	62.2	63.1	0.9	No
A26	HOTEL	E	72	1	63.3	64.1	0.8	No
A27.2	RESIDENTIAL	B	67	1	56.1	55.8	-0.3	No
A28.2	RESIDENTIAL	B	67	1	49.3	49.0	-0.3	No
A29.2	RESIDENTIAL	B	67	1	49.1	48.8	-0.3	No
A30.2	RESIDENTIAL	B	67	1	48.6	48.3	-0.3	No
A31.2	RESIDENTIAL	B	67	1	48.4	48.1	-0.3	No
A32.2	RESIDENTIAL	B	67	1	47.8	47.6	-0.2	No
A33.2	RESIDENTIAL	B	67	1	42.2	41.6	-0.6	No
A34.2	RESIDENTIAL	B	67	1	42.2	41.7	-0.5	No

Table 2. Impact Analysis Results, dB(A) L_{eq}(1h) Continued

Receiver ID	Noise Abatement Criteria (NAC)			Receptors	Noise Level – dB(A) L_{eq}(1h)			
	Description	Category	Criteria, L_{eq}(h)		Existing	Future Recommended Preferred Alternative		
						NL	Change from Existing	Impact (Y/N)
A35.2	RESIDENTIAL	B	67	1	42.3	41.8	-0.5	No
A36.2	RESIDENTIAL	B	67	1	42.6	41.7	-0.9	No
A37.2	RESIDENTIAL	B	67	1	42.5	41.4	-1.1	No
A38.2	RESIDENTIAL	B	67	1	44.3	44.2	-0.1	No
A39.2	RESIDENTIAL	B	67	1	49.4	48.9	-0.5	No
A40.2	RESIDENTIAL	B	67	1	43.1	42.6	-0.5	No
A41.2	RESIDENTIAL	B	67	1	42.3	41.7	-0.6	No
A42.2	RESIDENTIAL	B	67	1	43.2	42.7	-0.5	No
A43.2	RESIDENTIAL	B	67	1	47.0	46.7	-0.3	No
A44.2	RESIDENTIAL	B	67	1	49.1	49.0	-0.1	No
A45	HOTEL	E	72	1	42.3	42.3	0.0	No
A46.2	RESIDENTIAL	B	67	1	43.5	42.4	-1.1	No
A47.2	RESIDENTIAL	B	67	1	43.1	42.7	-0.4	No
A48.2	RESIDENTIAL	B	67	1	45.8	46.0	0.2	No
A49.2	RESIDENTIAL	B	67	1	46.4	46.2	-0.2	No
A50.2	RESIDENTIAL	B	67	1	47.2	47.0	-0.2	No
A51.2	RESIDENTIAL	B	67	1	48.1	48.3	0.2	No
A52.2	RESIDENTIAL	B	67	1	55.4	55.7	0.3	No

Table 2. Impact Analysis Results, dB(A) L_{eq}(1h) Continued

Receiver ID	Noise Abatement Criteria (NAC)			Receptors	Noise Level – dB(A) L_{eq}(1h)			
	Description	Category	Criteria, L_{eq}(h)		Existing	Future Recommended Preferred Alternative		
						NL	Change from Existing	Impact (Y/N)
A53.2	RESIDENTIAL	B	67	1	51.8	52.3	0.5	No
A54.2	RESIDENTIAL	B	67	1	51.5	51.9	0.4	No
A55.2	RESIDENTIAL	B	67	1	50.5	51.0	0.5	No
A56.2	RESIDENTIAL	B	67	1	50.0	50.5	0.5	No
A57.2	RESIDENTIAL	B	67	1	48.7	49.2	0.5	No
A58	RESIDENTIAL	B	67	1	42.6	41.9	-0.7	No
A59	OFFICE (NO EXTERIOR USE)	E	72	-	-	-	-	-
CNE B								
B1	VACANT BUILDING	G	-	-	-	-	-	-
CNE C								
C1	RESIDENTIAL	B	67	1	64.3	62.3	-2.0	No
C2	RESIDENTIAL	B	67	1	64.0	62.0	-2.0	No
C3	RESIDENTIAL	B	67	1	63.9	61.9	-2.0	No
C4	RESIDENTIAL	B	67	1	63.9	61.8	-2.1	No
C5	RESIDENTIAL	B	67	1	64.9	61.4	-3.5	No
C6	RESIDENTIAL	B	67	1	65.2	61.6	-3.6	No
C7	RESIDENTIAL	B	67	1	65.2	61.7	-3.5	No
C8	RESIDENTIAL	B	67	1	65.2	61.8	-3.4	No
C9	RESIDENTIAL	B	67	1	64.9	63.3	-1.6	No
C10	RESIDENTIAL	B	67	1	65.1	63.8	-1.3	No
C11	RESIDENTIAL	B	67	1	65.1	64.1	-1.0	No
C12	RESIDENTIAL	B	67	1	64.9	64.2	-0.7	No

Table 2. Impact Analysis Results, dB(A) L_{eq}(1h) Continued

Receiver ID	Noise Abatement Criteria (NAC)			Receptors	Noise Level – dB(A) L_{eq}(1h)			
	Description	Category	Criteria, L_{eq}(h)		Existing	Future Recommended Preferred Alternative		
						NL	Change from Existing	Impact (Y/N)
C13	**RESIDENTIAL**	B	67	1	68.5	66.2	-2.3	**Yes**
C14	**RESIDENTIAL**	B	67	1	68.9	66.5	-2.4	**Yes**
C15	**RESIDENTIAL**	B	67	1	68.6	66.7	-1.9	**Yes**
C16	**RESIDENTIAL**	B	67	1	68.3	66.7	-1.6	**Yes**
C17	**RESIDENTIAL**	B	67	1	69.1	67.3	-1.8	**Yes**
C18	**RESIDENTIAL**	B	67	1	68.7	67.7	-1.0	**Yes**
C19	**RESIDENTIAL**	B	67	1	68.2	67.8	-0.4	**Yes**
C20	**RESIDENTIAL**	B	67	1	68.1	67.8	-0.3	**Yes**
C21	RESIDENTIAL	B	67	1	63.2	59.9	-3.3	No
C22	RESIDENTIAL	B	67	1	62.5	59.0	-3.5	No
C23	RESIDENTIAL	B	67	1	62.2	58.6	-3.6	No
C24	RESIDENTIAL	B	67	1	61.9	58.4	-3.5	No
C25	RESIDENTIAL	B	67	1	59.8	56.0	-3.8	No
C26	RESIDENTIAL	B	67	1	59.6	55.6	-4.0	No
C27	RESIDENTIAL	B	67	1	59.4	55.4	-4.0	No
C28	RESIDENTIAL	B	67	1	59.2	55.1	-4.1	No
C29	RESIDENTIAL	B	67	1	59.2	56.2	-3.0	No
C30	RESIDENTIAL	B	67	1	56.7	53.5	-3.2	No
C31	RESIDENTIAL	B	67	1	53.3	50.3	-3.0	No
C32	RESIDENTIAL	B	67	1	43.7	49.0	5.3	No
C33	RESIDENTIAL	B	67	1	59.4	56.7	-2.7	No
C34	RESIDENTIAL	B	67	1	56.0	53.1	-2.9	No
C35	RESIDENTIAL	B	67	1	53.2	50.0	-3.2	No

Table 2. Impact Analysis Results, dB(A) L_{eq}(1h) Continued

Receiver ID	Noise Abatement Criteria (NAC)			Receptors	Noise Level – dB(A) L_{eq}(1h)			
	Description	Category	Criteria, L_{eq}(h)		Existing	Future Recommended Preferred Alternative		
						NL	Change from Existing	Impact (Y/N)
C36	RESIDENTIAL	B	67	1	52.0	49.1	-2.9	No
C37	RESIDENTIAL	B	67	1	51.8	50.3	-1.5	No
C38	RESIDENTIAL	B	67	1	50.4	48.5	-1.9	No
C39	RESIDENTIAL	B	67	1	47.2	45.7	-1.5	No
C40	RESIDENTIAL	B	67	1	46.0	45.1	-0.9	No
C41	RESIDENTIAL	B	67	1	52.2	50.4	-1.8	No
C42	RESIDENTIAL	B	67	1	48.4	46.9	-1.5	No
C43	RESIDENTIAL	B	67	1	47.3	45.8	-1.5	No
C44	RESIDENTIAL	B	67	1	47.2	45.6	-1.6	No
C45	RESIDENTIAL	B	67	1	47.4	46.0	-1.4	No
C46	RESIDENTIAL	B	67	1	46.3	44.9	-1.4	No
C47	PLAYGROUND	C	67	1	50.7	49.0	-1.7	No
C48	RESIDENTIAL	B	67	1	61.9	59.4	-2.5	No
C49	RESIDENTIAL	B	67	1	59.0	56.5	-2.5	No
C50	RESIDENTIAL	B	67	1	55.7	52.5	-3.2	No
C51	RESIDENTIAL	B	67	1	54.3	51.0	-3.3	No
C52	RESIDENTIAL	B	67	1	52.3	50.7	-1.6	No
C53	RESIDENTIAL	B	67	1	49.9	48.6	-1.3	No
C54	RESIDENTIAL	B	67	1	48.4	46.6	-1.8	No
C55	RESIDENTIAL	B	67	1	48.0	46.3	-1.7	No
C56	RESIDENTIAL	B	67	1	47.3	45.9	-1.4	No
C57	RESIDENTIAL	B	67	1	47.0	45.7	-1.3	No
C58	RESIDENTIAL	B	67	1	62.1	59.4	-2.7	No

Table 2. Impact Analysis Results, dB(A) L_{eq}(1h) Continued

Receiver ID	Noise Abatement Criteria (NAC)			Receptors	Noise Level – dB(A) L_{eq}(1h)			
	Description	Category	Criteria, L_{eq}(h)		Existing	Future Recommended Preferred Alternative		
						NL	Change from Existing	Impact (Y/N)
C59	RESIDENTIAL	B	67	1	59.0	55.0	-4.0	No
C60	RESIDENTIAL	B	67	1	55.3	52.1	-3.2	No
C61	RESIDENTIAL	B	67	1	53.8	51.0	-2.8	No
C62	RESIDENTIAL	B	67	1	51.6	50.3	-1.3	No
C63	RESIDENTIAL	B	67	1	50.1	48.5	-1.6	No
C64	RESIDENTIAL	B	67	1	49.3	47.4	-1.9	No
C65	RESIDENTIAL	B	67	1	49.0	47.1	-1.9	No
C66	RESIDENTIAL	B	67	1	48.0	46.5	-1.5	No
C67	RESIDENTIAL	B	67	1	47.6	46.3	-1.3	No
C68	RESIDENTIAL	B	67	1	46.1	44.9	-1.2	No
C69	RESIDENTIAL	B	67	1	44.3	41.8	-2.5	No
C70	RESIDENTIAL	B	67	1	44.0	41.9	-2.1	No
C71	RESIDENTIAL	B	67	1	45.8	44.4	-1.4	No
C72	PLAYGROUND	C	67	1	50.1	49.2	-0.9	No
C73	RESIDENTIAL	B	67	1	52.3	51.7	-0.6	No
C74	RESIDENTIAL	B	67	1	48.5	48.7	0.2	No
C75	RESIDENTIAL	B	67	1	47.3	47.8	0.5	No
C76	RESIDENTIAL	B	67	1	47.1	47.9	0.8	No
C77	RESIDENTIAL	B	67	1	46.8	47.7	0.9	No
C78	RESIDENTIAL	B	67	1	47.0	47.6	0.6	No
C79	RESIDENTIAL	B	67	1	61.2	62.1	0.9	No
C80	RESIDENTIAL	B	67	1	58.0	59.9	1.9	No
C81	RESIDENTIAL	B	67	1	54.4	56.6	2.2	No

Table 2. Impact Analysis Results, dB(A) L_{eq}(1h) Continued

Receiver ID	Noise Abatement Criteria (NAC)			Receptors	Noise Level – dB(A) L_{eq}(1h)			
	Description	Category	Criteria, L_{eq}(h)		Existing	Future Recommended Preferred Alternative		
						NL	Change from Existing	Impact (Y/N)
C82	RESIDENTIAL	B	67	1	53.3	55.2	1.9	No
C83	RESIDENTIAL	B	67	1	52.6	52.7	0.1	No
C84	RESIDENTIAL	B	67	1	51.6	51.7	0.1	No
C85	RESIDENTIAL	B	67	1	50.4	50.7	0.3	No
C86	RESIDENTIAL	B	67	1	49.6	49.7	0.1	No
C87	RESIDENTIAL	B	67	1	61.8	62.5	0.7	No
C88	RESIDENTIAL	B	67	1	59.1	59.4	0.3	No
C89	RESIDENTIAL	B	67	1	55.1	56.6	1.5	No
C90	RESIDENTIAL	B	67	1	53.5	55.5	2.0	No
C91	RESIDENTIAL	B	67	1	63.1	62.1	-1.0	No
C92	RESIDENTIAL	B	67	1	62.6	61.6	-1.0	No
C93	RESIDENTIAL	B	67	1	62.4	61.4	-1.0	No
C94	RESIDENTIAL	B	67	1	61.9	60.9	-1.0	No
C95	RESIDENTIAL	B	67	1	59.2	58.6	-0.6	No
C96	RESIDENTIAL	B	67	1	59.1	58.3	-0.8	No
C97	RESIDENTIAL	B	67	1	58.9	58.1	-0.8	No
C98	RESIDENTIAL	B	67	1	58.9	58.0	-0.9	No
CNE D								
D1	RESTAURANT (NO EXTERIOR USE)	E	72	-	-	-	-	-
D2	RESIDENTIAL	B	67	1	66.0	64.0	-2.0	No
D3	PLACE OF WORSHIP (EXTERIOR USE)	C	67	1	59.2	58.8	-0.4	No

Table 2. Impact Analysis Results, dB(A) L_{eq}(1h) Continued

Receiver ID	Noise Abatement Criteria (NAC)			Receptors	Noise Level – dB(A) L_{eq}(1h)			
	Description	Category	Criteria, L_{eq}(h)		Existing	Future Recommended Preferred Alternative		
						NL	Change from Existing	Impact (Y/N)
D4	NONPROFIT INSTITUTIONAL STRUCTURE (NO EXTERIOR USE)	D[2]	52	1	48.7	44.3	-4.4	No
D5	INDUSTRIAL	F	–	-	-	-	-	-
D6	INDUSTRIAL	F	–	-	-	-	-	-
D7	INDUSTRIAL	F	–	-	-	-	-	-
CNE E								
E1	INDUSTRIAL	F	–	-	-	-	-	-
E2	RESTAURANT (EXTERIOR USE)	E	72	1	60.1	61.9	1.8	No
E3	RESTAURANT (EXTERIOR USE)	E	72	1	56.4	56.9	0.5	No
CNE F								
F1	RETAIL FACILITY	F	–	-	-	-	-	-
F2	VACANT BUILDING	G	-	-	-	-	-	-
F3	PLACE OF WORSHIP	C	67	1	59.4	58.8	-0.6	No
F4	RESIDENTIAL	B	67	1	59.5	58.6	-0.9	No
CNE G								
G1	PLACE OF WORSHIP	C	67	1	61.6	61.6	0.0	No
G2	RESIDENTIAL	B	67	1	56.3	56.3	0.0	No
G3	RETAIL FACILITY	F	-	-	-	-	-	-
G4	RETAIL FACILITY	F	-	-	-	-	-	-
G5	RESIDENTIAL	B	67	1	56.2	55.7	-0.5	No
CNE H								

Table 2. Impact Analysis Results, dB(A) L_{eq}(1h) Continued

Receiver ID	Noise Abatement Criteria (NAC)			Receptors	Noise Level – dB(A) L_{eq}(1h)			
	Description	Category	Criteria, L_{eq}(h)		Existing	Future Recommended Preferred Alternative		
						NL	Change from Existing	Impact (Y/N)
H1	RETAIL FACILITY	F	-	-	-	-	-	-
H2	RETAIL FACILITY	F	-	-	-	-	-	-
H3	OFFICE (EXTERIOR USE)	E	72	1	61.1	61.4	0.3	No
H4	PLACE OF WORSHIP (NO EXTERIOR USE)	D[2]	52	1	41.1	41.6	0.5	No
H5	OFFICE (EXTERIOR USE)	E	72	1	56.4	56.2	-0.2	No
H6	OFFICE (EXTERIOR USE)	C	67	1	61.8	62.1	0.3	No
CNE I								
I1	INDUSTRIAL	F	-	-		65.6	-	-
I2	OFFICE (EXTERIOR USE)	E	72	1	62.2	62.0	-0.2	No
I3	VACANT BUILDING	G	-	-	-	-	-	-
I4	VACANT SCHOOL	G	-	-	-	-	-	-
I5	RESIDENTIAL	B	67	1	66.2	61.3	-4.9	No
I6	RESIDENTIAL	B	67	1	66.2	61.2	-5.0	No
I7	RESIDENTIAL	B	67	1	66.3	61.2	-5.1	No
I8	RESIDENTIAL	B	67	1	64.7	59.7	-5.0	No
I9	RESIDENTIAL	B	67	1	67.3	61.1	-6.2	No
I10	RECREATION AREA	C	67	1	50.3	50.9	0.6	No
I11.4	RESIDENTIAL	B	67	1	58.2	56.0	-2.2	No

Table 2. Impact Analysis Results, dB(A) L_{eq}(1h) Continued

Receiver ID	Noise Abatement Criteria (NAC)			Receptors	Noise Level – dB(A) L_{eq}(1h)			
	Description	Category	Criteria, L_{eq}(h)		Existing	Future Recommended Preferred Alternative		
						NL	Change from Existing	Impact (Y/N)
I12	RECREATION AREA	C	67	1	50.8	46.8	-4.0	No
I13.4	RESIDENTIAL	B	67	1	61.3	57.2	-4.1	No
I14	RECREATION AREA	C	67	1	56.9	57.2	0.3	No
I15.4	RESIDENTIAL	B	67	1	47.7	46.7	-1.0	No
I16.4	RESIDENTIAL	B	67	1	57.4	56.0	-1.4	No
I17.4	RESIDENTIAL	B	67	1	52.6	53.1	0.5	No
I18.4	RESIDENTIAL	B	67	1	53.1	53.3	0.2	No
I19.4	RESIDENTIAL	B	67	1	55.1	54.9	-0.2	No
CNE J								
J1	OFFICE (NO EXTERIOR USE)	E	72	-	-	-	-	-
J2	OFFICE (NO EXTERIOR USE)	E	72	-	-	-	-	-
J3	OFFICE (NO EXTERIOR USE)	E	72	-	-	-	-	-
J4	PLACE OF WORSHIP (NO EXTERIOR USE)	D[2]	52	1	41.7	42.7	1.0	No
J5	RESIDENTIAL	B	67	1	52.8	54.0	1.2	No
CNE K								
K1	SCHOOL (NO EXTERIOR USE)	D[2]	52	1	46.0	43.3	-2.7	No
K2	PLACE OF WORSHIP (NO EXTERIOR USE)	D[2]	52	1	46.0	42.9	-3.1	No
K3	RESTAURANT (NO EXTERIOR USE)	E	72	-	-	-	-	-

Table 2. Impact Analysis Results, dB(A) L_{eq}(1h) Continued

Receiver ID	Noise Abatement Criteria (NAC)			Receptors	Noise Level – dB(A) L_{eq}(1h)			
	Description	Category	Criteria, L_{eq}(h)		Existing	Future Recommended Preferred Alternative		
						NL	Change from Existing	Impact (Y/N)
K4	OFFICE (NO EXTERIOR USE)	E	72	-	-	-	-	-
K5	RESTAURANT (EXTERIOR USE)	E	72	1	69.8	66.0	-3.8	No
CNE L								
L1	OFFICE (NO EXTERIOR USE)	E	72	-	-	-	-	-
L2	PUBLIC INSTITUTIONAL STRUCTURE (NO EXTERIOR USE)	D[2]	52	1	40.5	43.6	3.1	No
L3	PLACE OF WORSHIP (NO EXTERIOR USE)	D[2]	52	1	36.1	39.8	3.7	No
L4	OFFICE (NO EXTERIOR USE)	E	72	-	-	-	-	-
L5	PLACE OF WORSHIP (EXTERIOR USE)	C	67	1	63.2	64.9	1.7	No
L6	ACTIVE SPORT AREA	C	67	1	56.7	54.6	-2.1	No
L7	RESIDENTIAL	B	67	1	52.9	56.5	3.6	No
L8	PLACE OF WORSHIP	C	67	1	49.8	51.4	1.6	No
L9	PARK	C	67	1	54.7	52.5	-2.2	No
CNE M								
M1	PLACE OF WORSHIP (NO EXTERIOR USE)	D[2]	52	1	42.8	41.8	-1.0	No

Boldface indicates noise levels that approach, equal or exceed the NAC and create an impact.

Receiver IDs with a decimal point followed by the number two (.2) indicate second-floor balconies. For example, A1.2, indicates a second-floor receiver. If there is not a decimal point, it is a first-floor receiver.

Source: HNTB Corporation, April 2020

Table 3. Abatement Analysis Results per Receiver, dB(A) L_{eq} (1h)

Receiver ID	Noise Abatement Criteria (NAC)			Receptors	Noise Level – dB(A) L_{eq}(1h)						
					Existing	Future Recommended Preferred Alternative					
	Description	Category	Criteria, L_{eq}(h)			NL	Change from Existing	Impact (Y/N)	NL with Barrier	Noise Barrier Reduction	Benefited Receptor
NB1											
C9	RESIDENTIAL	B	67	1	64.9	63.3	-1.6	No	62.0	1.3	No
C10	RESIDENTIAL	B	67	1	65.1	63.8	-1.3	No	62.5	1.3	No
C11	RESIDENTIAL	B	67	1	65.1	64.1	-1.0	No	62.7	1.4	No
C12	RESIDENTIAL	B	67	1	64.9	64.2	-0.7	No	62.7	1.5	No
C13	**RESIDENTIAL**	B	67	1	68.5	66.2	-2.3	**Yes**	**64.8**	1.4	No
C14	**RESIDENTIAL**	B	67	1	68.9	66.5	-2.4	**Yes**	**65.1**	1.4	No
C15	**RESIDENTIAL**	B	67	1	68.6	66.7	-1.9	**Yes**	**65.2**	1.5	No
C16	**RESIDENTIAL**	B	67	1	68.3	66.7	-1.6	**Yes**	**65.2**	1.5	No
C17	**RESIDENTIAL**	B	67	1	69.1	67.3	-1.8	**Yes**	**65.3**	2.0	No
C18	**RESIDENTIAL**	B	67	1	68.7	67.7	-1.0	**Yes**	**65.8**	1.9	No
C19	**RESIDENTIAL**	B	67	1	68.2	67.8	-0.4	**Yes**	**66.0**	1.8	No
C20	**RESIDENTIAL**	B	67	1	68.1	67.8	-0.3	**Yes**	**66.1**	1.7	No
C68	RESIDENTIAL	B	67	1	46.1	44.9	-1.2	No	44.4	0.5	No
C69	RESIDENTIAL	B	67	1	44.3	41.8	-2.5	No	41.4	0.4	No
C70	RESIDENTIAL	B	67	1	44.0	41.9	-2.1	No	41.4	0.5	No
C71	RESIDENTIAL	B	67	1	45.8	44.4	-1.4	No	43.4	1.0	No
C72	PLAYGROUND	C	67	1	50.1	49.2	-0.9	No	48.4	0.8	No
C73	RESIDENTIAL	B	67	1	52.3	51.7	-0.6	No	50.6	1.1	No
C74	RESIDENTIAL	B	67	1	48.5	48.7	0.2	No	47.3	1.4	No

Table 3. Abatement Analysis Results per Receiver, dB(A) L_{eq} (1h) Continued

Receiver ID	Noise Abatement Criteria (NAC)			Receptors	Noise Level – dB(A) L_{eq}(1h)						
	Description	Category	Criteria, L_{eq}(h)		Existing	Future Recommended Preferred Alternative					
						NL	Change from Existing	Impact (Y/N)	NL with Barrier	Noise Barrier Reduction	Benefited Receptor
C75	RESIDENTIAL	B	67	1	47.3	47.8	0.5	No	46.1	1.7	No
C76	RESIDENTIAL	B	67	1	47.1	47.9	0.8	No	46.1	1.8	No
C77	RESIDENTIAL	B	67	1	46.8	47.7	0.9	No	45.9	1.8	No
C78	RESIDENTIAL	B	67	1	47.0	47.6	0.6	No	45.9	1.7	No
C79	RESIDENTIAL	B	67	1	61.2	62.1	0.9	No	60.1	2.0	No
C80	RESIDENTIAL	B	67	1	58.0	59.9	1.9	No	57.7	2.2	No
C81	RESIDENTIAL	B	67	1	54.4	56.6	2.2	No	54.6	2.0	No
C82	RESIDENTIAL	B	67	1	53.3	55.2	1.9	No	53.3	1.9	No
C83	RESIDENTIAL	B	67	1	52.6	52.7	0.1	No	51.4	1.3	No
C84	RESIDENTIAL	B	67	1	51.6	51.7	0.1	No	50.4	1.3	No
C85	RESIDENTIAL	B	67	1	50.4	50.7	0.3	No	49.4	1.3	No
C86	RESIDENTIAL	B	67	1	49.6	49.7	0.1	No	48.4	1.3	No
C87	RESIDENTIAL	B	67	1	61.8	62.5	0.7	No	60.4	2.1	No
C88	RESIDENTIAL	B	67	1	59.1	59.4	0.3	No	57.6	1.8	No
C89	RESIDENTIAL	B	67	1	55.1	56.6	1.5	No	54.7	1.9	No
C90	RESIDENTIAL	B	67	1	53.5	55.5	2.0	No	53.3	2.2	No
C91	RESIDENTIAL	B	67	1	63.1	62.1	-1.0	No	61.9	0.2	No
C92	RESIDENTIAL	B	67	1	62.6	61.6	-1.0	No	61.4	0.2	No
C93	RESIDENTIAL	B	67	1	62.4	61.4	-1.0	No	61.3	0.1	No
C94	RESIDENTIAL	B	67	1	61.9	60.9	-1.0	No	60.8	0.1	No
C95	RESIDENTIAL	B	67	1	59.2	58.6	-0.6	No	58.6	0.0	No
C96	RESIDENTIAL	B	67	1	59.1	58.3	-0.8	No	58.2	0.1	No

Table 3. Abatement Analysis Results per Receiver, dB(A) L_{eq} (1h) Continued

Receiver ID	Noise Abatement Criteria (NAC)			Receptors	Noise Level – dB(A) L_{eq}(1h)						
	Description	Category	Criteria, L_{eq}(h)		Existing	Future Recommended Preferred Alternative					
						NL	Change from Existing	Impact (Y/N)	NL with Barrier	Noise Barrier Reduction	Benefited Receptor
C97	RESIDENTIAL	B	67	1	58.9	58.1	-0.8	No	58.0	0.1	No
C98	RESIDENTIAL	B	67	1	58.9	58.0	-0.9	No	57.9	0.1	No
NB2											
A1.2	RESIDENTIAL	B	67	1	68.2	69.1	0.9	Yes	58.2	10.9	Yes
A2.2	RESIDENTIAL	B	67	1	60.9	61.7	0.8	No	53.8	7.9	Yes
A3.2	RESIDENTIAL	B	67	1	59.4	60.0	0.6	No	52.7	7.3	Yes
A4.2	RESIDENTIAL	B	67	1	56.8	56.7	-0.1	No	50.3	6.4	Yes
A5.2	RESIDENTIAL	B	67	1	56.1	55.9	-0.2	No	49.8	6.1	Yes
A6.2	RESIDENTIAL	B	67	1	53.5	53.3	-0.2	No	48.4	4.9	No
A8.2	RESIDENTIAL	B	67	1	71.0	71.9	0.9	Yes	62.8	9.1	Yes
A9.2	RESIDENTIAL	B	67	1	70.9	72.0	1.1	Yes	63.0	9.0	Yes
A10.2	RESIDENTIAL	B	67	1	67.7	69.1	1.4	Yes	65.7	3.4	No
A17.2	RESIDENTIAL	B	67	1	59.5	59.7	0.2	No	57.3	2.4	No
A23.2	RESIDENTIAL	B	67	1	53.3	53.4	0.1	No	52.6	0.8	No
A22.2	RESIDENTIAL	B	67	1	47.9	47.2	-0.7	No	46.9	0.3	No
A21.2	RESIDENTIAL	B	67	1	46.6	44.8	-1.8	No	44.4	0.4	No
A20.2	RESIDENTIAL	B	67	1	46.1	43.6	-2.5	No	42.9	0.7	No
A19.2	RESIDENTIAL	B	67	1	46.3	43.9	-2.4	No	43.0	0.9	No
A18.2	RESIDENTIAL	B	67	1	49.8	48.8	-1.0	No	45.5	3.3	No
A11.2	RESIDENTIAL	B	67	1	56.5	56.1	-0.4	No	50.1	6.0	Yes
A7.2	RESIDENTIAL	B	67	1	68.3	69.0	0.7	Yes	61.1	7.9	Yes
A12.2	RESIDENTIAL	B	67	2	55.7	55.8	0.1	No	50.2	5.6	Yes

Table 3. Abatement Analysis Results per Receiver, dB(A) L_{eq} (1h) Continued

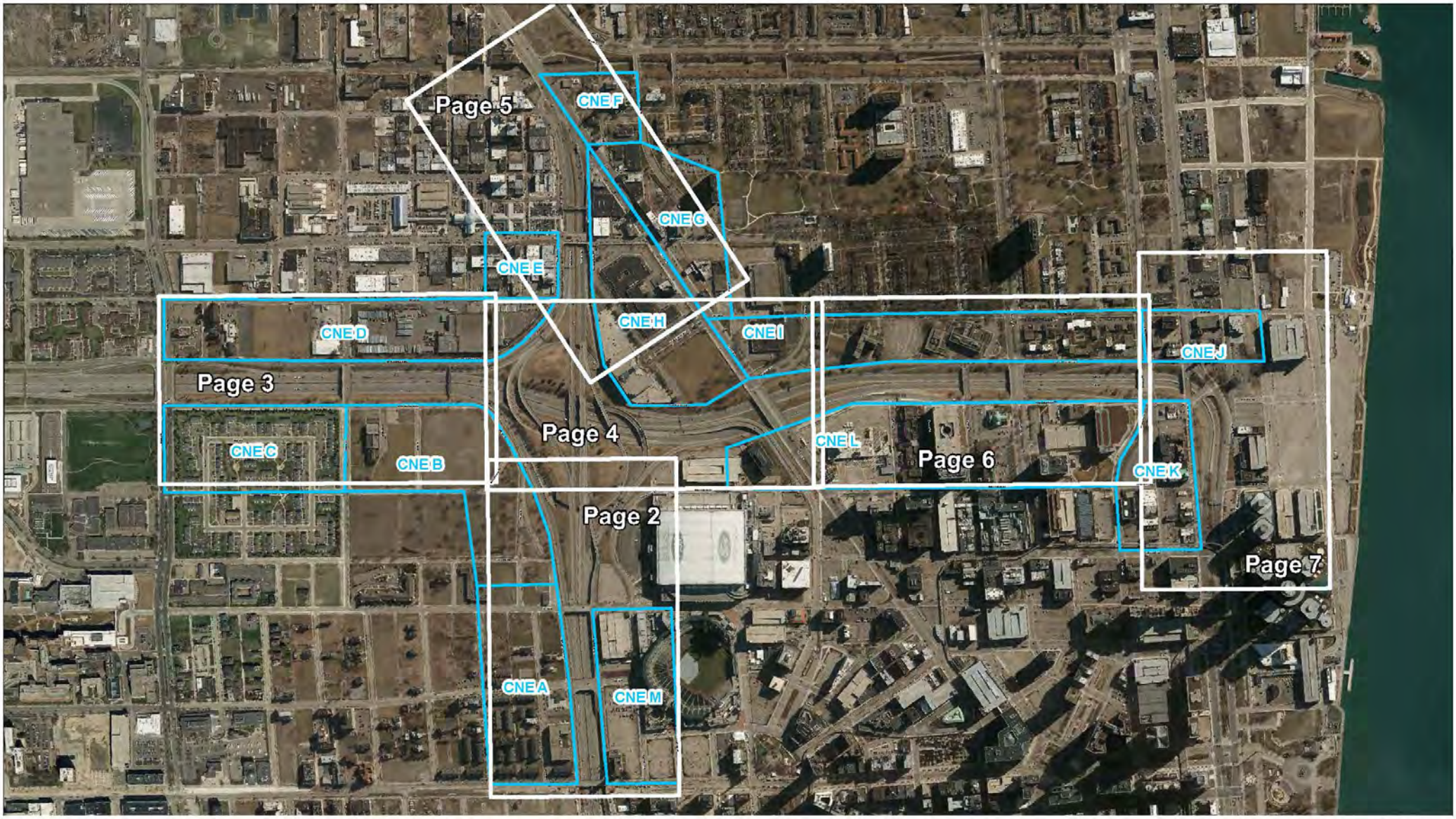
Receiver ID	Noise Abatement Criteria (NAC)			Receptors	Noise Level – dB(A) L_{eq}(1h)						
	Description	Category	Criteria, L_{eq}(h)		Existing	Future Recommended Preferred Alternative					
						NL	Change from Existing	Impact (Y/N)	NL with Barrier	Noise Barrier Reduction	Benefited Receptor
A13.2	RESIDENTIAL	B	67	1	55	55.0	0.0	No	50.4	4.6	No
A15.2	RESIDENTIAL	B	67	1	55.4	55.5	0.1	No	50.5	5.0	Yes
A16.2	RESIDENTIAL	B	67	2	56.6	57.0	0.4	No	50.9	6.1	Yes
A24	Place of Worship	D	52	1	42	42.8	0.8	Yes	41.9	0.9	No
A25	RESIDENTIAL	B	67	1	62.2	63.1	0.9	No	62.9	0.2	No
A26	Hotel	E	72	1	63.3	64.1	0.8	No	63.9	0.2	No
A27.2	RESIDENTIAL	B	67	1	56.1	55.8	-0.3	No	53.3	2.5	No
A28.2	RESIDENTIAL	B	67	1	49.3	49.0	-0.3	No	45.2	3.8	No
A29.2	RESIDENTIAL	B	67	1	49.1	48.8	-0.3	No	45.0	3.8	No
A30.2	RESIDENTIAL	B	67	1	48.6	48.3	-0.3	No	44.6	3.7	No
A31.2	RESIDENTIAL	B	67	1	48.4	48.1	-0.3	No	44.7	3.4	No
A32.2	RESIDENTIAL	B	67	1	47.8	47.6	-0.2	No	44.3	3.3	No
A33.2	RESIDENTIAL	B	67	1	42.2	41.5	-0.7	No	40.7	0.8	No
A34.2	RESIDENTIAL	B	67	1	42.2	41.7	-0.5	No	41.0	0.7	No
A35.2	RESIDENTIAL	B	67	1	42.3	41.8	-0.5	No	41.1	0.7	No
A36.2	RESIDENTIAL	B	67	1	42.6	41.7	-0.9	No	41.0	0.7	No
A37.2	RESIDENTIAL	B	67	1	42.5	41.4	-1.1	No	40.7	0.7	No
A38.2	RESIDENTIAL	B	67	1	44.3	44.2	-0.1	No	43.9	0.3	No
A39.2	RESIDENTIAL	B	67	1	49.4	48.9	-0.5	No	43.8	5.1	Yes
A40.2	RESIDENTIAL	B	67	1	43.1	42.6	-0.5	No	40.8	1.8	No
A41.2	RESIDENTIAL	B	67	1	42.3	41.7	-0.6	No	39.7	2.0	No
A42.2	RESIDENTIAL	B	67	1	43.2	42.7	-0.5	No	41.3	1.4	No

Table 3. Abatement Analysis Results per Receiver, dB(A) L_{eq} (1h) Continued

Receiver ID	Noise Abatement Criteria (NAC)			Receptors	Noise Level – dB(A) L_{eq}(1h)						
					Existing	Future Recommended Preferred Alternative					
	Description	Category	Criteria, L_{eq}(h)			NL	Change from Existing	Impact (Y/N)	NL with Barrier	Noise Barrier Reduction	Benefited Receptor
A43.2	RESIDENTIAL	B	67	1	47	46.7	-0.3	No	44.9	1.8	No
A44.2	RESIDENTIAL	B	67	1	49.1	49.0	-0.1	No	45.9	3.1	No
A45	Hotel	E	72	1	42.3	42.4	0.1	No	42.1	0.3	No
A46.2	RESIDENTIAL	B	67	1	43.5	42.4	-1.1	No	41.5	0.9	No
A47.2	RESIDENTIAL	B	67	1	43.1	42.7	-0.4	No	41.7	1.0	No
A48.2	RESIDENTIAL	B	67	1	45.8	46.0	0.2	No	45.7	0.3	No
A49.2	RESIDENTIAL	B	67	1	46.4	46.2	-0.2	No	45.0	1.2	No
A50.2	RESIDENTIAL	B	67	1	47.2	47.0	-0.2	No	46.6	0.4	No
A51.2	RESIDENTIAL	B	67	1	48.1	48.3	0.2	No	48.0	0.3	No
A52.2	RESIDENTIAL	B	67	1	55.4	55.7	0.3	No	54.1	1.6	No
A53.2	RESIDENTIAL	B	67	1	51.8	52.3	0.5	No	48.6	3.7	No
A54.2	RESIDENTIAL	B	67	1	51.5	51.9	0.4	No	48.2	3.7	No
A55.2	RESIDENTIAL	B	67	1	50.5	51.0	0.5	No	47.1	3.9	No
A56.2	RESIDENTIAL	B	67	1	50	50.5	0.5	No	46.6	3.9	No
A57.2	RESIDENTIAL	B	67	1	48.7	49.2	0.5	No	45.5	3.7	No
A58	RESIDENTIAL	B	67	1	42.6	41.9	-0.7	No	41.5	0.4	No
Boldface	indicates noise levels that approach, equal or exceed the NAC and create an impact.										

Source: HNTB Corporation, April 2020

Appendix A: Traffic Noise Analysis Exhibits



MDOT
Michigan Department of Transportation

HNTB

Legend

Common Noise Environment

0 500 1,000
Feet

Traffic Noise Study Overview
Preferred Alternative
I-375 Improvement Project
Detroit, Michigan

Figure 4-1

MDOT Michigan Department of Transportation

HNTB

Legend

- Benefitted Receiver
- Impacted Receiver
- Not Impacted Receiver
- Field Sites
- Modeled Noise Barrier
- 66 dB Setback
- Common Noise Environment

N

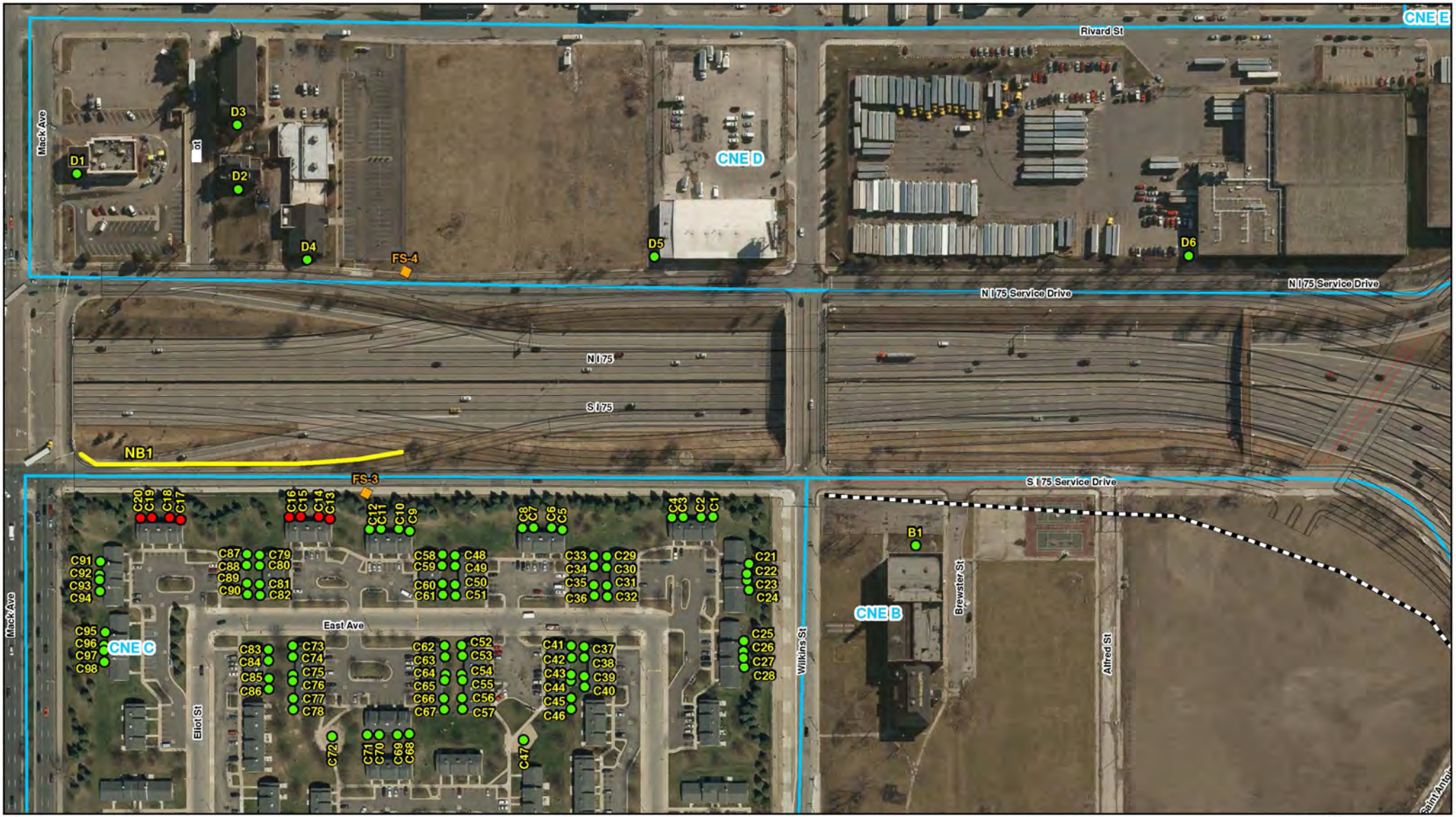
150 75 0 150

Feet

Note: Each TNM receiver can represent multiple receptor units. Table 7 provides details of the number of receptors per receiver shown on this exhibit.

Traffic Noise Study
Preferred Alternative
I-375 Improvement Project
Detroit, Michigan

Figure 4-2



MDOT Michigan Department of Transportation

HNTB

Legend

- Impacted Receiver
- Not Impacted Receiver
- Field Sites
- Modeled Noise Barrier
- 66 dB Setback
- Common Noise Environment

N

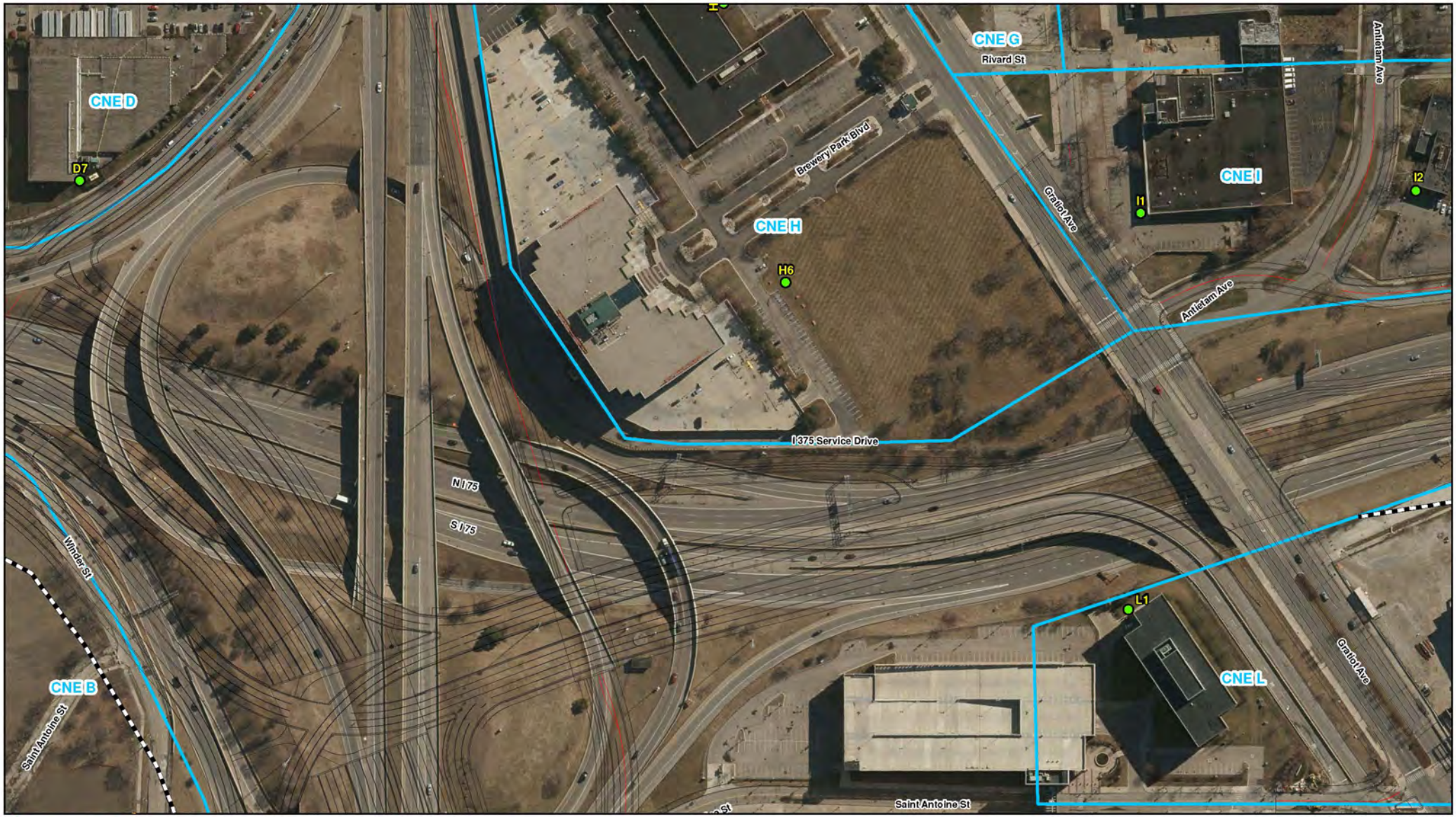
150 75 0 150

Feet

Note: Each TNM receiver can represent multiple receptor units. Table 7 provides details of the number of receptors per receiver shown on this exhibit.

Traffic Noise Study
Preferred Alternative
I-375 Improvement Project
Detroit, Michigan

Figure 4-3



MDOT Michigan Department of Transportation

HNTB

Legend

- Impacted Receiver
- Not Impacted Receiver
- Field Sites
- 66 dB Setback
- Common Noise Environment

150 75 0 150

Feet

Note: Each TNM receiver can represent multiple receptor units. Table 7 provides details of the number of receptors per receiver shown on this exhibit.

Traffic Noise Study
Preferred Alternative
I-375 Improvement Project
Detroit, Michigan

Figure 4-4

Legend

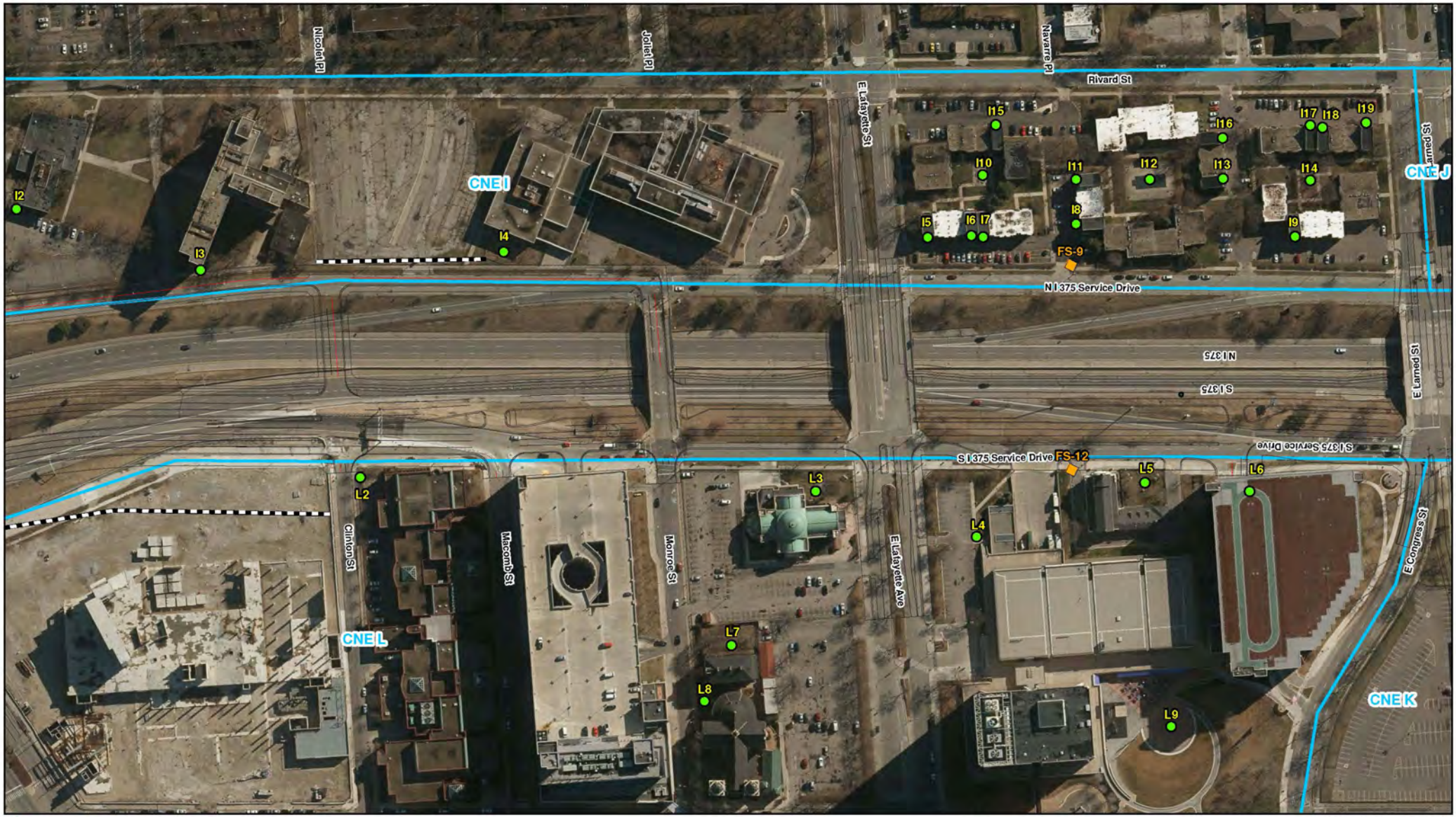
- Impacted Receiver
- Not Impacted Receiver
- Field Sites
- 66 dB Setback
- Common Noise Environment

150 75 0 150
Feet

Note: Each TNM receiver can represent multiple receptor units. Table 7 provides details of the number of receptors per receiver shown on this exhibit.

Traffic Noise Study
Preferred Alternative
I-375 Improvement Project
Detroit, Michigan

Figure 4-5



MDOT Michigan Department of Transportation

HNTB

Legend

- Impacted Receiver
- Not Impacted Receiver
- Field Sites
- 66 dB Setback
- Common Noise Environment

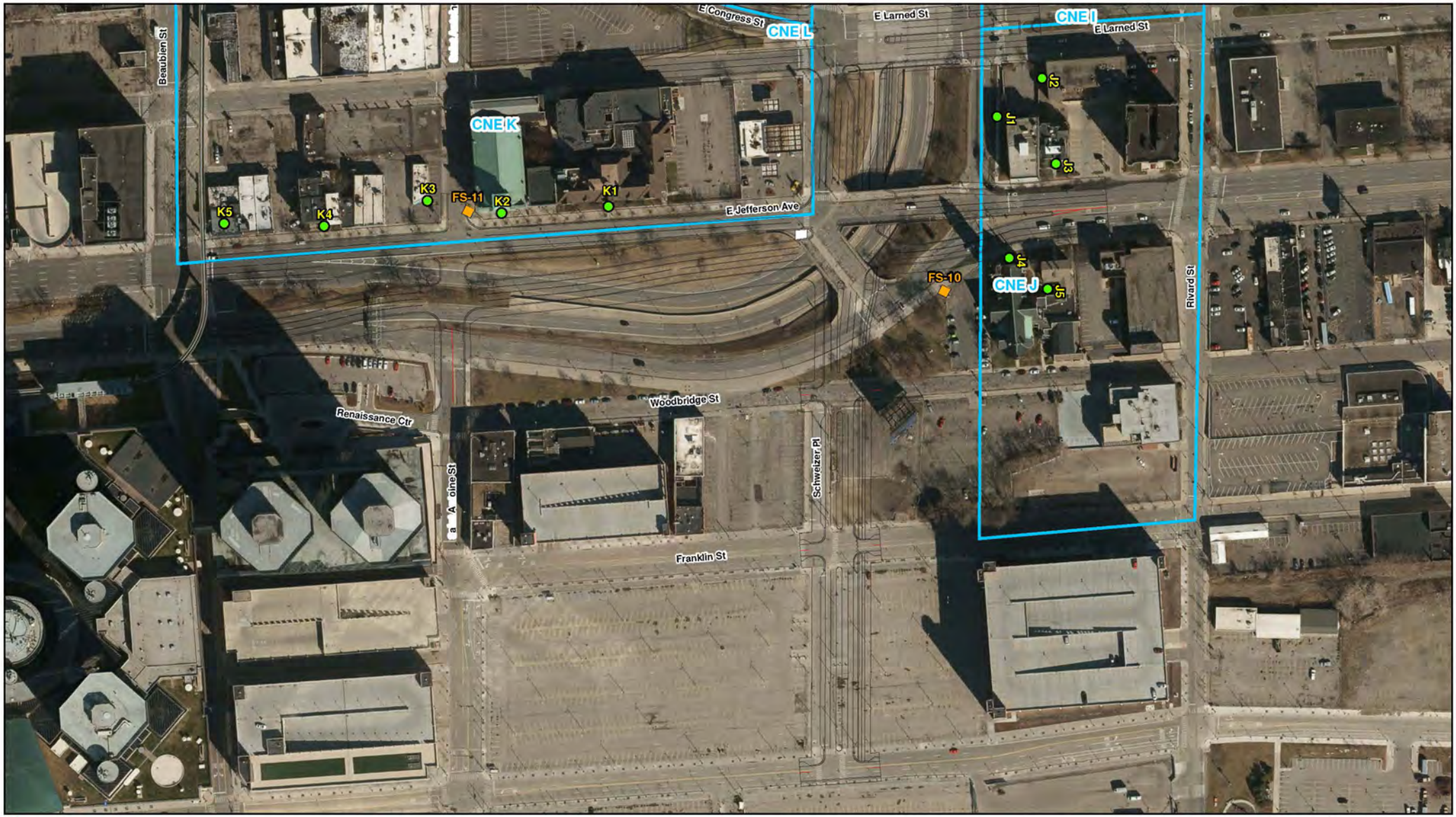
150 75 0 150

Feet

Note: Each TNM receiver can represent multiple receptor units. Table 7 provides details of the number of receptors per receiver shown on this exhibit.

Traffic Noise Study
Preferred Alternative
I-375 Improvement Project
Detroit, Michigan

Figure 4-6



Legend

- Impacted Receiver
- Not Impacted Receiver
- Field Sites
- 66 dB Setback
- Common Noise Environment

150 75 0 150
Feet

Note: Each TNM receiver can represent multiple receptor units. Table 7 provides details of the number of receptors per receiver shown on this exhibit.

Traffic Noise Study
Preferred Alternative
I-375 Improvement Project
Detroit, Michigan

Figure 4-7