The Eastern Corridor

Preliminary Noise Screening

Eastern Corridor Multi-Modal Projects
HAM-Eastern Corridor Segment II/III (Relocated SR 32)
US 50 to Bells Lane; PID 22970
Hamilton and Clermont Counties, Ohio

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January 2009

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A. PROJECT DESCRIPTION

Background

The Eastern Corridor Segment II/III project involves the relocation of SR 32 (combined with new parallel rail transit) between US 50 in Hamilton County and I-275 in Clermont County (see Exhibit 1), and is one of several new highway capacity investments to be implemented as part of the Eastern Corridor Multi-Modal Projects (HAM-SR32-0.00, PID 22970; FHWA-OH-EIS-04-02). The Eastern Corridor Multi-Modal Projects cover 165 square miles of Cincinnati's eastern suburbs in eastern Hamilton County and western Clermont County, and is following a tiered approach for compliance with requirements of the National Environmental Policy Act (NEPA) and related statutes. Tier 1, completed in 2006, evaluated transportation needs in the Eastern Corridor, identified environmental and community issues, developed preliminary multi-modal alternatives, and assessed preliminary costs, benefits, and impacts. Preliminary alternatives developed in Tier 1 were based on a multi-modal framework established by the Eastern Corridor Major Investment Study completed in 2000. The Eastern Corridor Tier 1 Record of Decision (ROD) was issued in June 2006 and identified a set of alternatives that will be evaluated by mode and segment through independent Tier 2 NEPA analyses to determine final location and impacts. The recommended Tier 2 projects, which include Segment II/III (Relocated SR 32), consist of new highway and rail transit implementation segments, expanded bus service, and local network improvements. The Tier 1 ROD established that the Tier 2 NEPA evaluation for Segment II/III and Rail Transit Segment 3, both located in the Little Miami River valley, must be conducted under one NEPA document.

Project Status

The new capacity components of the Eastern Corridor Multi-modal Projects, including highway and rail transit, are following the current Ohio Department of Transportation (ODOT) 14-Step Project Development Process (PDP) for Major projects. The Tier 1 work for Segment II/III identified 21 preliminary alternative segments that can be combined into 264 different full-length alternatives for a shared SR 32/rail transit corridor between US 50 in Hamilton County and Bells Lane in Clermont County (located approximately one mile west of the I-275/SR 32 interchange).

Tier 2 for Segment II/III will continue project development consistent with the ODOT PDP and federal NEPA requirements to identify a preferred alternative, corresponding to Major PDP Step 6 (refining feasible alternatives and identifying a preferred alternative), Step 7 (developing the preferred alternative) and Step 8 (environmental clearance). Because of the numerous corridor segments carried over from the initial Eastern Corridor work, the transition from Tier 1 to Tier 2 includes the completion of a Conceptual Alternatives Study (completion of PDP Step 5) to identify a manageable number of full-length feasible alternatives to be carried forward into Step 6 evaluation. This Preliminary Noise Screening is a required component of the Conceptual Alternatives Study.

Proposed Transportation Improvements

Segment II/III involves consolidating and managing access points to establish relocated SR 32 as a controlled-access arterial roadway west of I-275. Segment II/III begins at US 50 near Fairfax in Hamilton County, where it ties into planned improvements in Segment I at Fair Lane (the Red Bank corridor), and ends in Clermont County's Eastgate area, where it ties a ties into planned Segment IV improvements for the I-275/SR 32 interchange (CLE-275-10.15; PID 76289) at Bells Lane. Proposed improvements in Segment II/III consist of a new interchange at US 50/Red Bank Road, relocated SR 32 with new parallel rail transit, a multi-modal clear span crossing of the Little Miami River, multi-modal transit stations at US

50 and Newtown Road, preservation of a future rail transit corridor for the proposed Eastern Corridor Wasson rail line, and coordination with other modal improvements in the area.

Study Area Setting

The Segment II/III study area (see Exhibit 1) includes the communities of Newtown, a portion of Anderson Township (including Mount Carmel), and the south edges of the communities of Fairfax and Mariemont. The area contains a mix of residential, commercial, and industrial land use. Five churches and one school were identified adjacent to preliminary alternative segments in the project study area. Segment II/III contains a number of recreational and natural areas including a public golf course, ball/soccer fields and other parks and greenspaces.

B. PURPOSE AND SCOPE OF STUDY

The purpose of this preliminary noise screening is to: 1) update noise-sensitive land use locations in the project study area, 2) identify potential sound-level impacts that may result from construction of the Segment II/III project, 3) provide a preliminary estimated cost for structural noise abatement at locations of potential impact, and 4) provide a preliminary estimated cost for noise abatement per potentially benefitted receptor.

Due to the inclusion of parallel rail transit in the Segment II/III project, ODOT-District 8 (with guidance from ODOT-Office of Environmental Services) determined that the appropriate approach to this preliminary noise screening would be to utilize the highway noise assessment modeling program typically used for this level of screening, as well as a transit noise screening model (see Section C).

C. SCREENING METHODOLOGY

This screening was conducted in accordance with Section I.B.2 of the ODOT noise policy (*Standard Procedure For Analysis And Abatement Of Highway Traffic Noise; Standard Procedures No. 417-001(SP), August 4, 2008*), which outlines the level of noise analysis required for the Conceptual Alternatives Study (Step 5 of the ODOT PDP for Major Projects). The Federal Transit Administration's *Transit Noise and Vibration Assessment* document (*FTA-VA-90-1003-06, May 2006*) was consulted for further guidance on transit screening procedures.

Analysis Site and Representative Receptor Selection

An aerial photograph and field review of noise-sensitive land uses occurring near the Segment II/III preliminary alternative segments was conducted at the beginning of this study, and a total of 19 analysis sites were identified for further screening. These 19 sites are primarily comprised of residential land uses; however, five churches (Faith Christian Fellowship Church, First Baptist Church, Horizon Community Church, Greater Cincinnati Worship Center, and All Saints Lutheran Church), one school (Miami Valley Christian Academy), and a local park (Robert Short Park) were included in this analysis. The Little Miami River, designated as a State and National Wild and Scenic River, was also included in this analysis as a noise-sensitive receptor since it attracts canoeists, wildlife observers, and others seeking outdoor recreation in a quiet, natural setting.

This analysis establishes sound levels under Base Year (1995) traffic conditions and predicts sound levels under preliminary (non-certified) Design Year (2030) Build traffic conditions for 45 noise-sensitive receptors (referred to as Receptors 1 through 45 in this report). These receptors represent 19 separate

areas of noise-sensitive land use (referred to as Analysis Sites A through S) located adjacent to the 21 preliminary alternative segments under study for the Eastern Corridor Segment II/III project. Table 1 (located in the Tables section of this document) provides a description of the noise-sensitive land uses represented by the 45 receptors selected for this analysis, and lists the preliminary alternative segment(s) applicable (or proximate) to each representative receptor. Exhibits 2a-2n show the locations of the 45 representative receptors and the 21 preliminary alternative segments.

Field Measurement of Ambient Sound Levels

Field measurement of ambient sound levels was conducted at each of the 19 analysis sites to serve as a baseline for evaluating noise screening results (field measurement results are included in Table 3, located in the Tables section of this document). Measurements were collected on October 21, October 22, November 26, and December 4, 2008 using a Larson Davis Type 1 sound level meter (model 820), calibrated with a Larson Davis acoustic calibrator (model CAL200) in a manner consistent with FHWA procedural guidelines.

Project Traffic Conditions

Certified Design Year traffic data is not currently available for the Segment II/III project. The most recent project traffic modeling data (2003) was used for this screening, which consists of Base Year (1995) and preliminary (non-certified) Design Year (2030) volumes. The volumes used in the identification of potential sound-level impacts are afternoon (p.m.) peak hour volumes, which typically present the daily "worst case" scenario at each analysis site. Tables 2a and 2b (located in the Tables section of this document) present the Base Year (1995) and Design Year (2030) p.m. peak-hour volumes and speeds used in this screening.

Noise-Screening Methods, Models, and Data Input

In consideration of the rail transit component of this multi-modal transportation study, the Federal Transit Administration's *Transit Noise and Vibration Assessment* document was consulted for procedural guidance as part of the preliminary noise screening. Section 3 of the *Transit Noise and Vibration Assessment* states that for projects which involve transit as part of new highway construction, the appropriate method for noise prediction and impact assessment depends on which noise source (highway or transit) is the dominant source (day and/or night).

According to the *Transit Noise and Vibration Assessment*, if: 1) FHWA and the state DOT are funding the project, 2) the transit component is located directly adjacent to (or within) the FHWA-funded portion of the project, and 3) sufficient evidence shows that highway noise dominates during the day and night, then FHWA noise screening methods – including the latest authorized version of the Traffic Noise Model (TNM) – should be used to determine potential areas of noise impact and preliminary estimated noise abatement costs for the project.

In order to establish whether highway traffic or transit noise sources are dominant under Design Year (2030) conditions, a transit noise assessment model was utilized. This model, which is based on the *General Transit Noise Assessment* spreadsheet developed by the Federal Transit Administration (FTA), assesses noise emissions associated with a variety of transportation-related sources, including moving and stationary railroad and highway sources. The transit noise assessment model predicts sound levels at selected receptors based on: distance(s) between receptors and noise sources (such as roadways, railroads, transit stations, etc.), vehicular traffic volumes and speeds, the presence (or absence) of building rows

located between receptors and noise sources, the speed and frequency of commuter and freight rail traffic, the number and type of locomotives per train, the length and type of rail cars per train, and the presence (or absence) of rail flats. The transit noise assessment model allows for input of distances between receptors and transit stations, park-and-ride facilities, rail yards, crossovers, and track layovers, and also allows for indication of the presence of embedded or jointed railroad track. Input assumptions used in the transit modeling conducted for this screening includes:

- A *peak hour* transit frequency of four Diesel Multiple Unit (DMU) trains per hour, each consisting of one diesel locomotive and one passenger car with no wheel flats (three truck and six axels per train), traveling at a speed of 35 mph.

- Rail freight activity operating on the existing Norfolk Southern railroad in the vicinity of Analysis Sites A, B, C, E, F, G, H, I, J, and L (see Exhibits 2a-2d, 2f, and 2g). Transit model input assumes one freight train per day traveling at a speed of 30 mph, consisting of one diesel locomotive towing three empty and three full, covered hopper cars (a total car length of 425 feet, based on typical car lengths). Wheel flats were estimated for 10% of freight rail cars.

- A proposed multi-modal transit station located along Preliminary Alternative Segments G, H, I, J, K, and L at Church Street in Newtown, and an existing rail yard located along Segment C, near the southern edge of Mariemont (Clare Yard, see Exhibit 2f). No instances of jointed or embedded track were assumed for any of the receptors modeled.

- Rail transit lines positioned along the south side of relocated SR 32 at a 60-foot offset from the roadway centerline for all preliminary alternative segments under study for the Segment II/III project (with the exception of Segments B1, B2, and B3, which are associated with the proposed intersection of relocated SR 32 and US 50; see Exhibits 2a-2c). For Analysis Site A, which is associated with the Segment B1, B2, and B3 preliminary interchange configurations, transit rail activity is assumed to occur on the preserved Wasson rail corridor (see Exhibits 2a, 2b, and 2c).

"Peak-hour" traffic represents the highest traffic volumes of the day (typically 7:00 a.m. to 9:00 a.m. and 3:00 p.m. to 7:00 p.m.). According to preliminary (non-certified) Design Year (2030) volumes for the Eastern Corridor, the morning peak-hour volumes on relocated SR 32 are expected to be slightly lower than the afternoon peak-hour volumes. Consequently, the afternoon peak-hour volumes (highway and train volumes) were used in the transit modeling to reflect the "worst case" traffic noise environment. A total of 136 transit model runs were performed for the 45 representative noise-sensitive receptors selected for this study (some of the these representative receptors are located adjacent to more than one of the 21 different preliminary alternative segments currently under study for the Segment II/III project). The results of these transit model runs show that *highway traffic noise is the dominant afternoon peak-hour source for all representative receptors under all applicable preliminary alternative segment Build scenarios*, and in 122 of the 136 transit model runs performed, sound levels from highway sources were substantially higher (6.5 dBA to 19.5 dBA higher) than transit sources.

Eastern Corridor preliminary (non-certified) Design Year (2030) traffic data shows that morning peak-hour volumes will be only nine percent lower than afternoon peak-hour volumes. Furthermore, ODOT-Office of Technical Services traffic count data (2007) shows that truck volumes on urban principal arterials such as relocated SR 32 are consistently higher during the morning peak-hours than in the afternoon peak-hours. In consideration of these factors, along with the transit model results for afternoon peak-hour conditions (which showed substantially higher sound levels from highway sources

compared to transit sources in a vast majority of the runs), the sound levels generated by highway sources during the morning peak hours are also expected to be substantially higher than transit sources.

ODOT-Office of Technical Services traffic count data shows that mid-day (9:00 a.m. to 3:00 p.m.) traffic volumes on urban principal arterials such as relocated SR 32 consistently range from 65 to 70 percent of the afternoon peak-hour volume, but with higher truck volumes than the afternoon peak. During the early morning (6:00 a.m. to 7:00 a.m.) and evening hours (7:00 p.m. to 10:00 p.m.), ODOT count data indicates that traffic volumes (including truck traffic volumes) on urban principal highway facilities typically range from 40 to 60 percent of the afternoon peak-hour volumes. For these non-peak hours, project assumptions are for transit volumes to decrease by 50 percent (two trains per hour or more, which corresponds to the typical decline in highway traffic reported by ODOT during these non-peak hours), and for transit operations to cease entirely between approximately 10 p.m. and 7:00 a.m. Consequently, highway traffic is expected to be the dominant noise source during all non-peak periods.

Since the transit modeling results indicate that highway noise is the dominant source for all representative receptors and associated preliminary alternative segment Build scenarios, it was determined that the FHWA Traffic Noise Model (Version 2.5) Lookup Table program would be utilized for the preliminary screening of sound levels and the identification of potential areas of noise impact.

D. IDENTIFICATION OF POTENTIAL SOUND-LEVEL IMPACTS

For this screening analysis, Base Year (1995) and preliminary Design Year (2030) sound levels were predicted for 45 representative receptors in the project study area using the FHWA Traffic Noise Model (Version 2.5) Lookup Table program, which addresses roadway noise emissions only, independent of other transit noise sources. The TNM 2.5 Lookup Table program predicts sound levels at selected receptors based on distance from the noise source (roadway), traffic vehicle mix (volumes), speed of traffic, and intervening ground type ("soft" or "hard"), assuming free-flow traffic. Base Year (1995) and preliminary (non-certified) Design Year (2030) p.m. peak hour traffic volumes were used for the TNM roadway volume inputs, and traffic speed inputs for the roadway segments modeled in this screening are based on posted limits (where applicable) and preliminary project design speeds (for proposed SR 32 preliminary alternative segments; see Tables 2a and 2b). TNM Lookup Table sound-level results are provided in Table 3 (located in the Tables Section of this report).

ODOT noise policy stipulates that for a CAS-level preliminary noise screening, any receptor predicted (by the TNM Lookup Table model) to experience a Design Year (2030) sound level of 60 dBA or greater shall be considered a "potentially impacted" receptor. The TNM 2.5 Lookup Table sound-level modeling conducted for this analysis determined that 22 of the 45 representative receptors analyzed (Receptors 3-8, 13, 14, 16, 22, 23, 25, 27-31, 33, 35, 37, 39, and 40) are predicted to experience a "potential impact" under Design Year (2030) Build conditions (in association with at least one of the preliminary alternative segments under study; see Table 3). Exhibits 2a-2n display the locations of all 45 representative receptors.

E. PRELIMINARY NOISE ABATEMENT COST ESTIMATES

The noise screening conducted for this project identifies potential Design Year (2030) sound-level impacts at 22 noise-sensitive receptors associated with 17 of the 21 preliminary alternative segments under consideration for the Segment II/III project (Segments B1, B2, B3, C, D, E, F, G, L, M, N, O, P, Q, R, S, and T; see Table 3 and Exhibits 2a-2n). ODOT noise policy stipulates that an estimation of the cost of structural noise abatement must be provided for these 17 preliminary alternative segments at the areas of

potential impact (areas containing at least one receptor predicted to experience a "potential impact" by the TNM Lookup Table sound-level modeling conducted for this screening).

According to ODOT policy, the length of potential structural noise abatement is to be estimated using the distance between the noise-sensitive receptors located at opposite edges of an area of potential impact, plus an additional 800 feet (or a figure equivalent to the sum of four times the distance between the potential abatement structure and the receptors at each edge of the area of potential impact, where feasible). Potential noise abatement cost is to be determined by assuming a structure measuring 16 feet in height, using a figure of $25 per square foot ($400 per lineal foot), as stipulated by ODOT Standard Procedure 417-001(SP).

Table 4, located in the Tables section of this report, provides preliminary structural noise abatement cost estimates for each area of potential impact identified in this screening, and lists the number and general location of noise-sensitive receptors to be potentially benefitted. Table 4 also lists the "cost per potentially benefitted receptor" for each potential noise abatement area. For each potential noise abatement area, the cost per potentially benefitted receptor was calculated by dividing the preliminary estimated noise abatement cost by the total number of potentially benefitted receptors (residences or other noise-sensitive receptors located between the potential noise abatement structure and the maximum limit of study, which is 600 feet from the proposed edge of pavement as stipulated by ODOT policy). The total number of potentially benefitted receptors at each area of potential abatement excludes those receptors which are expected to be taken by the associated preliminary alternative segment.

Table 4 does not provide a cost per potentially benefitted receptor for the potential noise abatement areas located adjacent to the Little Miami River, as the river represents the only noise-sensitive receptor in those areas. Table 4 also does not provide a cost per potentially benefitted receptor for Potential Noise Abatement Area M1, as the Horizon Community Church is the only noise-sensitive receptor in that area. Per ODOT policy, the maximum allowable cost of noise abatement per benefitted receptor is $35,000.

The potential noise abatement areas identified in this screening and the number of receptors which may benefit from the potential abatement are based on the results of screening-level analysis methodology (TNM Lookup Tables) for the purpose of evaluating potential noise abatement locations and costs associated with the project's various preliminary alternative segments. No final determinations on the feasibility or cost-reasonableness of potential noise abatement should be made without a detailed, design-level noise analysis using the full FHWA TNM program.

F. CONCLUSIONS / SUMMARY OF RESULTS

As described in Section B, the purpose of this preliminary noise screening is to: 1) update noise-sensitive land use locations in the project study area, 2) identify potential sound-level impacts that may result from construction of the Segment II/III project, 3) provide a preliminary estimated cost for structural noise abatement at locations of potential impact, and 4) provide a preliminary estimated cost for noise abatement per potentially benefitted receptor.

Noise Sensitive Land Uses / Potential Sound-Level Impacts

The preliminary noise screening conducted for this project identified 19 areas of noise-sensitive land use ("analysis sites") located adjacent to the 21 preliminary alternative segments under study for the Segment II/III project (see Section C and Table 1).

Sound-level modeling was conducted for Base Year (1995) and preliminary (non-certified) Design Year (2030) traffic conditions at 45 representative noise-sensitive receptors using the FHWA TNM 2.5 Lookup Table program. The Lookup Table results indicate that 22 of the 45 receptors analyzed could potentially experience Design Year (2030) sound-level impacts associated with one or more of the preliminary alternative segments currently under study (see Section D and Table 3).

Preliminary Cost Estimates for Potential Noise Abatement

Preliminary noise abatement cost estimates were completed for 32 potential noise abatement areas located adjacent to 17 of the 21 preliminary alternative segments under study for this project (Segments B1, B2, B3, C, D, E, F, G, L, M, N, O, P, Q, R, S, and T) using ODOT noise policy methodologies summarized in Section E. The preliminary cost estimates are summarized in Table 4 by individual noise abatement area and by preliminary alternative segment. Preliminary noise abatement cost estimates by preliminary alternative segment range from $379,600 (Segment S) to $2,330,800 (Segment D).

Preliminary Estimated Noise Abatement Cost Per Potentially Benefitted Receptor

Preliminary noise abatement cost estimates per potentially benefitted receptor were completed on the noise abatement areas located adjacent to Segments B1, B2, B3, L, M, N, O, P, Q, R, S, and T, using ODOT noise policy methodologies summarized in Section E; these preliminary estimated costs are presented in Table 4. Preliminary noise abatement cost per potentially benefitted receptor is not provided for the potential noise abatement areas located along Segments C, D, E, F and G since the only noise-sensitive receptor in those areas is the Little Miami River; likewise, cost per potentially benefitted receptor is not provided for Potential Noise Abatement Area M1 since the planned Horizon Community Church is the only noise-sensitive receptor in that area. Per ODOT policy, the maximum allowable cost of noise abatement per benefitted receptor is $35,000. Based on this preliminary analysis, 14 potential noise abatement areas have costs per potentially benefitted receptor that are below the $35,000 threshold (potential noise abatement areas B1, B2, B3, L2, M2, N2, O1, O2, P1, Q1, Q2, R2, S1, and T2).

How The Results Of This Study Will Be Used

As stated above and in Section B, the purpose of this preliminary noise screening is to: 1) update noise-sensitive land use locations in the project study area, 2) identify potential sound-level impacts that may result from construction of the Segment II/III project, 3) provide a preliminary estimated cost for structural noise abatement at locations of potential impact, and 4) provide a preliminary estimated cost for noise abatement per potentially benefitted receptor. This information will be summarized in the project Conceptual Alternative Study (CAS) report and will be considered in the evaluation of preliminary alternative segments and the identification of alternatives to be advanced for further study and development (in Step 6 of ODOT's PDP for Major Projects). The study will also be used to identify locations where future design-level noise analysis may be necessary.

It should be emphasized that t*his study is not a design-level noise impact analysis, and its results should not be used to form any final conclusions about sound-level impacts, abatement locations, or abatement costs.* While this study was conducted using FHWA (and FTA)-approved programs and methodologies, certain information critical to making final sound-level impact determinations (such as certified design-year traffic data, detailed design plans, detailed land use, and topographic data) are either not yet available or can not be used because the screening-level modeling programs used in this analysis are not designed to process those types of data.

As discussed in Section C, a transit noise assessment model (based on the *General Transit Noise Assessment* spreadsheet developed by the FTA) was used to evaluate which noise source (highway or transit) is dominant under Design Year (2030) conditions at the analysis sites selected for this screening. The transit modeling results indicate that highway traffic is the dominant noise source for all receptors analyzed; thus, it was determined that FHWA methodologies should be used for this preliminary noise screening. The effects of transit noise, however, will continue to be considered in future noise impact studies to be conducted for this project (once certified Design Year 2030 traffic data and additional design details become available, and final decisions on transit technology and peak/non-peak transit volumes are made).

Important Information About This Study And The Little Miami River

The Little Miami River is a State and National Scenic River. During the Tier 1 EIS process, the National Park Service raised the issue of Section 4(f) "constructive use" impacts on the Little Miami River's Outstandingly Remarkable Values (ORV's). The ORV's assigned to the Little Miami River are scenic (aesthetic), recreational, fish and wildlife, geological and historical. A "constructive use" impact occurs in situations where the proximity impacts of a project (such as aesthetic or noise impacts) are so severe that the attributes which qualify the resource for protection under Section 4(f) are substantially impaired.

To address the issue of a constructive use due to noise, ODOT conducted field sound-level measurements at several locations along the Little Miami River in the Eastern Corridor Segment II/III study area in 2005 (sound levels ranged from 51.5 to 56.0 dBA). ODOT also conducted a detailed analysis for future (Design Year 2020) sound levels. The highest predicted future sound level was 62.2 dBA. Since the FHWA Noise Abatement Criteria threshold for recreational activity is 67 dBA, FHWA concluded that there was no sound-level impact and, therefore, no constructive use of the Little Miami River. This information was documented in the Tier 1 EIS/ROD.

As part of this screening-level analysis, a field sound-level measurement was taken in October 2008 along the Little Miami River in the Eastern Corridor Segment II/III study area. An ambient sound level of 53 dBA was recorded, and a screening-level analysis for future (Design Year 2030) sound levels was performed using FHWA's TNM Lookup Table program. The TNM Lookup Table program (highway-only analysis) predicted a Design Year 2030 sound level of 63 dBA at each of the four preliminary alternative segment crossing locations (Segments C, D, E and F; see Table 3).

These predicted Design Year 2030 sound levels are below the FHWA Noise Abatement Criteria (23 CFR Part 772) threshold for recreational land uses (67 dBA). However, following the guidelines issued in ODOT noise policy for CAS-level preliminary noise screening, these Little Miami River receptors have been identified in this report as "potentially impacted" since 2030 Build-condition sound levels at these receptors – as predicted by the TNM Lookup Table program – exceed the screening-level threshold for "potential impact" (60 dBA; see discussion in Section D and Tables 3 and 4).

As described in the previous section, this screening is not the equivalent of a design-level analysis, and its results should not be used to form any final conclusions about sound-level impacts, particularly in determining whether or not the project will result in a constructive use impact on the Little Miami River. However, considering the results of this screening, additional noise analysis (i.e., a detailed, design-level noise study) is warranted and will be conducted for the Segment II/III project (including the Little Miami River crossing area) later in the project development process, once a Preferred Alternative has been identified and additional design details and traffic data are available.

TABLES

Table 1: Description of Representative Receptors Analyzed
Table 2a: Base Year (1995) Traffic Volumes and Speeds Used in the Preliminary Noise Screening
Table 2b: Design Year (2030) Traffic Volumes and Speeds Used in the Preliminary Noise Screening
Table 3: Base Year (1995) and Design Year (2030) Sound Levels and Identification of Potential Impacts
Table 4: Preliminary Cost Estimates for Potential Noise Abatement

TABLE 1: Descriptions of Representative Receptors Analyzed

Analysis Site	Representative Receptor	Location	Represents	Associated Alternative Segments
A	1	3659 Old Red Bank Road	Residences on Old Red Bank Road	B1, B2, B3
	2	3601 Old Red Bank Road	Residences on Old Red Bank Road and Forestoak Court	B1, B2, B3
	3	Traskwood Circle	Residences on Traskwood Circle	B1, B2, B3
	4	Forestoak Court	Residences on Forestoak Court	B1, B2, B3
B	5	Little Miami River	Little Miami River	C
	6	Little Miami River	Little Miami River	D
	7	Little Miami River	Little Miami River	E
	8	Little Miami River	Little Miami River	F
C	9	6508 Miami Bluff Drive	Residences on Miami Bluff Drive	C
	10	6614 Miami Bluff Drive	Residences on Miami Bluff Drive	C
	11	6714 Miami Bluff Drive	Residences on Miami Bluff Drive	C
D	12	102 1st Avenue	Residences on 1st, 2nd, and 3rd Avenues in Shademore	G, H
E	13	3525 Leonard Street	Residences on Leonard, West, Crull, Crawford, and Plum Streets	J, K, L
	14	6819 Center Street	Residences on Center Street and Debolt Road	L
	15	3546 Church Street	Newtown United Methodist Church	L
F	16	Robert Short Park	Pedestrian trail, soccer fields, basketball courts	I, K, L
	17	Robert Short Park	Pedestrian trail, picnic area	H, I, J, K, L
G	18	6830 School Road	Miami Valley Christian Academy	G, H, I, K, L
	19	6830 School Road	Miami Valley Christian Academy	G, H, I, J, K, L
	20	6800 School Road	Faith Christian Fellowship Church	G, H, I, J, K, L
H	21	6944 Main Street	First Baptist Church - Newtown	P
I	22	3628 Church Street	Residences on Church Street, just north of railroad tracks	G, H, I, O, P
	23	3644 Church Street	Whispering Wind apartments	I, N, O, P
	24	3646 Church Street	Whispering Wind apartments	I, N, O, P
J	25	3712 Church Street	Residences on Church Street, south of Valley Avenue	G, H, I, N, O, P
	26	3734 Church Street	Residences on Church Street, south of Valley Avenue	G, H, I, N, O, P
K	27	7004 Valley Avenue	Residences on Valley Avevue	M, N, O, P
	28	3810 View Street	Residences on View and Oak Streets	M, N, O
	29	7004 Oak Street	Residences on View and Oak Streets	M, N, O
	30	3822 View Street	Residences on View Street	M, N, O
	31	Church Street	Horizon Community Church (planned)	M, N, O
L	32	7217 Baltic Court	Condominiums on Baltic Court	O, P
M	33	3807 Round Bottom Road	Residences on Round Bottom Road, north of Valley Avenue	M, N
N	34	5063 Lake Forest Drive	Residences on Lake Forest Lane	Q, R, S, T
O	35	8398 Wycliffe Drive	Residences on Wycliffe Drive and Castle Pines Lane	Q, R, S, T
P	36	8290 Batavia Road (SR 32)	Greater Cincinnati Worship Center on Batavia Road (SR 32)	Q, R, S, T
Q	37	8604 Susanview Lane	Residences on Susanview Lane	Q, R, S, T
	38	3309 Mt. Carmel Road	Residences on Mt. Carmel Road	Q, R, S, T
	39	8629 Susanview Lane	Residences on Susanview Lane	Q, R, S, T
R	40	445 Craig Road	All Saints Lutheran Church	Q, R, S, T
	41	3146 Mt. Carmel Road	Residences on Mt. Carmel Road	Q, R, S, T
	42	471 Little Turtle Lane	Residences on Little Turtle Lane	Q, R, S, T
S	43	439 Batavia Road (SR 32)	Residences on south side of Batavia Road, north of Van Vista Drive	Q, R, S, T
	44	445 Van Vista Drive	Residences on Van Vista Drive	Q, R, S, T
	45	452 Hilltop Drive	Residences on Hilltop Drive	Q, R, S, T

TABLE 2a: Base Year (1995) Traffic Volumes Used in the Preliminary Noise Screening

Roadway Segment	Speed (m.p.h.)	BASE YEAR (1995) P.M. PEAK HOUR TRAFFIC VOLUMES*			
		Autos	Medium Trucks	Heavy Trucks	Total
Red Bank Road					
North of US 50	35	1449	37	37	1523
South of US 50	35	247	2	2	251
SR 32					
West of Church Street	25	987	25	25	1036
Church Street to Round Bottom Road	25	1081	26	26	1133
Round Bottom Road to Ivy Hills Place	35	1826	44	44	1914
Ivy Hills Place to Little Dry Run Road	50	1708	40	40	1789
Little Dry Run Road to Eight Mile Road	50-55	1703	41	41	1784
Eight Mile Road to Beechwood Road	55	1734	41	41	1817
East of Beechwood Road	55	1763	52	52	1866
Church Street					
SR 32 to Valley Avenue	25	370	8	8	386
Valley Avenue to US 50	25	1536	45	45	1626
Valley Avenue					
Church Street to Round Bottom Road	25	1221	38	38	1297
Round Bottom Road					
North of Valley Avenue	35	356	17	17	390
Mt. Carmel Road					
South of SR 32	35	346	4	4	354
North of Beechwood Road	35	457	16	16	489
Beechwood Road					
North of SR 32	40	860	22	22	903

* No Certified Traffic Data was available for this phase of the project study. The data used is derived from the most recent study-wide traffic modeling performed (2003).

TABLE 2b: Design Year (2030) Traffic Volumes Used in the Preliminary Noise Screening

Roadway Segment	Speed (m.p.h.)	DESIGN YEAR (2030) P.M. PEAK HOUR TRAFFIC VOLUMES*			
		Autos	Medium Trucks	Heavy Trucks	Total
New SR 32					
North of US 50 Interchange	50	3709	161	161	4032
Between Interchange Ramps	50	3012	137	137	3286
US 50 Interchange to Church Street	50	3990	167	167	4324
Church Street. to Proposed Little Dry Run Road Extension	50	3997	159	159	4315
Proposed Little Dry Run Road Extension to Proposed Ancor Connector	50	3474	151	151	3775
Proposed Ancor Connector to Beechwood Road	50	3517	142	142	3802
East of Beechwood Road	50	3653	153	153	3959
Old Red Bank Road					
North of Wooster Pike	35	230	5	5	240
Old SR 32					
West of Church Street	25	457	13	13	482
Church Street to Round Bottom Road	25	565	16	16	597
Round Bottom Road to Ivy Hills Place	35	684	24	24	733
Ivy Hills Place to Little Dry Run Road	50	544	16	16	576
Little Dry Run Road to Eight Mile Road	50-55	638	16	16	670
Eight Mile Road to Beechwood Road	55	712	17	17	746
Church Street					
SR 32 to Valley Avenue	25	246	6	6	257
Valley Avenue to New SR 32	25	631	28	28	686
New SR 32 to US 50	35	1329	34	34	1396
Valley Avenue					
Church Street to Round Bottom Road	25	397	22	22	441
Round Bottom Road					
Valley Avenue to Proposed Little Dry Run Road Extension	35	83	3	3	90
North of Proposed Little Dry Run Road Extension	35	278	9	9	297
Mt. Carmel Road					
South of SR 32	35	350	4	4	358
North of Beechwood Road	35	75	3	3	80
Beechwood Road					
North of SR 32	40	794	26	26	845

* No Certified Traffic Data was available for this phase of the project study. The data used is derived from the most recent study-wide traffic modeling performed (2003).

TABLE 3: Base Year (1995) and Design Year (2030) Sound Levels and Identification of Potential Impacts

Site	Receptor	Segment	Distance to Preliminary Alternative Segment Centerline	Field Measurement Sound Level (dBA)	Base Year (1995) Sound Level (Leq dBA)	Design Year (2030) Sound Level (Leq dBA)	Potential Impact?
A	1	B1	TAKE	60	53	TAKE	TAKE
		B2	TAKE	60	53	TAKE	TAKE
		B3	TAKE	60	53	TAKE	TAKE
	2	B1	388	60	52	55	No
		B2	TAKE	60	52	TAKE	TAKE
		B3	TAKE	60	52	TAKE	TAKE
	3	B1	192	52	50	61	Yes
		B2	126	52	50	64	Yes
		B3	147	52	50	63	Yes
	4	B1	556	52	48	53	No
		B2	187	52	48	61	Yes
		B3	155	52	48	62	Yes
B	5	C / G	217	53	*	63	Yes
	6	D	217	53	*	63	Yes
	7	E	217	53	*	63	Yes
	8	F	217	53	*	63	Yes
C	9	C	618	51	*	54	No
	10	C	722	51	*	53	No
	11	C	982	51	*	50	No
D	12	G	873	51	*	51	No
		H	1483	51	*	*	No
E	13	J	1498	51	44	*	No
		K	914	51	44	51	No
		L	265	51	44	61	Yes
	14	L	256	51	45	61	Yes
	15	L	428	57	53	58	No
F	16	I	1423	50	*	*	No
		K	1022	50	*	*	No
		L	243	50	*	62	Yes
	17	H	1535	50	*	*	No
		I	955	50	*	50	No
		J	1081	50	*	*	No
		K	388	50	*	58	No
		L	752	50	*	52	No
G	18	G	1452	48	42	*	No
		H	1377	48	42	*	No
		I	1176	48	42	*	No
		K	1097	48	42	*	No
		L	431	48	42	57	No
	19	G	1103	48	41	*	No
		H	1031	48	41	*	No
		I	854	48	41	51	No
		J	1412	48	41	*	No
		K	835	48	41	52	No
		L	737	48	41	53	No
	20	G	901	48	37	51	No
		H	797	48	37	52	No
		I	535	48	37	55	No
		J	1084	48	37	*	No
		K	465	48	37	56	No
		L	1079	48	37	*	No

* No modeling results available; distance between receptor and roadway noise source exceeds TNM 2.5 Lookup Table parameters (maximum distance = 984 feet)

TABLE 3 (continued): Base Year and Design Year Sound Levels and Identification of Potential Impacts

Site	Receptor	Segment	Distance to Preliminary Alternative Segment Centerline	Field Measurement Sound Level (dBA)	Base Year (1995) Sound Level (Leq dBA)	Design Year (2030) Sound Level (Leq dBA)	Potential Impact?
H	21	P	686	59	52	55	No
I	22	G	1458	53	54	*	No
		H	1428	53	54	*	No
		I	1331	53	54	*	No
		O	1338	53	54	*	No
		P	269	53	54	61	Yes
	23	I	1457	50	40	*	No
		N	1609	50	40	*	No
		O	1226	50	40	*	No
		P	288	50	40	60	Yes
	24	I	1182	50	40	*	No
		N	1286	50	40	*	No
		O	902	50	40	51	No
		P	612	50	40	54	No
J	25	G	421	55	57	59	No
		H	421	55	57	59	No
		I	392	55	57	59	No
		N	589	55	57	57	No
		O	218	55	57	63	Yes
		P	1332	55	57	*	No
	26	G	936	53	50	52	No
		H	930	53	50	52	No
		I	872	53	50	53	No
		N	1134	53	50	*	No
		O	764	53	50	53	No
		P	794	53	50	53	No
K	27	M	607	63	61	59	No
		N	413	63	61	61	Yes
		O	TAKE	63	61	TAKE	TAKE
		P	1451	63	61	*	No
	28	M	437	56	51	57	No
		N	214	56	51	63	Yes
		O	189	56	51	64	Yes
	29	M	274	53	47	61	Yes
		N	TAKE	53	47	TAKE	TAKE
		O	373	53	47	58	No
	30	M	134	51	45	67	Yes
		N	127	51	45	67	Yes
		O	530	51	45	55	No
	31	M	192	51	42	64	Yes
		N	502	51	42	56	No
		O	905	51	42	51	No
L	32	O	1419	63	59	*	No
		P	567	63	59	58	No
M	33	M	182	61	56	64	Yes
		N	488	61	56	56	No

* No modeling results available; distance between receptor and roadway noise source exceeds TNM 2.5 Lookup Table parameters (maximum distance = 984 feet)

TABLE 3 (continued): Base Year and Design Year Sound Levels and Identification of Potential Impacts

Site	Receptor	Segment	Distance to Preliminary Alternative Segment Centerline	Field Measurement Sound Level (dBA)	Base Year (1995) Sound Level (Leq dBA)	Design Year (2030) Sound Level (Leq dBA)	Potential Impact?
N	34	Q	1522	51	48	*	No
		R	1732	51	48	*	No
		S	960	51	48	50	No
		T	535 (EB) / 769 (WB)	51	48	53	No
O	35	Q	1418	52	51	*	No
		R	811	51	51	52	No
		S	717	51	51	52	No
		T	233 (EB) / 557 (WB)	51	51	60	Yes
P	36	Q	TAKE	57	51	TAKE	TAKE
		R	302	57	51	59	No
		S	366	57	51	58	No
		T	524 (WB) / 843 (EB)	57	51	53	No
Q	37	Q	TAKE	49	47	TAKE	TAKE
		R	215	49	47	62	Yes
		S	842	49	47	51	No
		T	862 (WB) / 1147 (EB)	49	47	47	No
	38	Q	603	53	54	54	No
		R	744	53	54	53	No
		S	887	53	54	51	No
		T	875	53	54	52	No
	39	Q	283	49	39	60	Yes
		R	563	49	39	54	No
		S	1259	49	39	*	No
		T	1282	49	39	*	No
R	40	Q	232	60	61	63	Yes
		R	232	60	61	63	Yes
		S	232	60	61	63	Yes
		T	232	60	61	63	Yes
	41	Q	320	60	59	59	No
		R	343	60	59	59	No
		S	328	60	59	59	No
		T	324	60	59	59	No
	42	Q	320	60	56	59	No
		R	320	60	56	59	No
		S	320	60	56	59	No
		T	320	60	56	59	No
S	43	Q	617	57	51	53	No
		R	561	57	51	54	No
		S	529	57	51	55	No
		T	541	57	51	54	No
	44	Q	366	60	55	58	No
		R	366	60	55	58	No
		S	366	60	55	58	No
		T	366	60	55	58	No
	45	Q	545	57	53	56	No
		R	545	57	53	56	No
		S	545	57	53	56	No
		T	545	57	53	56	No

* No modeling results available; distance between receptor and roadway noise source exceeds TNM 2.5 Lookup Table parameters (maximum distance = 984 feet)

TABLE 4: Preliminary Cost Estimates for Potential Noise Abatement

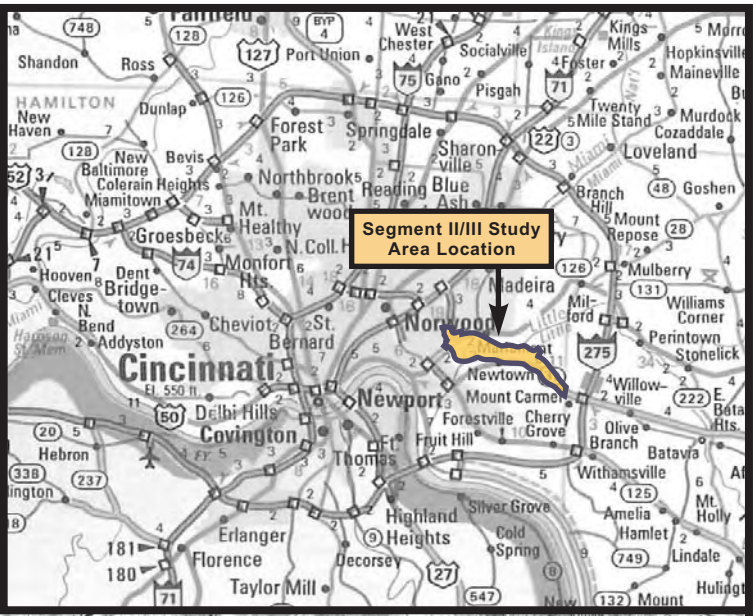
Potential Noise Abatement Area	Preliminary Alternative Segment	Analysis Site / Receptors Benefitted by Potential Noise Abatement	Length of Potential Abatement	Preliminary Cost	Potentially Benefitted Receptors	Cost per Potentially Benefitted Receptor
B1	B1	Site A / Ashworth Dr., Traskwood Cir., Forestoak Ct., Old Red Bank Rd. residences	1,678 ft.	$671,200	119	$5,640
		Totals for Preliminary Alternative Segment B1	1,678 ft.	$671,200		
B2	B2	Site A / Ashworth Dr., Traskwood Cir., and Forestoak Ct. residences	2,227 ft.	$890,800	133	$6,698
		Totals for Preliminary Alternative Segment B2	2,227 ft.	$890,800		
B3	B3	Site A / Ashworth Dr., Traskwood Cir., and Forestoak Ct. residences	2,297 ft.	$918,800	130	$7,068
		Totals for Preliminary Alternative Segment B3	2,297 ft.	$918,800		
C1	C	Site B / Little Miami River at the Horseshoe Bend preserve	1,931 ft.	$772,400	*	*
C2	C	Site B / Little Miami River near the Norfolk Southern railroad bridge	898 ft.†	$359,200 †	*	*
C3	C	Site B / Little Miami River near the Norfolk Southern railroad bridge	1,426 ft.†	$570,400 †	*	*
		Totals for Preliminary Alternative Segment C	4,255 ft.	$1,702,000		
D1	D	Site B / Little Miami River at the Horseshoe Bend preserve	3,839 ft.	$1,535,600	*	*
D2	D	Site B / Little Miami River at the Horseshoe Bend preserve	1,988 ft.	$795,200	*	*
		Totals for Preliminary Alternative Segment D	5,827 ft.	$2,330,800		
E1	E	Site B / Little Miami River at the south edge of the Horseshoe Bend preserve	1,353 ft.	$541,200	*	*
E2	E	Site B / Little Miami River at the south edge of the Horseshoe Bend preserve	1,181 ft.	$472,400	*	*
E3	E	Site B / Little Miami River at the east edge of the Horseshoe Bend preserve	2,086 ft.	$834,400	*	*
		Totals for Preliminary Alternative Segment E	4,620 ft.	$1,848,000		
F1	F	Site B / Little Miami River, south of the Horseshoe Bend preserve	1,980 ft.	$792,000	*	*
F2	F	Site B / Little Miami River, south of the Horseshoe Bend preserve	1,247 ft.	$498,800	*	*
		Totals for Preliminary Alternative Segment F	3,227 ft.	$1,290,800		
G1	G	Site B / Little Miami River near the Norfolk Southern railroad bridge	821 ft.†	$328,400 †	*	*
G2	G	Site B / Little Miami River near the Norfolk Southern railroad bridge	195 ft.†	$78,000 †	*	*
		Totals for Preliminary Alternative Segment G	1,016 ft.	$406,400		
L1	L	Site F / Portions of Robert Short Park and the Miami Valley Christian Academy	1,627 ft.	$650,800	2	$325,400
L2	L	Site E / Crull/West/Leonard/Crawford/Plum/Center Street & Debolt Road residences	3,272 ft.	$1,308,800	80	$16,360
		Totals for Preliminary Alternative Segment L	4,899 ft.	$1,959,600		
M1	M	Site K / Horizon Community Church (planned for area just north of Newtown)	1,596 ft.	$638,400	*	*
M2	M	Site K / View and Oak Street residences	1,697 ft.	$678,800	27	$25,141
M3	M	Site M / Round Bottom Road residences	1,545 ft.	$618,000	8	$77,250
		Totals for Preliminary Alternative Segment M	4,838 ft.	$1,935,200		
N1	N	Site K / View Street and Oak Street residences, Horizon Community Church	990 ft.	$396,000	6	$66,000
N2	N	Site K / View Street (south of Oak Street) and Valley Avenue residences	1,672 ft.	$668,800	22	$30,400
		Totals for Preliminary Alternative Segment N	2,662 ft.	$1,064,800		
O1	O	Site K / Oak Street and View Street residences	1,562 ft.	$624,800	20	$31,240
O2	O	Site J / Church Street residences (south of Valley Avenue)	406 ft.	$162,400	8	$20,300
		Totals for Preliminary Alternative Segment O	1,968 ft.	$787,200		
P1	P	Site I / Whispering Wind Apts. (first-floor units) & select Church St. residences	1,124 ft.	$449,600	47	$9,566
		Totals for Preliminary Alternative Segment P	1,124 ft.	$449,600		
Q1	Q	Site Q / Susanview Court residences	862 ft.	$344,800	11	$31,345
Q2	Q	Site R / All Saints Lutheran Church & adjacent single family residences	1,002 ft.	$400,800	13	$30,831
		Totals for Preliminary Alternative Segment Q	1,864 ft.	$745,600		
R1	R	Site Q / Susanview Court residences	1,036 ft.	$414,400	10	$41,440
R2	R	Site R / All Saints Lutheran Church & adjacent single family residences	982 ft.	$392,800	12	$32,733
		Totals for Preliminary Alternative Segment R	2,018 ft.	$807,200		
S1	S	Site R / All Saints Lutheran Church & adjacent single family residences	949 ft.	$379,600	11	$34,509
		Totals for Preliminary Alternative Segment S	949 ft.	$379,600		
T1	T	Site O / Wycliffe Drive and Castle Pines Lane residences	1,372 ft.	$548,800	7	$78,400
T2	T	Site R / All Saints Lutheran Church & adjacent single family residences	953 ft.	$381,200	11	$34,655
		Totals for Preliminary Alternative Segment T	2,325 ft.	$930,000		

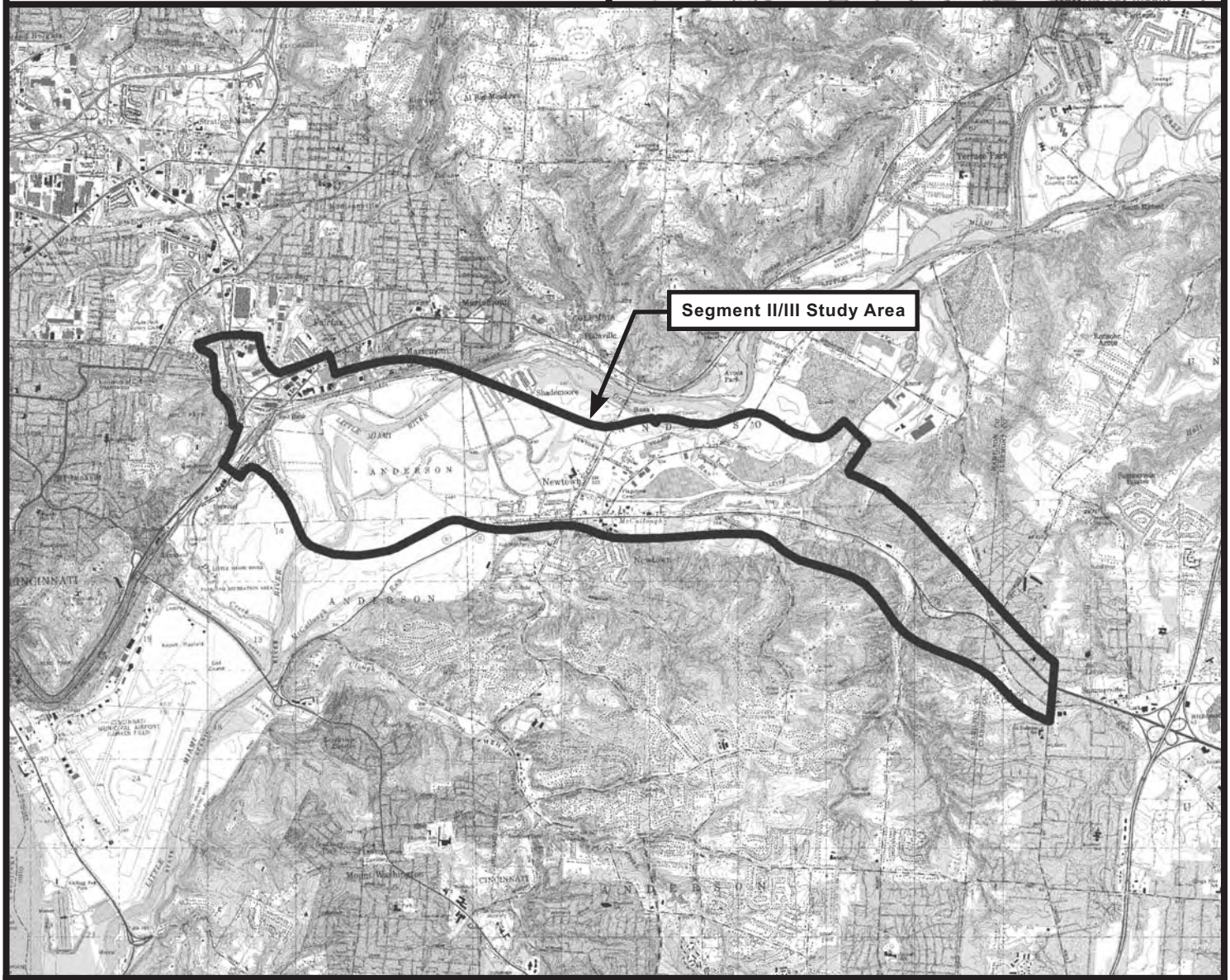
† Potential Noise Abatement Areas G1 and G2 are continuations of Areas C2 and C3, respectively; see Exhibit 2f.

* Cost per potentially benefitted receptor not calculated since only one noise-sensitive receptor occurs within the respective potential noise abatement area.

EXHIBITS

Exhibit 1:	Project Location Map
Exhibits 2a-2n:	Representative Noise Receptor and Potential Noise Abatement Area Location Map





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NORTH

0 (FEET) 5,000

January 2009

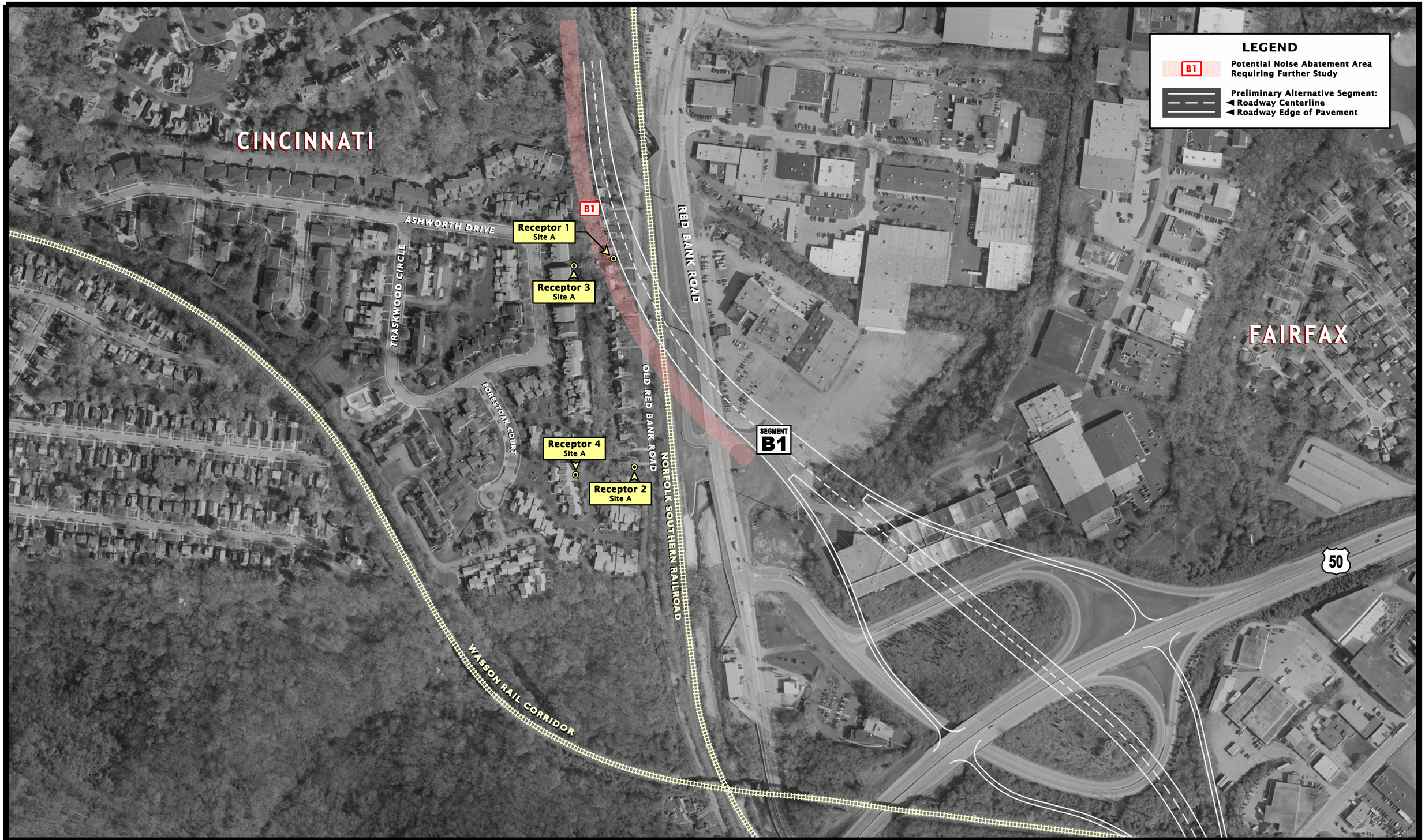
The Eastern Corridor

Preliminary Noise Screening

Eastern Corridor Multi-Modal Projects
Segment II/III (Relocated SR 32); PID 22970

Exhibit 1

Project Location Map



0 50 100 300 FEET

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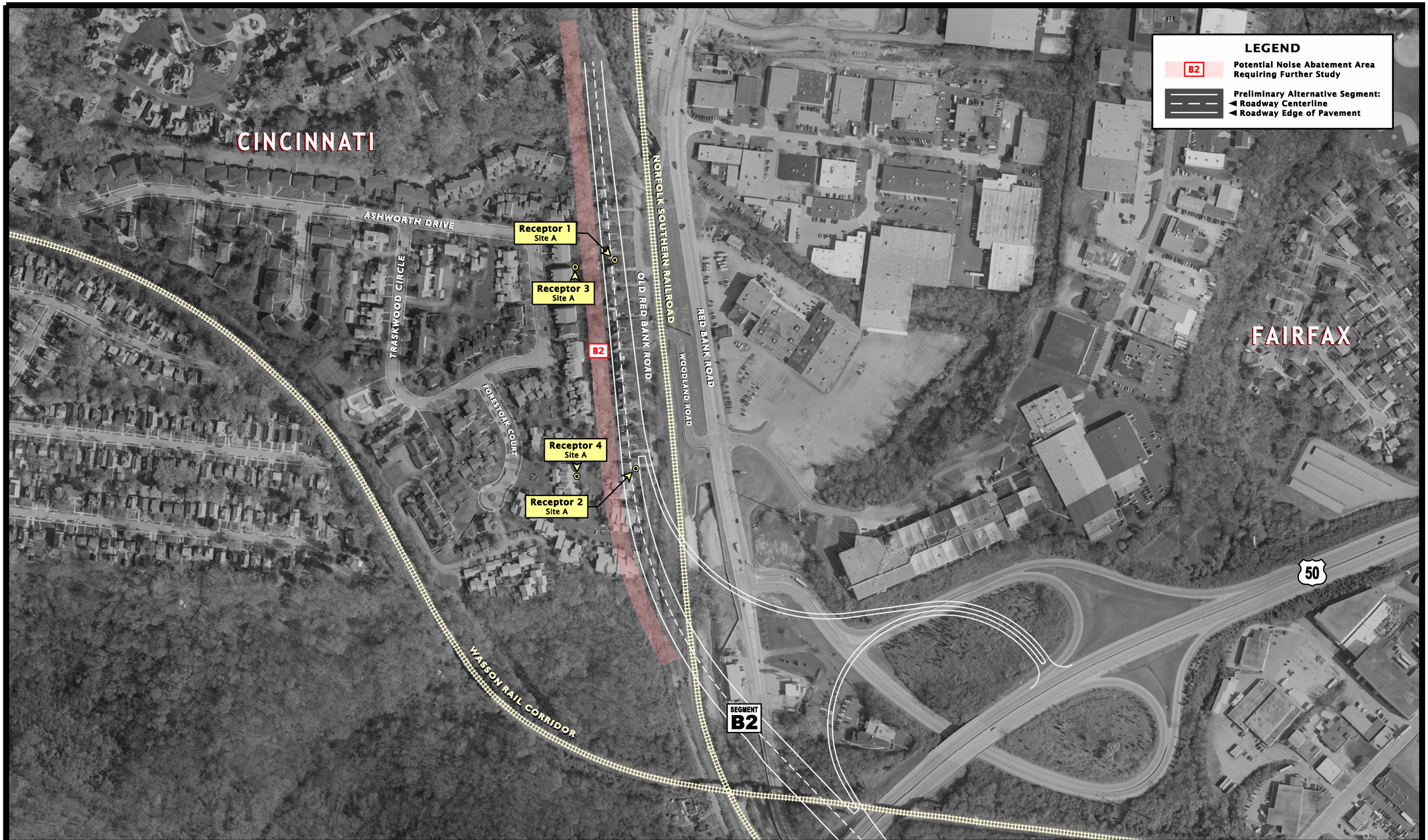
Exhibit 2a

Representative Noise Receptor and Potential Noise Abatement Area Location Map



0 50 100 300 FEET

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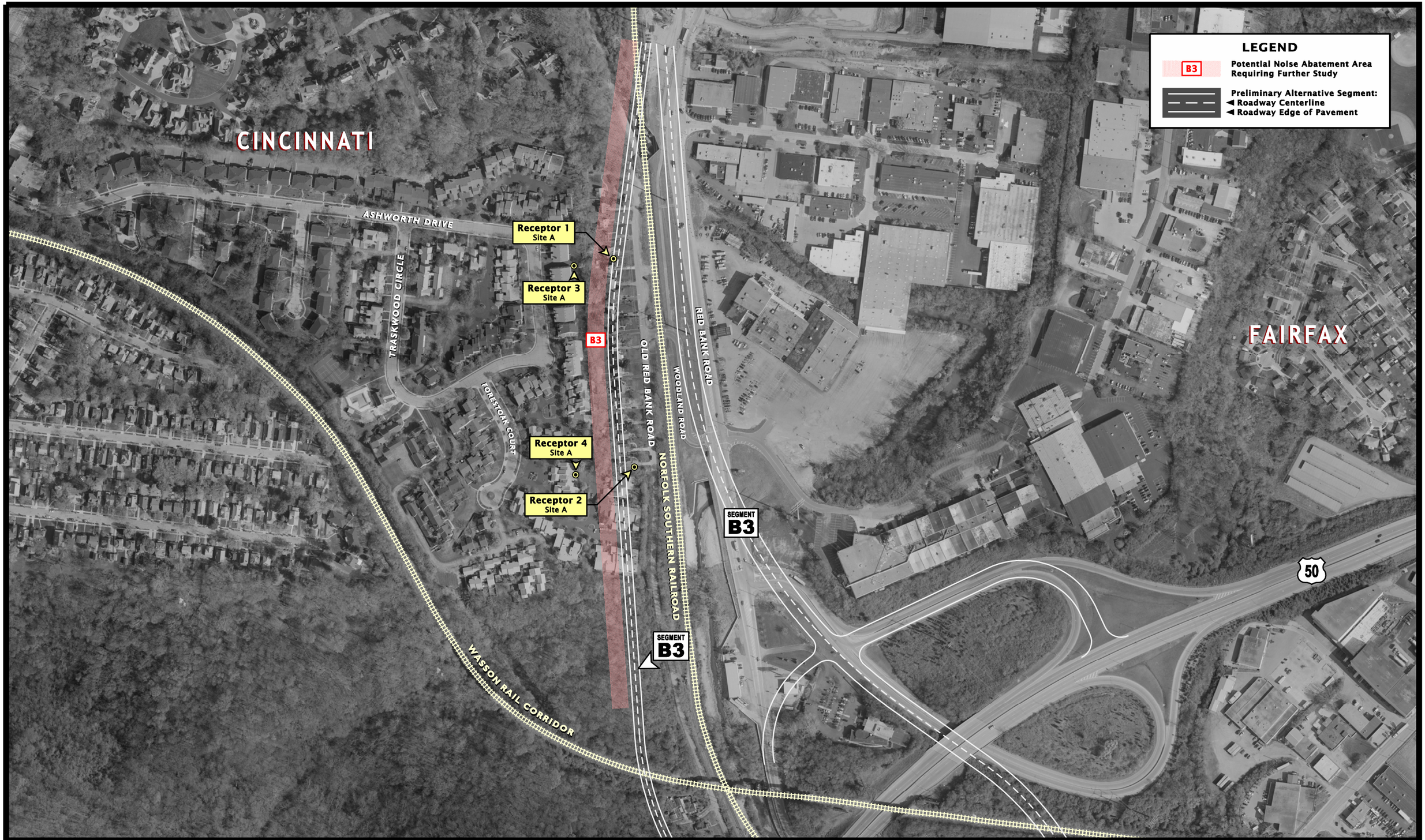
Exhibit 2b
Representative Noise Receptor and
Potential Noise Abatement Area Location Map



0 50 100 300 FEET

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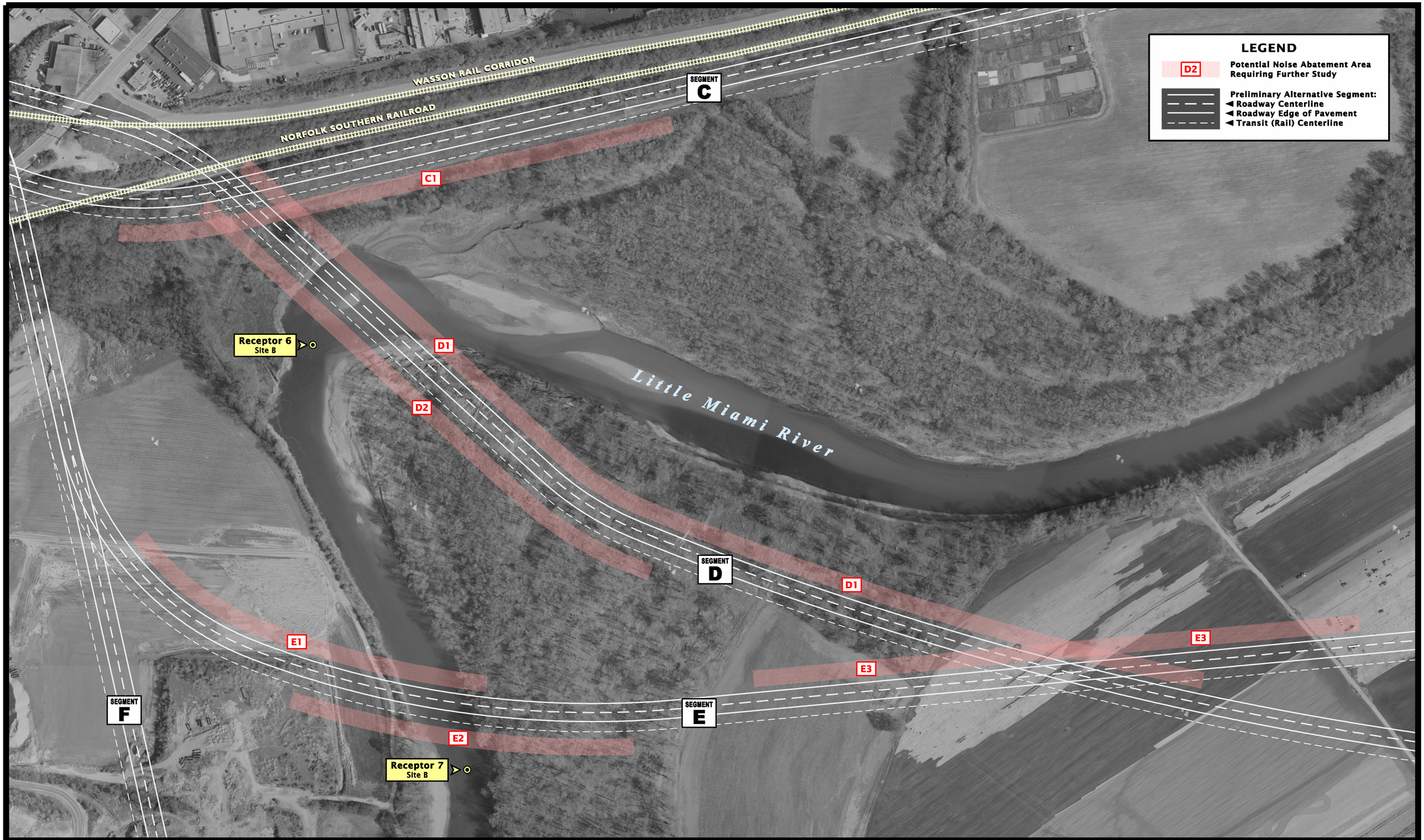
Exhibit 2c
Representative Noise Receptor and
Potential Noise Abatement Area Location Map



0 50 100 300 FEET

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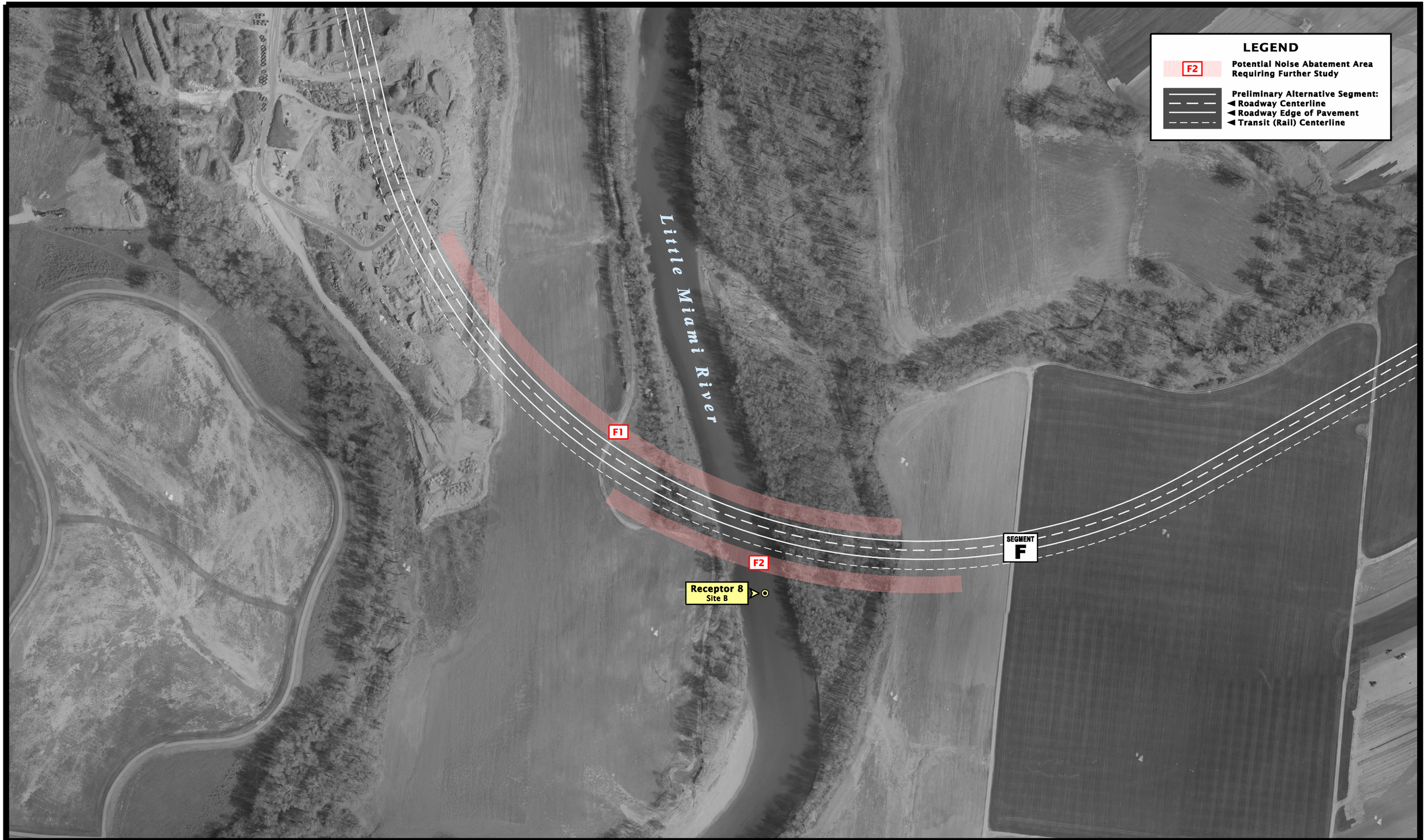
Eastern Corridor Multi-Modal Projects
Segment II / III (Relocated SR 32); PID 22970

Exhibit 2d
Representative Noise Receptor and Potential Noise Abatement Area Location Map



0 50 100 300 FEET

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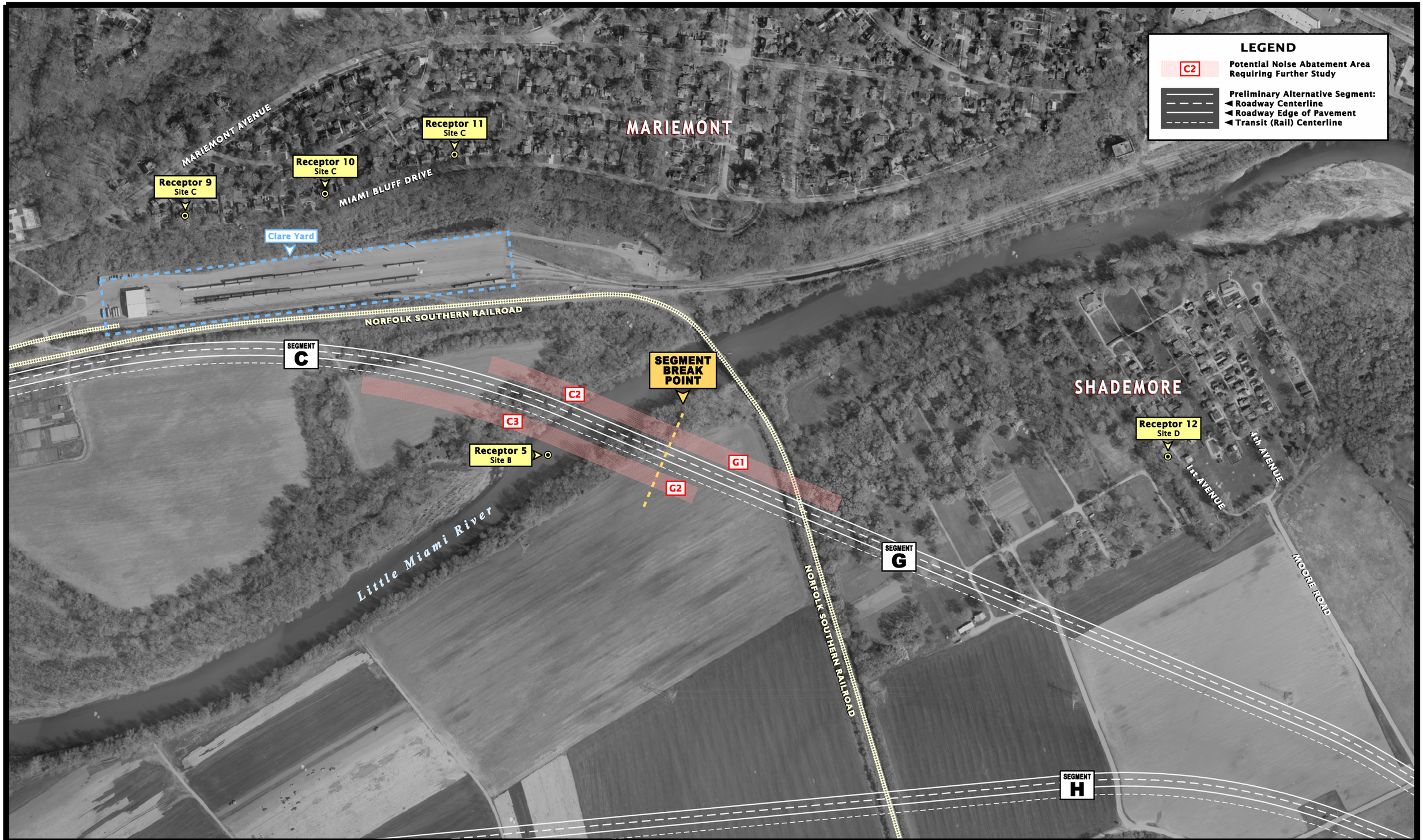
Eastern Corridor Multi-Modal Projects
Segment II / III (Relocated SR 32); PID 22970

Exhibit 2e
Representative Noise Receptor and
Potential Noise Abatement Area Location Map


LEGEND
C2
Potential Noise Abatement Area Requiring Further Study
Preliminary Alternative Segment:
◀ Roadway Centerline
◀ Roadway Edge of Pavement
◀ Transit (Rail) Centerline
MARIEMONT
MARIEMONT AVENUE
MIAMI BLUFF DRIVE
Receptor 9
Site C
Receptor 10
Site C
Receptor 11
Site C
Clare Yard
NORFOLK SOUTHERN RAILROAD
SEGMENT C
SEGMENT BREAK POINT
C2
C3
G1
G2
Receptor 5
Site B
Little Miami River
SHADEMORE
Receptor 12
Site D
4th AVENUE
1st AVENUE
MOORE ROAD
NORFOLK SOUTHERN RAILROAD
SEGMENT G
SEGMENT H
0 100 200 400 FEET
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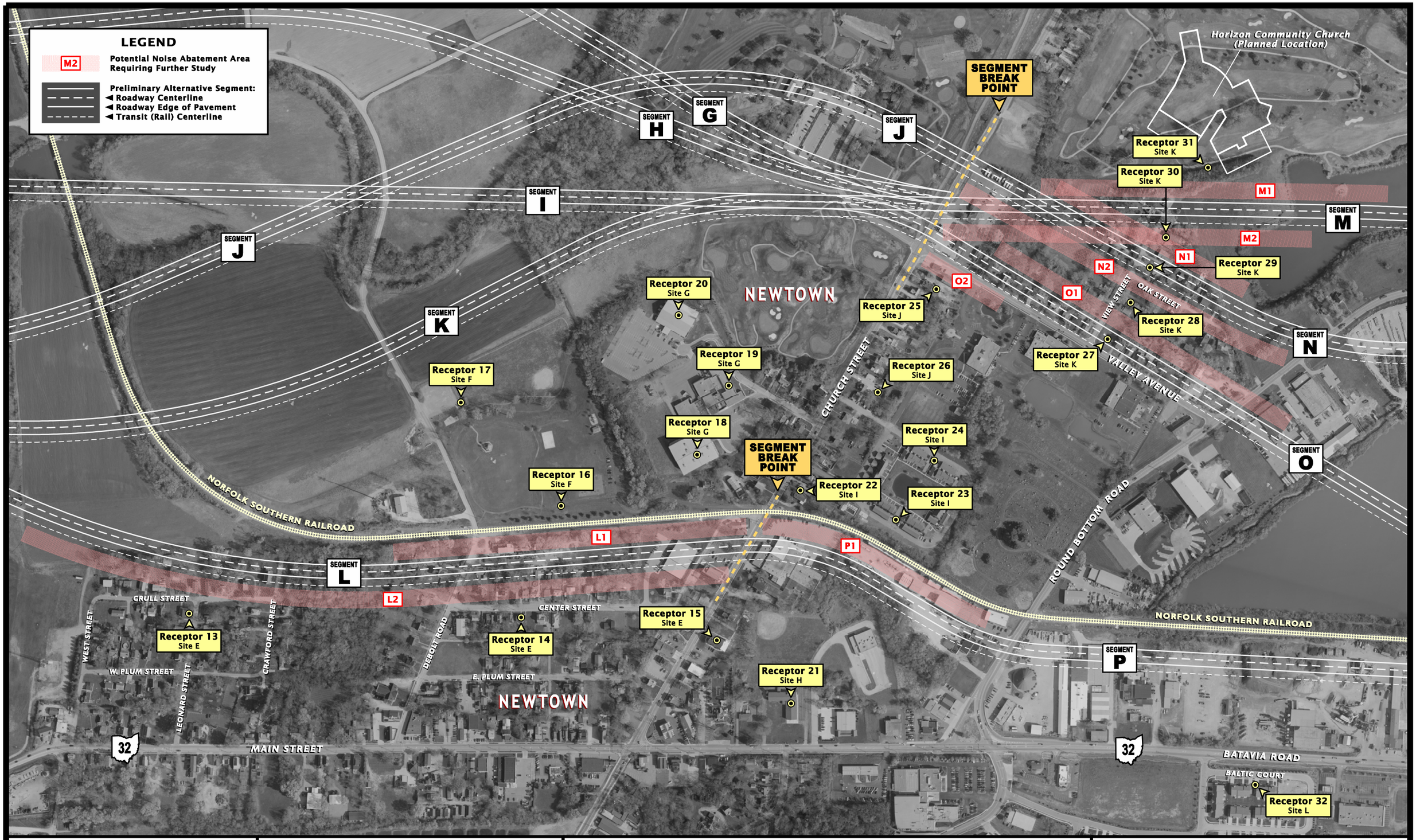
Eastern Corridor Multi-Modal Projects
Segment II / III (Relocated SR 32); PID 22970
Exhibit 2f
Representative Noise Receptor and
Potential Noise Abatement Area Location Map



0 100 200 400 FEET

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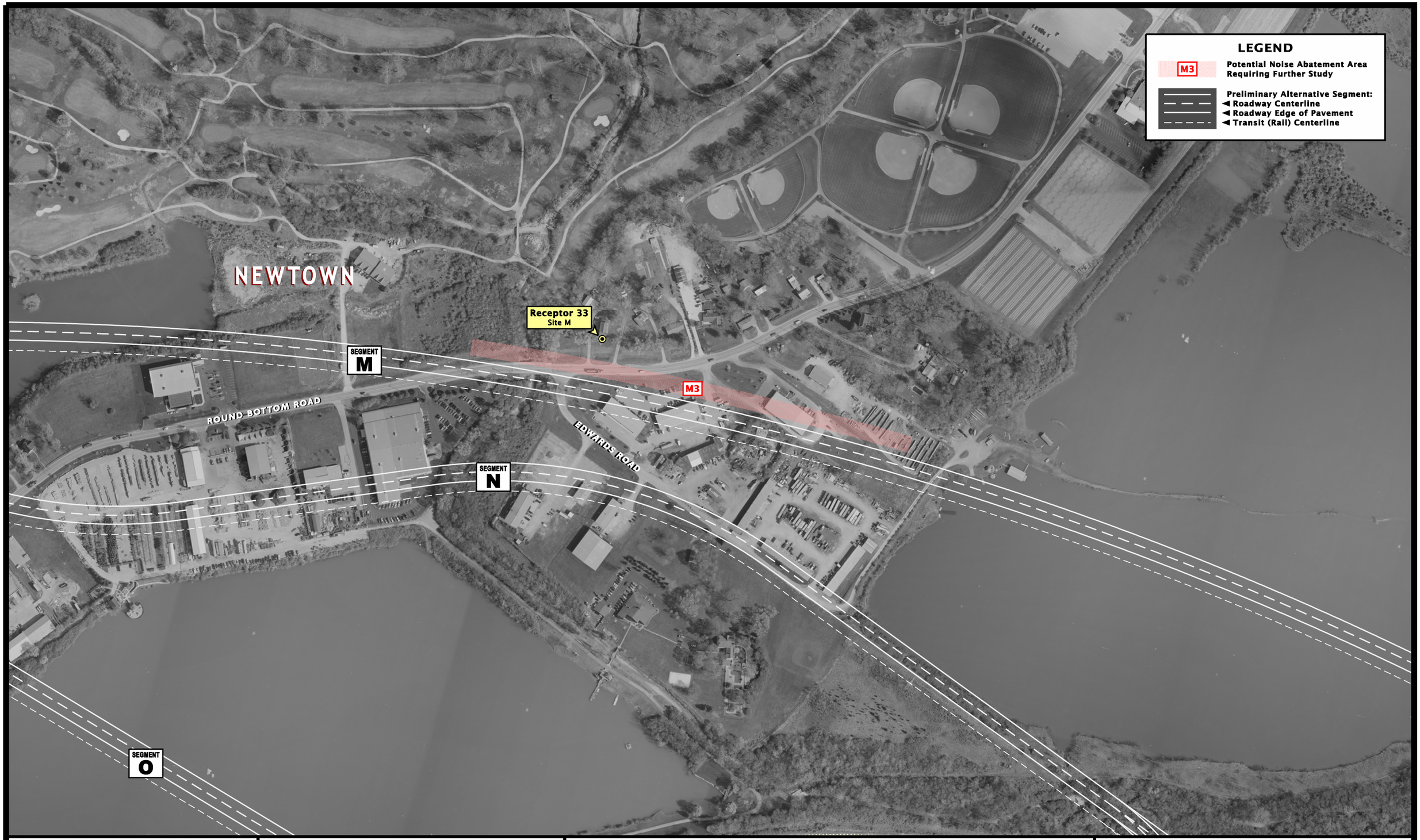
Preliminary Noise Screening

Eastern Corridor Multi-Modal Projects
Segment II / III (Relocated SR 32); PID 22970

Exhibit 2g

Representative Noise Receptor and Potential Noise Abatement Area Location Map



0 50 100 300 FEET

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Preliminary Noise Screening
Eastern Corridor Multi-Modal Projects
Segment II / III (Relocated SR 32); PID 22970

Exhibit 2h
Representative Noise Receptor and
Potential Noise Abatement Area Location Map

0 50 100 300 FEET

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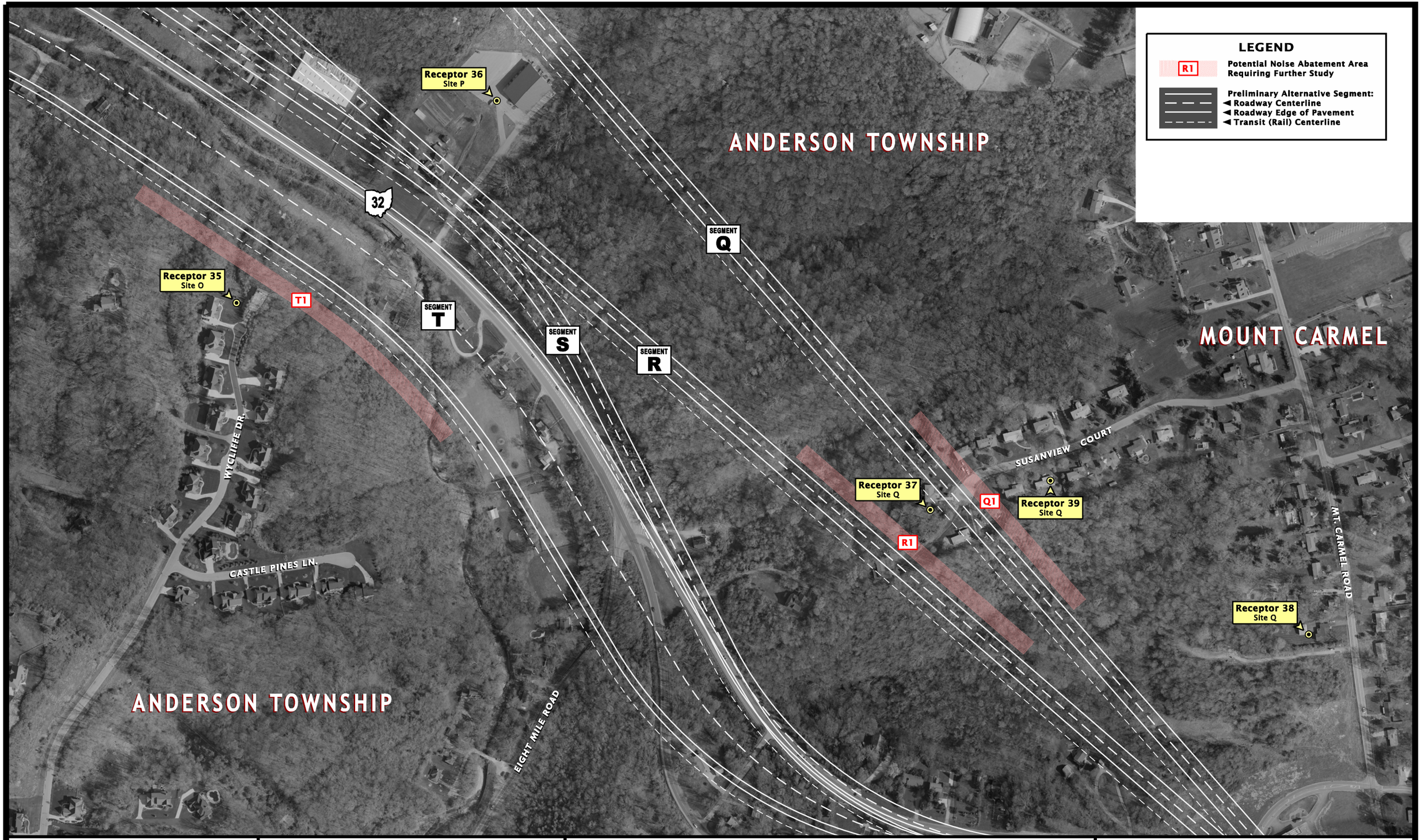
Preliminary Noise Screening
Eastern Corridor Multi-Modal Projects
Segment II / III (Relocated SR 32); PID 22970

Exhibit 2i
Representative Noise Receptor and
Potential Noise Abatement Area Location Map



0 50 100 300 FEET

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NORTH

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Preliminary Noise Screening
Eastern Corridor Multi-Modal Projects
Segment II / III (Relocated SR 32); PID 22970

Exhibit 2j
Representative Noise Receptor and Potential Noise Abatement Area Location Map

0 50 100 300 FEET

January 2009

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Preliminary Noise Screening
Eastern Corridor Multi-Modal Projects
Segment II / III (Relocated SR 32); PID 22970

Exhibit 2k
Representative Noise Receptor and Potential Noise Abatement Area Location Map

0 50 100 300 FEET

January 2009

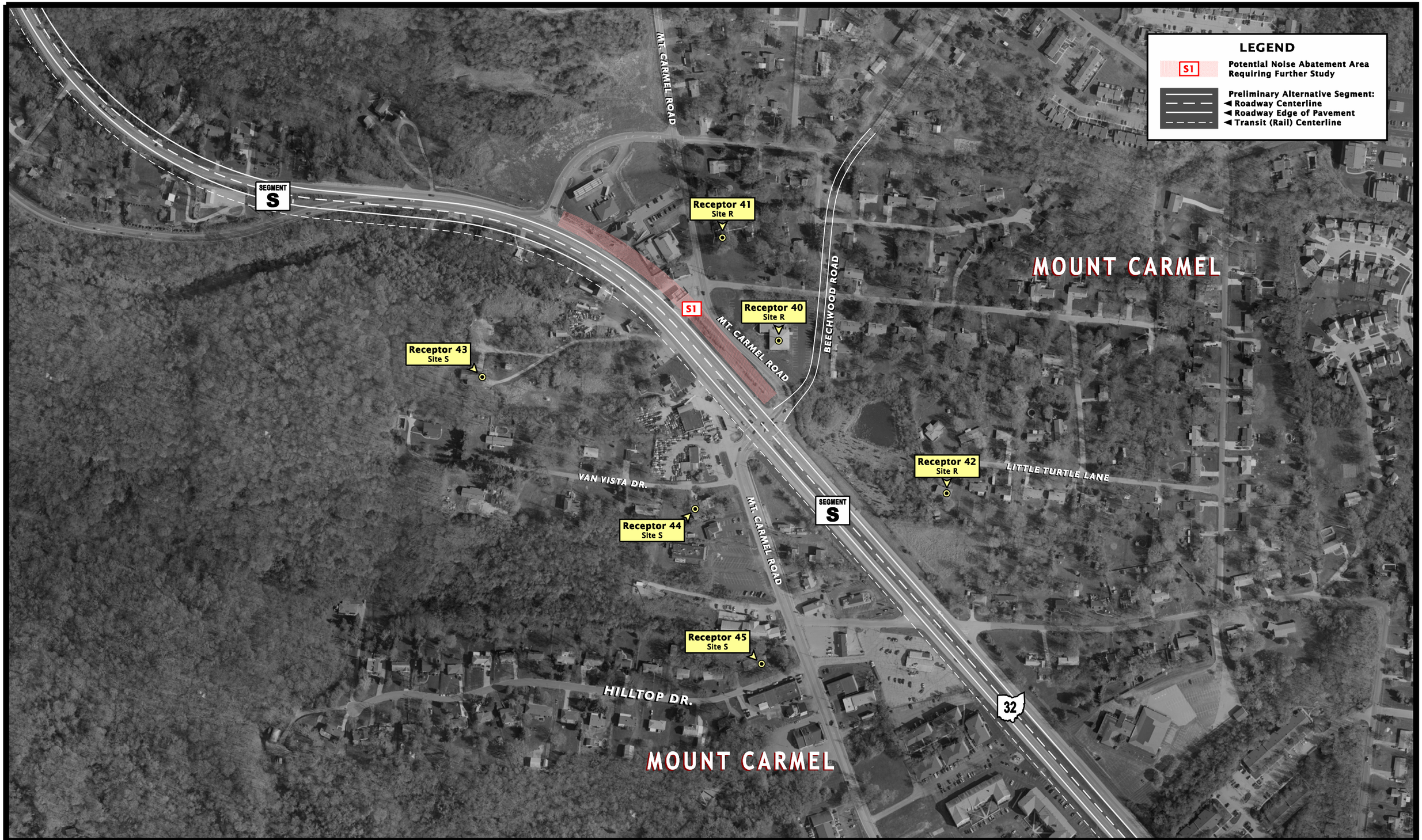
NORTH

The Eastern Corridor

ENTRAN

Preliminary Noise Screening
Eastern Corridor Multi-Modal Projects
Segment II / III (Relocated SR 32); PID 22970

Exhibit 2I
Representative Noise Receptor and Potential Noise Abatement Area Location Map



0 50 100 300 FEET

January 2009

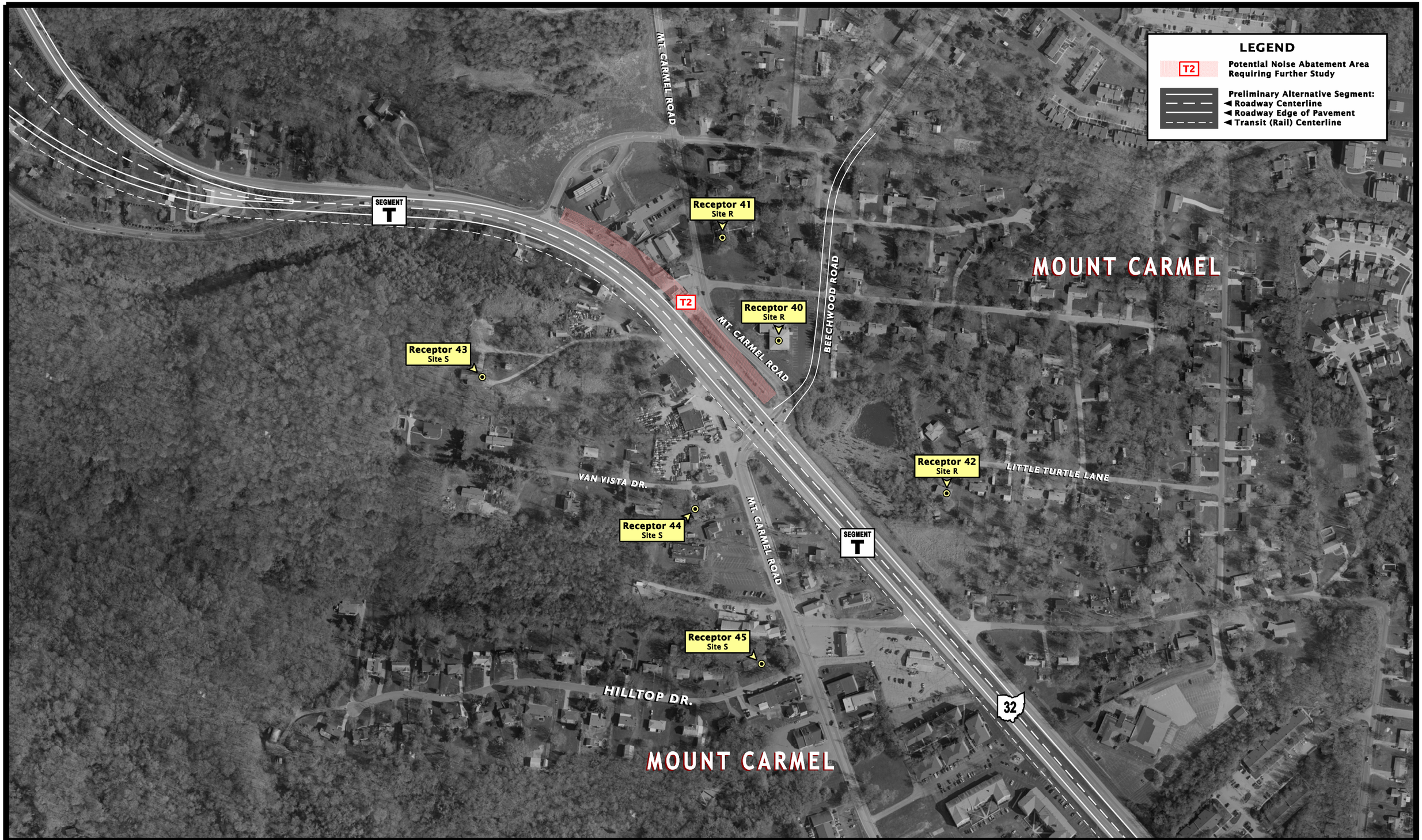
NORTH

The Eastern Corridor

ENTRAN

Preliminary Noise Screening
Eastern Corridor Multi-Modal Projects
Segment II / III (Relocated SR 32); PID 22970

Exhibit 2m
Representative Noise Receptor and Potential Noise Abatement Area Location Map



0 50 100 300 FEET

January 2009

NORTH

The Eastern Corridor

ENTRAN

Preliminary Noise Screening
Eastern Corridor Multi-Modal Projects
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Exhibit 2n
Representative Noise Receptor and Potential Noise Abatement Area Location Map

ATTACHMENT

Transit Noise Assessment Model Spreadsheets and FHWA TNM 2.5 Lookup Table Results for Base Year (1995) and Design Year (2030) Conditions (CD-ROM)

OHIO DEPARTMENT OF TRANSPORTATION
INTER-OFFICE COMMUNICATION
Office of Environmental Services

TO: Andy Fluegemann - Planning and Prog. Admin. #8 **DATE:** March 9, 2009
Attn: Keith Smith P.E. - Planning Engineer

FROM: Noel Alcala, Noise and Air Quality Coordinator

SUBJECT: Preliminary Noise Screening

PROJECT: HAM-32-0.00 Eastern Corridor Multi-modal PID #22970

The **HAM-32-0.00 Eastern Corridor Multi-modal Projects** Preliminary Noise Screening prepared by Entran has been reviewed by this office and we believe our 2/10/09 comments have been addressed. Per ODOT's Noise Standard Procedure, the next submittal will be the Preliminary Noise Analysis on the Feasible Alternatives. In the Preliminary Noise Analysis, receivers located within 400' from the EOP (edge of pavement) of a feasible alternative should be used for refined cost reasonableness calculations for structural noise abatement.

Any questions, please call Noel Alcala of this office at 614- 466-5222 or Elvin Pinckney at 614-466-5154.

TMH:ALS:EWP
cc: File
Reading file