Appendix K – DEIS Reasonable Alternatives Traffic Noise Analysis Report

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DEIS Reasonable Alternatives Traffic Noise Analysis Report

Loop 9, Segment A
From US 67 to IH 35E
Dallas and Ellis Counties

CSJ: 2964-10-006

Texas Department of Transportation -- Dallas District

September 8, 2022

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 9, 2019, and executed by FHWA and TxDOT.

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Project Description

The proposed Loop 9, Segment A project includes the construction of a six-lane new location frontage road system between United States 67 (US 67) and Interstate Highway 35 East (IH 35E) through Dallas and Ellis counties, Texas, and is approximately 9.4 miles in length. The proposed Loop 9 roadway system would pass through the Cities of Cedar Hill, Ovilla, Glenn Heights, and Red Oak. The proposed project right-of-way (ROW) would include a median that would accommodate the future construction of an ultimate access-controlled mainlane facility. Construction of the ultimate access-controlled mainlane facility would be based on projected traffic and funding and would require additional environmental analysis prior to construction.

The new location Loop 9 frontage road system would include an eastbound and westbound frontage road facility, each consisting of three 12-foot lanes, an 8-foot inside shoulder, and an 8-foot outside shoulder for bicycle accommodations within the rural section of the proposed roadway. The proposed project ROW would include a median (358 to 512 feet wide) that would accommodate the future construction of an ultimate access-controlled mainlane facility.

The proposed project would construct intersections at eight (8) major crossroads as follows: Tar Road, future Clark Road, S. Joe Wilson Road, S. Duncanville Road, S. Cockrell Hill Road, S. Westmoreland Road, S. Hampton Road, and Uhl Road. The proposed project would also construct a grade separation at the BNSF Railroad. In addition, the western limit of the project would tie into a grade separation at US 67 which would be constructed under a separate project prior to construction of Loop 9 Segment A. The eastern limit of the project would tie into a grade separation at IH 35E which would be constructed under a separate project prior to construction of Loop 9, Segment A.

The proposed Loop 9, Segment A project, from US 67 to IH 35E, would likely be constructed in three phases based on traffic needs and project funding. A logical sequence for staging the various elements for construction of the new location roadway system could be as follows:

- Phase 1 would construct a single two-lane, two-way frontage road, and would also acquire the proposed ROW to accommodate a six-lane frontage road system and the future ultimate access-controlled mainlane facility. This phase would also include restriping of the US 67 intersection to accommodate the new Loop 9 frontage road turning movements.

- Phase 2 would involve the construction of the three-lane frontage road in each direction, which would include the conversion of the two-way frontage road built in Phase 1 to a one-way operation, and the construction of grade separations at specific high-volume intersections. Phase 2 would be constructed as traffic warrants and funding becomes available.

- Phase 3 would involve the construction of the ultimate access-controlled mainlane facility in both directions. Construction of the ultimate access-controlled mainlane facility would be based on projected traffic and funding and would require additional environmental analysis prior to construction.

Build Alternatives

From Tar Road to approximately 0.4 miles east of Duncanville Road, four Build Alternatives are being considered. East and west of these limits, each alternative shares a Common Alignment to the project termini.

Common Alignment

From US 67, the Common Alignment heads east for a distance of approximately 0.8 miles until intersecting Tar Road, where the four Build Alternatives begin. The Common Alignment in this location runs parallel to and just south of the Dallas/Ellis County line in Ellis County. A grade separation at the BNSF Railroad would be constructed in this portion of the Common Alignment. In addition, the western limit of the project would tie into a grade separation at US 67 which would be constructed under a separate project prior to construction of Loop 9 Segment A.

After the divergence of the four Build Alternatives, the Common Alignment comes back together approximately 0.4 miles east of S. Duncanville Road. At this point, it follows generally an easterly direction for approximately 4.6 miles before terminating at the intersection with IH 35E. This portion of the Common Alignment includes intersection with four major crossroads: S. Cockrell Hill Road, S. Westmoreland Road, S. Hampton Road, and Uhl Road. The eastern limit of the project would tie into a grade separation at IH 35E which would be constructed under a separate project prior to construction of Loop 9, Segment A.

Alternative 1

Alternative 1 (4.0 miles), the north-central alternative, diverges from the Common Alignment at Tar Road heading east, then immediately turns northeast before crossing S. Joe Wilson Road and converging back with the Common Alignment.

Alternative 2

Alternative 2 (4.0 miles), the south-central alternative, diverges from the Common Alignment at Tar Road heading east, then immediately turns northeast; however, this alignment follows a straighter path between Tar Road and S. Joe Wilson Road. After S. Joe Wilson Road, the alternative continues in a northeast direction before converging back with the Common Alignment.

Alternative 3

Alternative 3 (4.0 miles), the southernmost alternative, diverges from the Common Alignment at Tar Road and keeps east, centered on existing Knight Street. At the end of Knight Street, the alternative shifts northeast before crossing S. Joe Wilson Road and converging back with the Common Alignment.

Alternative 4

Alternative 4 (4.1 miles), the northernmost alternative, diverges from the Common Alignment at Tar Road, heading northeast, then continues for approximately 2 miles before turning east and crossing S. Joe Wilson Road. After S. Joe Wilson Road, the alignment continues east, north of and parallel to Bear Creek Road before converging back with the Common Alignment approximately 0.4 miles east of S. Duncanville Road.

Each of the four Build Alternatives would construct intersections with four major crossroads: Tar Road, future Clark Road, S. Joe Wilson Road, S. Duncanville Road.

Modifications

As a result of prior public and stakeholder comments, four modifications are also being evaluated. Modifications A and B to the Common Alignment were developed to reduce potential residential impacts at Lindell Estates. Modification C was developed to optimize the intersection with S. Westmoreland Road and reduce potential residential impacts to homes on Shady Meadows Lane. Modification D was developed along Alternative 3 to reduce potential residential and environmental impacts near Knight Street.

Modification A

Modification A begins approximately 0.27 miles west of Hampton Road where it diverges slightly to the south of the Common Alignment, continuing east, before crossing back over the Common Alignment approximately 0.36 miles east of Hampton Road. At this point, Modification A travels northeast of the Common Alignment for a distance of 1.5 miles before converging back with the Common Alignment. At its furthest point, the centerline of Modification A is 0.15 miles north of the centerline of the Common Alignment.

Modification B

Modification B follows the same path as Modification A; however, it does not extend as far north of the Common Alignment. At its furthest point, the centerline of Modification B is 0.07 miles north of the of the centerline of the Common Alignment.

Modification C

Modification C begins approximately 0.86 miles west of S. Westmoreland Road. At this point, Modification C diverges south of the Common Alignment and then continues east past S. Westmoreland Road for a distance of 0.19 miles before converging back with the Common Alignment.

Modification D

Modification D begins approximately 0.43 miles west of Tar Road. At this point, it begins to shift north of Alternative 3. Modification D continues east, crossing Tar Road and running parallel with Knight Street. At its furthest point, the centerline of Modification D is approximately 300 feet north of the centerline of Alternative 3. After Knight Street, Modification D turns northeast before converging back with Alternative 3 approximately 0.04 miles west of S. Joe Wilson Road.

No Build Alternative

The No-Build Alternative represents the case in which Loop 9 would not be built. The No-Build Alternative would include all existing conditions and the construction of all projects already programmed and funded by TxDOT, Ellis County, Dallas County, City of Cedar Hill, City of Glenn Heights, City of Ovilla, City of Red Oak, Dallas Area Rapid Transit (DART), or Federal entities by the year 2045. These programmed and funded improvements are included in the approved Metropolitan Transportation Plan (MTP) *Mobility 2045*, Capital Improvement Plans for the City of Cedar Hill, City of Glenn Heights, City of Red Oak and City of Ovilla, and the 2019-2022 Transportation Improvement Program (TIP).

This noise analysis will evaluate the roadways in the Phase 2 configuration. Four alternative locations and four modifications for the roadway would be evaluated for this project.

Introduction

This analysis was accomplished in accordance with TxDOT's (FHWA-approved) Traffic Noise Policy (2019).

Sound from highway traffic is generated primarily from a vehicle's tires, engine and exhaust. It ly measured in decibels and is expressed as "dB."

Sound occurs over a wide range of frequencies. However, not all frequencies are detectable by the human ear; therefore, an adjustment is made to the high and low frequencies to approximate the way an average person hears traffic sounds. This adjustment is called A-weighting and is expressed as "dB(A)."

Also, because traffic sound levels are never constant due to the changing number, type and speed of vehicles, a single value is used to represent the average or equivalent sound level and is expressed as "Leq."

The traffic noise analysis typically includes the following elements:

- Identification of land use activity areas that might be impacted by traffic noise.
- Determination of existing noise levels.
- Prediction of future noise levels.
- Identification of possible noise impacts.
- Consideration and evaluation of measures to reduce noise impacts.

The FHWA has established the following Noise Abatement Criteria (NAC) for various land use activity areas that are used as one of two means to determine when a traffic noise impact would occur.

Table 1. FHWA Noise Abatement Criteria (NAC)

Activity Category	FHWA (dB(A) Leq)	Description of Land Use Activity Areas
A	57 (exterior)	Lands on which serenity and quiet are of extra-ordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (exterior)	Residential
C	67 (exterior)	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.

Activity Category	FHWA (dB(A) Leq)	Description of Land Use Activity Areas
D	52 (interior)	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	72 (exterior)	Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in A-D or F.
F	--	Agricultural, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G	--	Undeveloped lands that are not permitted.

Source: *Guidelines for Analysis and Abatement of Roadway Traffic Noise* (TxDOT 2019).

A noise impact occurs when either the absolute or relative criterion is met:

Absolute criterion - The predicted noise level at a receptor approaches, equals, or exceeds the NAC. "Approach" is defined as one dB(A) below the NAC. For example: a noise impact would occur at a Category B residence if the noise level is predicted to be 66 dB(A) or above.

Relative criterion - The predicted noise level substantially exceeds the existing noise level at a receptor even though the predicted noise level does not approach, equal or exceed the NAC. “Substantially exceeds” is defined as more than 10 dB(A). For example: a noise impact would occur at a Category B residence if the existing level is 54 dB(A) and the predicted level is 65 dB(A).

When a traffic noise impact occurs, noise abatement measures must be considered. A noise abatement measure is any positive action taken to reduce the impact of traffic noise on an activity area.

Analysis

The FHWA traffic noise modeling software (TNM 2.5) was used to calculate predicted traffic noise levels. The model primarily considers the number, type and speed of vehicles; highway alignment and grade; cuts, fills and natural berms; surrounding terrain features; and the locations of activity areas likely to be impacted by the associated traffic noise.

The approved traffic data used in this analysis is included in **Attachment B**.

The proposed project is a new location roadway; therefore, existing noise levels were measured using a Quest Sound Pro DL Type 2 sound level meter rather than calculated using the TNM model. In consultation with TxDOT-Dallas District and TxDOT Environmental Affairs Division, ten ambient noise monitoring sites were chosen to be geographically distributed and characteristic of the existing ambient noise levels in the vicinity of the proposed alternatives. See **Attachment C** for additional detail regarding the field collection of ambient noise levels.

Four preliminary Build Alternatives, and four modifications to these alternatives as described above, are being evaluated at an equal level. At the western and eastern ends of the project, all four alternatives follow a Common Alignment. Four separate models were prepared. Noise measurement locations were selected to represent receiver locations used in the models.

Validation

A validation study was not performed in order to ensure that traffic noise is the main source of noise and to verify that the existing model accurately predicts existing traffic noise based on current conditions. Model validation compares field-collected sound level measurements to traffic noise levels calculated in an existing condition model that used field-collected traffic parameters. Loop 9 is a new location project and field collected noise measurements were used instead of the results of a TNM model of the existing condition. Differences between the measured and calculated levels for this project were used to determine impacts. Because no existing condition TNM model was used, validation of the noise model was not performed. Data from the field measurements is included in is included in **Attachment C.**

Results

Existing traffic noise levels were measured, and predicted traffic noise levels were modeled at receiver locations for all four alternatives and four modifications (**Table 2,** and **Attachment A, Figure 2**) that represent the land use activity areas adjacent to the proposed project that might be impacted by traffic noise and potentially benefit from feasible and reasonable noise abatement. In areas where the modeled receiver was greater than 500 feet from the proposed ROW, the modeled noise levels for the proposed conditions may result in atypical reduction in noise levels, such as a reduction in noise levels between the existing and proposed conditions. Atypical results are noted in the **Table 2**. For receivers that would be displaced and would fall within the proposed ROW of one or more of the alternatives, no noise level was provided for the proposed condition.

Data for all 93 representative receivers is presented in one table, **Table 2**, for ease of comparison between the four alternatives and four modifications. Each alternative and modification is illustrated in its own set of maps in **Figure 2.**

Table2: Traffic Noise Results by Alternative Alignment Loop 9, Segment A Alternative 1

Representative Receiver[1]	NAC Category	NAC Level	Existing[2] (2020) dB(A) Leq	Alternative 1			Alternative 1 Mod A			Alternative 1 Mod B			Alternative 1 Mod C			Alternative 1 Mod A & C			Alternative 1 Mod B & C		
				Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact
R1 - Residential	B	67	48	59	11	**Yes**	59	11	**Yes**	59	11	**Yes**	59	11	**Yes**	59	11	**Yes**	59	11	**Yes**
R2 - Residential	B	67	48	53	5	No	53	5	No	53	5	No	53	5	No	53	5	No	53	5	No
R3 - Residential	B	67	48	52	4	No	52	4	No	52	4	No	52	4	No	52	4	No	52	4	No
R4 - Residential	B	67	48	65	17	**Yes**	65	17	**Yes**	65	17	**Yes**	65	17	**Yes**	65	17	**Yes**	65	17	**Yes**
R5 - Residential	B	67	48	59	11	**Yes**	59	11	**Yes**	59	11	**Yes**	59	11	**Yes**	59	11	**Yes**	59	11	**Yes**
R6 - Residential	B	67	48	57	9	No	57	9	No	57	9	No	57	9	No	57	9	No	57	9	No
R7 - Residential	B	67	48	58	10	No	58	10	No	58	10	No	58	10	No	58	10	No	58	10	No
R8 - Residential	B	67	48	54	6	No	54	6	No	54	6	No	54	6	No	54	6	No	54	6	No
R9 - Residential	B	67	48	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R10 - Residential	B	67	48	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R11 - Residential	B	67	48	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R12 - Residential	B	67	48	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R13 - Residential	B	67	48	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R14 - Residential	B	67	48	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R15 - Residential	B	67	48	48	0	No	48	0	No	48	0	No	48	0	No	48	0	No	48	0	No
R16 - Residential	B	67	48	49	1	No	49	1	No	49	1	No	49	1	No	49	1	No	49	1	No
R17 - Residential	B	67	48	49†	1	No	49†	1	No	49†	1	No	49†	1	No	49†	1	No	49†	1	No
R18- Residential	B	67	47	51	4	No	51	4	No	51	4	No	51	4	No	51	4	No	51	4	No
R19 - Residential	B	67	53	59	6	No	59	6	No	59	6	No	59	6	No	59	6	No	59	6	No
R20 - Residential	B	67	53	61	8	No	61	8	No	61	8	No	61	8	No	61	8	No	61	8	No
R21 - Residential	B	67	53	54†	1	No	54†	1	No	54†	1	No	54†	1	No	54†	1	No	54†	1	No
R22 - Residential	B	67	53	54†	1	No	54†	1	No	54†	1	No	54†	1	No	54†	1	No	54†	1	No
R23 - Residential	B	67	53	56	3	No	56	3	No	56	3	No	56	3	No	56	3	No	56	3	No
R24 - Residential	B	67	47	47	0	No	47	0	No	47	0	No	47	0	No	47	0	No	47	0	No
R25 - Residential	B	67	47	50	3	No	50	3	No	50	3	No	50	3	No	50	3	No	50	3	No
R26 - Residential	B	67	47	54	7	No	54	7	No	54	7	No	54	7	No	54	7	No	54	7	No
R27 - Residential	B	67	47	51	4	No	51	4	No	51	4	No	51	4	No	51	4	No	51	4	No
R28 - Residential	B	67	47	51	4	No	51	4	No	51	4	No	51	4	No	51	4	No	51	4	No
R29 - Residential	B	67	47	49	2	No	49	2	No	49	2	No	49	2	No	49	2	No	49	2	No
R30 - Residential	B	67	53	54†	1	No	54†	1	No	54†	1	No	54†	1	No	54†	1	No	54†	1	No

Table2: Traffic Noise Results by Alternative Alignment Loop 9, Segment A Alternative 1 (Continued)

Representative Receiver[1]	NAC Category	NAC Level	Existing[2] (2020) dB(A) Leq	Alternative 1			Alternative 1 Mod A			Alternative 1 Mod B			Alternative 1 Mod C			Alternative 1 Mod A & C			Alternative 1 Mod B & C		
				Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact
R31 - Residential	B	67	53	54†	1	No	54†	2	No	54†	3	No	54†	4	No	54†	5	No	54†	6	No
R32 - Residential	B	67	53	54†	1	No	54†	1	No	54†	1	No	54†	1	No	54†	1	No	54†	1	No
R33 - Residential	B	67	53	54†	1	No	54†	1	No	54†	1	No	54†	1	No	54†	1	No	54†	1	No
R34 - Residential	B	67	53	55†	2	No	55†	2	No	55†	2	No	55†	2	No	55†	2	No	55†	2	No
R35 - Residential	B	67	53	54	1	No	54	1	No	54	1	No	54	1	No	54	1	No	54	1	No
R36 - Residential	B	67	53	60	7	No	60	7	No	60	7	No	60	7	No	60	7	No	60	7	No
R37 - Residential	B	67	53	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R38 - Residential	B	67	53	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R39 - Residential	B	67	53	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R40 - Residential	B	67	53	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R41 - Residential	B	67	47	60	13	**Yes**	60	13	**Yes**	60	13	**Yes**	60	13	**Yes**	60	13	**Yes**	60	13	**Yes**
R42 - Residential	B	67	47	64	17	**Yes**	64	17	**Yes**	64	17	**Yes**	64	17	**Yes**	64	17	**Yes**	64	17	**Yes**
R43 - Residential	B	67	47	65	18	**Yes**	65	18	**Yes**	65	18	**Yes**	65	18	**Yes**	65	18	**Yes**	65	18	**Yes**
R44 - Residential	B	67	47	58	11	**Yes**	58	11	**Yes**	58	11	**Yes**	58	11	**Yes**	58	11	**Yes**	58	11	**Yes**
R45 - Equestrian	C	67	47	55	8	No	55	8	No	55	8	No	55	8	No	55	8	No	55	8	No
R46 - Residential	B	67	58	60†	2	No	60†	2	No	60†	2	No	60†	2	No	60†	2	No	60†	2	No
R47 - Residential	B	67	58	61†	3	No	61†	3	No	61†	3	No	61†	3	No	61†	3	No	61†	3	No
R48 - Residential	B	67	58	60†	2	No	60†	2	No	60†	2	No	60†	2	No	60†	2	No	60†	2	No
R49 - Residential	B	67	53	62	9	No	62	9	No	62	9	No	62	9	No	62	9	No	62	9	No
R50 - Residential	B	67	53	54	1	No	54	1	No	54	1	No	54	1	No	54	1	No	54	1	No
R51 - Residential	B	67	53	55†	2	No	55†	2	No	55†	2	No	53†	0	No	53†	0	No	53†	0	No
R52 - Residential	B	67	53	55†	2	No	55†	2	No	55†	2	No	54†	1	No	54†	1	No	54†	1	No
R53 - Residential	B	67	53	55†	2	No	55†	2	No	55†	2	No	54†	1	No	54†	1	No	54†	1	No
R54 - Residential	B	67	53	60	7	No	60	7	No	60	7	No	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R55 - Residential	B	67	53	62	9	No	62	9	No	62	9	No	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R56 - Residential	B	67	53	55	2	No	55	2	No	55	2	No	56	3	No	56	3	No	56	3	No
R57 - Residential	B	67	45	55	10	No	55	10	No	55	10	No	54	9	No	54	9	No	54	9	No
R58 - Residential	B	67	45	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	64	19	**Yes**	64	19	**Yes**	64	19	**Yes**
R59 - Residential	B	67	45	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	63	18	**Yes**	63	18	**Yes**	63	18	**Yes**
R60 - Residential	B	67	45	66	21	**Yes**	66	21	**Yes**	66	21	**Yes**	60	15	**Yes**	60	15	**Yes**	60	15	**Yes**

Table2: Traffic Noise Results by Alternative Alignment Loop 9, Segment A Alternative 1 (Continued)

Representative Receiver[1]	NAC Category	NAC Level	Existing[2] (2020) dB(A) Leq	Alternative 1			Alternative 1 Mod A			Alternative 1 Mod B			Alternative 1 Mod C			Alternative 1 Mod A & C			Alternative 1 Mod B & C		
				Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact
R61 - Recreation	B	67	45	53	8	No	53	8	No	53	8	No	50	5	No	50	5	No	50	5	No
R62 - Residential	C	67	45	65	20	**Yes**	64	19	**Yes**	63	18	**Yes**	65	20	**Yes**	64	19	**Yes**	63	18	**Yes**
R63 - Residential	B	67	44	56	12	**Yes**	59	15	**Yes**	55	11	**Yes**	56	12	**Yes**	59	15	**Yes**	55	11	**Yes**
R64 - Residential	B	67	44	63	19	**Yes**	65	21	**Yes**	65	21	**Yes**	63	19	**Yes**	65	21	**Yes**	65	21	**Yes**
R65 - Residential	B	67	48	60	12	**Yes**	61	13	**Yes**	61	13	**Yes**	60	12	**Yes**	61	13	**Yes**	61	13	**Yes**
R66 - Residential	B	67	48	60	12	**Yes**	62	14	**Yes**	61	13	**Yes**	60	12	**Yes**	62	14	**Yes**	61	13	**Yes**
R67 - Residential	B	67	48	56	8	No	61	13	**Yes**	61	13	**Yes**	56	8	No	61	13	**Yes**	61	13	**Yes**
R68 - Residential	B	67	48	62	14	**Yes**	59	11	**Yes**	59	11	**Yes**	62	14	**Yes**	59	11	**Yes**	59	11	**Yes**
R69 - Residential	B	67	48	69	21	**Yes**	63	15	**Yes**	63	15	**Yes**	69	21	**Yes**	63	15	**Yes**	63	15	**Yes**
R70 - Residential	B	67	48	67	19	**Yes**	63	15	**Yes**	62	14	**Yes**	67	19	**Yes**	63	15	**Yes**	62	14	**Yes**
R71 - Residential	B	67	48	67	19	**Yes**	62	14	**Yes**	62	14	**Yes**	67	19	**Yes**	62	14	**Yes**	62	14	**Yes**
R72 - Residential	B	67	48	65	17	**Yes**	60	12	**Yes**	60	12	**Yes**	65	17	**Yes**	60	12	**Yes**	60	12	**Yes**
R73 - Residential	B	67	48	64	16	**Yes**	60	12	**Yes**	60	12	**Yes**	64	16	**Yes**	60	12	**Yes**	60	12	**Yes**
R74 - Residential	B	67	48	66	18	**Yes**	65	17	**Yes**	65	17	**Yes**	66	18	**Yes**	65	17	**Yes**	65	17	**Yes**
R75 - Residential	B	67	46	61	15	**Yes**	55	9	No	55	9	No	61	15	**Yes**	55	9	No	55	9	No
R76 - Residential	B	67	46	63	17	**Yes**	50	4	No	51	5	No	63	17	**Yes**	50	4	No	51	5	No
R77 - Residential	B	67	46	66	20	**Yes**	49	3	No	51	5	No	66	20	**Yes**	49	3	No	51	5	No
R78 - Residential	B	67	46	N/A*	N/A*	N/A*	67	21	**Yes**	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	67	21	**Yes**	N/A*	N/A*	N/A*
R79 - Residential	B	67	46	N/A*	N/A*	N/A*	60	14	**Yes**	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	60	14	**Yes**	N/A*	N/A*	N/A*
R80 - Residential	B	67	46	N/A*	N/A*	N/A*	57	11	**Yes**	69	23	**Yes**	N/A*	N/A*	N/A*	57	11	**Yes**	69	23	**Yes**
R81 - Residential	B	67	46	N/A*	N/A*	N/A*	55	9	No	69	23	**Yes**	N/A*	N/A*	N/A*	55	9	No	69	23	**Yes**
R82 - Residential	B	67	46	N/A*	N/A*	N/A*	55	9	No	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	55	9	No	N/A*	N/A*	N/A*
R83 - Residential	B	67	46	60	14	**Yes**	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	60	14	**Yes**	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R84 - Residential	B	67	46	63	17	**Yes**	64	18	**Yes**	53	7	No	63	17	**Yes**	64	18	**Yes**	53	7	No
R85 - Residential	B	67	46	68	22	**Yes**	50	4	No	54	8	No	68	22	**Yes**	50	4	No	54	8	No
R86- Residential	B	67	46	67	21	**Yes**	50	4	No	55	9	No	67	21	**Yes**	50	4	No	55	9	No
R87 - Residential	B	67	46	69	23	**Yes**	50	4	No	55	9	No	69	23	**Yes**	50	4	No	55	9	No
R88 - Residential	B	67	46	62	16	**Yes**	51	5	No	55	9	No	62	16	**Yes**	51	5	No	55	9	No
R89 - Residential	B	67	46	63	17	**Yes**	52	6	No	55	9	No	63	17	**Yes**	52	6	No	55	9	No
R90 - Residential	B	67	46	61	15	**Yes**	51	5	No	55	9	No	61	15	**Yes**	51	5	No	55	9	No

Table2: Traffic Noise Results by Alternative Alignment Loop 9, Segment A Alternative 1 (Continued)

Representative Receiver[1]	NAC Category	NAC Level	Existing[2] (2020) dB(A) Leq	Alternative 1			Alternative 1 Mod A			Alternative 1 Mod B			Alternative 1 Mod C			Alternative 1 Mod A & C			Alternative 1 Mod B & C		
				Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact
R91 - Residential	B	67	46	61	15	**Yes**	53	7	No	57	11	**Yes**	61	15	**Yes**	53	7	No	57	11	**Yes**
R92 - Residential	B	67	46	60	14	**Yes**	54	8	No	57	11	**Yes**	60	14	**Yes**	54	8	No	57	11	**Yes**
R93 - Residential	B	67	46	59	13	**Yes**	58	12	**Yes**	59	13	**Yes**	59	13	**Yes**	58	12	**Yes**	59	13	**Yes**

[1] Bold receiver number indicates an absolute or relative criterion potential noise impact.

[2] Existing noise levels were determined by measurements of a sound level meter at TxDOT approved locations near the reciver locations in the models.

* Receivers located in the ROW of the proposed alternative. Receiver would be displaced and no noise results are reported.

† Decibel addition was used for predicted noise levels for receivers with modeled results lower than the measured noise levels.

Table 2: Traffic Noise Results by Alternative Alignment Loop 9, Segment A Alternative 2

Representative Receiver[1]	NAC Category	NAC Level	Existing[2] (2020) dB(A) Leq	Alternative 2			Alternative 2 Mod A			Alternative 2 Mod B			Alternative 2 Mod C			Alternative 2 Mod A & C			Alternative 2 Mod B & C		
				Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact
R1 - Residential	B	67	48	59	11	**Yes**	59	11	**Yes**	59	11	**Yes**	59	11	**Yes**	59	11	**Yes**	59	11	**Yes**
R2 - Residential	B	67	48	53	5	No	53	5	No	53	5	No	53	5	No	53	5	No	53	5	No
R3 - Residential	B	67	48	52	4	No	52	4	No	52	4	No	52	4	No	52	4	No	52	4	No
R4 - Residential	B	67	48	65	17	**Yes**	65	17	**Yes**	65	17	**Yes**	65	17	**Yes**	65	17	**Yes**	65	17	**Yes**
R5 - Residential	B	67	48	59	11	**Yes**	59	11	**Yes**	59	11	**Yes**	59	11	**Yes**	59	11	**Yes**	59	11	**Yes**
R6 - Residential	B	67	48	58	10	No	58	10	No	58	10	No	58	10	No	58	10	No	58	10	No
R7 - Residential	B	67	48	58	10	No	58	10	No	58	10	No	58	10	No	58	10	No	58	10	No
R8 - Residential	B	67	48	54	6	No	54	6	No	54	6	No	54	6	No	54	6	No	54	6	No
R9 - Residential	B	67	48	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R10 - Residential	B	67	48	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R11 - Residential	B	67	48	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R12 - Residential	B	67	48	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R13 - Residential	B	67	48	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R14 - Residential	B	67	48	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R15 - Residential	B	67	48	51†	3	No	51†	3	No	51†	3	No	51†	3	No	51†	3	No	51†	3	No
R16 - Residential	B	67	48	53	5	No	53	5	No	53	5	No	53	5	No	53	5	No	53	5	No
R17 - Residential	B	67	48	49†	1	No	49†	1	No	49†	1	No	49†	1	No	49†	1	No	49†	1	No
R18- Residential	B	67	47	53	6	No	53	6	No	53	6	No	53	6	No	53	6	No	53	6	No
R19 - Residential	B	67	53	57	4	No	57	4	No	57	4	No	57	4	No	57	4	No	57	4	No
R20 - Residential	B	67	53	61	8	No	61	8	No	61	8	No	61	8	No	61	8	No	61	8	No
R21 - Residential	B	67	53	54†	1	No	54†	1	No	54†	1	No	54†	1	No	54†	1	No	54†	1	No
R22 - Residential	B	67	53	54†	1	No	54†	1	No	54†	1	No	54†	1	No	54†	1	No	54†	1	No
R23 - Residential	B	67	53	56	3	No	56	3	No	56	3	No	56	3	No	56	3	No	56	3	No
R24 - Residential	B	67	47	48	1	No	48	1	No	48	1	No	48	1	No	48	1	No	48	1	No
R25 - Residential	B	67	47	51	4	No	51	4	No	51	4	No	51	4	No	51	4	No	51	4	No
R26 - Residential	B	67	47	54	7	No	54	7	No	54	7	No	54	7	No	54	7	No	54	7	No
R27 - Residential	B	67	47	51	4	No	51	4	No	51	4	No	51	4	No	51	4	No	51	4	No
R28 - Residential	B	67	47	51	4	No	51	4	No	51	4	No	51	4	No	51	4	No	51	4	No
R29 - Residential	B	67	47	49	2	No	49	2	No	49	2	No	49	2	No	49	2	No	49	2	No
R30 - Residential	B	67	53	54†	1	No	54†	1	No	54†	1	No	54†	1	No	54†	1	No	54†	1	No

Table 2: Traffic Noise Results by Alternative Alignment Loop 9, Segment A Alternative 2 (Continued)

Representative Receiver[1]	NAC Category	NAC Level	Existing[2] (2020) dB(A) Leq	Alternative 2			Alternative 2 Mod A			Alternative 2 Mod B			Alternative 2 Mod C			Alternative 2 Mod A & C			Alternative 2 Mod B & C		
				Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact
R31 - Residential	B	67	53	54†	1	No	54†	1	No	54†	1	No	54†	1	No	54†	1	No	54†	1	No
R32 - Residential	B	67	53	54†	1	No	54†	1	No	54†	1	No	54†	1	No	54†	1	No	54†	1	No
R33 - Residential	B	67	53	54†	1	No	54†	1	No	54†	1	No	54†	1	No	54†	1	No	54†	1	No
R34 - Residential	B	67	53	55†	2	No	55†	2	No	55†	2	No	55†	2	No	55†	2	No	55†	2	No
R35 - Residential	B	67	53	53	0	No	53	0	No	53	0	No	53	0	No	53	0	No	53	0	No
R36 - Residential	B	67	53	60	7	No	60	7	No	60	7	No	60	7	No	60	7	No	60	7	No
R37 - Residential	B	67	53	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R38 - Residential	B	67	53	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R39 - Residential	B	67	53	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R40 - Residential	B	67	53	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R41 - Residential	B	67	47	60	13	**Yes**	60	13	**Yes**	60	13	**Yes**	60	13	**Yes**	60	13	**Yes**	60	13	**Yes**
R42 - Residential	B	67	47	64	17	**Yes**	64	17	**Yes**	64	17	**Yes**	64	17	**Yes**	64	17	**Yes**	64	17	**Yes**
R43 - Residential	B	67	47	65	18	**Yes**	65	18	**Yes**	65	18	**Yes**	65	18	**Yes**	65	18	**Yes**	65	18	**Yes**
R44 - Residential	B	67	47	58	11	**Yes**	58	11	**Yes**	58	11	**Yes**	58	11	**Yes**	58	11	**Yes**	58	11	**Yes**
R45 - Equestrian	C	67	47	55	8	No	55	8	No	55	8	No	55	8	No	55	8	No	55	8	No
R46 - Residential	B	67	58	60†	2	No	60†	2	No	60†	2	No	60†	2	No	60†	2	No	60†	2	No
R47 - Residential	B	67	58	61†	3	No	61†	3	No	61†	3	No	61†	3	No	61†	3	No	61†	3	No
R48 - Residential	B	67	58	60†	2	No	60†	2	No	60†	2	No	60†	2	No	60†	2	No	60†	2	No
R49 - Residential	B	67	53	62	9	No	62	9	No	62	9	No	62	9	No	62	9	No	62	9	No
R50 - Residential	B	67	53	54	1	No	54	1	No	54	1	No	54	1	No	54	1	No	54	1	No
R51 - Residential	B	67	53	55†	2	No	55†	2	No	55†	2	No	53†	0	No	53†	0	No	53†	0	No
R52 - Residential	B	67	53	55†	2	No	55†	2	No	55†	2	No	54†	1	No	54†	1	No	54†	1	No
R53 - Residential	B	67	53	55†	2	No	55†	2	No	55†	2	No	54†	1	No	54†	1	No	54†	1	No
R54 - Residential	B	67	53	55	2	No	55	2	No	55	2	No	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R55 - Residential	B	67	53	60	7	No	60	7	No	60	7	No	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R56 - Residential	B	67	53	55	2	No	55	2	No	55	2	No	56	3	No	56	3	No	56	3	No
R57 - Residential	B	67	45	62	17	**Yes**	62	17	**Yes**	62	17	**Yes**	54	9	No	54	9	No	54	9	No
R58 - Residential	B	67	45	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	64	19	**Yes**	64	19	**Yes**	64	19	**Yes**
R59 - Residential	B	67	45	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	63	18	**Yes**	63	18	**Yes**	63	18	**Yes**
R60 - Residential	B	67	45	66	21	**Yes**	66	21	**Yes**	66	21	**Yes**	60	15	**Yes**	60	15	**Yes**	60	15	**Yes**

Table 2: Traffic Noise Results by Alternative Alignment Loop 9, Segment A Alternative 2 (Continued)

Representative Receiver[1]	NAC Category	NAC Level	Existing[2] (2020) dB(A) Leq	Alternative 2			Alternative 2 Mod A			Alternative 2 Mod B			Alternative 2 Mod C			Alternative 2 Mod A & C			Alternative 2 Mod B & C		
				Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact
R61 - Recreation	B	67	45	53	8	No	53	8	No	53	8	No	50	5	No	50	5	No	50	5	No
R62 - Residential	C	67	45	65	20	**Yes**	64	19	**Yes**	63	18	**Yes**	65	20	**Yes**	64	19	**Yes**	63	18	**Yes**
R63 - Residential	B	67	44	56	12	**Yes**	59	15	**Yes**	55	11	**Yes**	56	12	**Yes**	59	15	**Yes**	55	11	**Yes**
R64 - Residential	B	67	44	63	19	**Yes**	65	21	**Yes**	65	21	**Yes**	63	19	**Yes**	65	21	**Yes**	65	21	**Yes**
R65 - Residential	B	67	48	60	12	**Yes**	61	13	**Yes**	61	13	**Yes**	60	12	**Yes**	61	13	**Yes**	61	13	**Yes**
R66 - Residential	B	67	48	60	12	**Yes**	62	14	**Yes**	61	13	**Yes**	60	12	**Yes**	62	14	**Yes**	61	13	**Yes**
R67 - Residential	B	67	48	56	8	No	61	13	**Yes**	61	13	**Yes**	56	8	No	61	13	**Yes**	61	13	**Yes**
R68 - Residential	B	67	48	62	14	**Yes**	59	11	**Yes**	59	11	**Yes**	62	14	**Yes**	59	11	**Yes**	59	11	**Yes**
R69 - Residential	B	67	48	69	21	**Yes**	63	15	**Yes**	63	15	**Yes**	69	21	**Yes**	63	15	**Yes**	63	15	**Yes**
R70 - Residential	B	67	48	67	19	**Yes**	63	15	**Yes**	62	14	**Yes**	67	19	**Yes**	63	15	**Yes**	62	14	**Yes**
R71 - Residential	B	67	48	67	19	**Yes**	62	14	**Yes**	62	14	**Yes**	67	19	**Yes**	62	14	**Yes**	62	14	**Yes**
R72 - Residential	B	67	48	65	17	**Yes**	60	12	**Yes**	60	12	**Yes**	65	17	**Yes**	60	12	**Yes**	60	12	**Yes**
R73 - Residential	B	67	48	64	16	**Yes**	60	12	**Yes**	60	12	**Yes**	64	16	**Yes**	60	12	**Yes**	60	12	**Yes**
R74 - Residential	B	67	48	66	18	**Yes**	65	17	**Yes**	65	17	**Yes**	66	18	**Yes**	65	17	**Yes**	65	17	**Yes**
R75 - Residential	B	67	46	61	15	**Yes**	55	9	No	55	9	No	61	15	**Yes**	55	9	No	55	9	No
R76 - Residential	B	67	46	63	17	**Yes**	50	4	No	51	5	No	63	17	**Yes**	50	4	No	51	5	No
R77 - Residential	B	67	46	66	20	**Yes**	49	3	No	51	5	No	66	20	**Yes**	49	3	No	51	5	No
R78 - Residential	B	67	46	N/A*	N/A*	N/A*	67	21	**Yes**	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	67	21	**Yes**	N/A*	N/A*	N/A*
R79 - Residential	B	67	46	N/A*	N/A*	N/A*	60	14	**Yes**	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	60	14	**Yes**	N/A*	N/A*	N/A*
R80 - Residential	B	67	46	N/A*	N/A*	N/A*	57	11	**Yes**	69	23	**Yes**	N/A*	N/A*	N/A*	57	11	**Yes**	69	23	**Yes**
R81 - Residential	B	67	46	N/A*	N/A*	N/A*	55	9	No	69	23	**Yes**	N/A*	N/A*	N/A*	55	9	No	69	23	**Yes**
R82 - Residential	B	67	46	N/A*	N/A*	N/A*	55	9	No	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	55	9	No	N/A*	N/A*	N/A*
R83 - Residential	B	67	46	60	14	**Yes**	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	60	14	**Yes**	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R84 - Residential	B	67	46	63	17	**Yes**	64	18	**Yes**	53	7	No	63	17	**Yes**	64	18	**Yes**	53	7	No
R85 - Residential	B	67	46	68	22	**Yes**	50	4	No	54	8	No	68	22	**Yes**	50	4	No	54	8	No
R86- Residential	B	67	46	67	21	**Yes**	50	4	No	55	9	No	67	21	**Yes**	50	4	No	55	9	No
R87 - Residential	B	67	46	69	23	**Yes**	50	4	No	55	9	No	69	23	**Yes**	50	4	No	55	9	No
R88 - Residential	B	67	46	62	16	**Yes**	51	5	No	55	9	No	62	16	**Yes**	51	5	No	55	9	No
R89 - Residential	B	67	46	63	17	**Yes**	52	6	No	55	9	No	63	17	**Yes**	52	6	No	55	9	No
R90 - Residential	B	67	46	61	15	**Yes**	51	5	No	55	9	No	61	15	**Yes**	51	5	No	55	9	No

Table 2: Traffic Noise Results by Alternative Alignment Loop 9, Segment A Alternative 2 (Continued)

Representative Receiver[1]	NAC Category	NAC Level	Existing[2] (2020) dB(A) Leq	Alternative 2			Alternative 2 Mod A			Alternative 2 Mod B			Alternative 2 Mod C			Alternative 2 Mod A & C			Alternative 2 Mod B & C		
				Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact
R91 - Residential	B	67	46	61	15	**Yes**	53	7	No	57	11	**Yes**	61	15	**Yes**	53	7	No	57	11	**Yes**
R92 - Residential	B	67	46	60	14	**Yes**	54	8	No	57	11	**Yes**	60	14	**Yes**	54	8	No	57	11	**Yes**
R93 - Residential	B	67	46	59	13	**Yes**	58	12	**Yes**	59	13	**Yes**	59	13	**Yes**	58	12	**Yes**	59	13	**Yes**

[1] Bold receiver number indicates an absolute or relative criterion potential noise impact.

[2] Existing noise levels were determined by measurements of a sound level meter at TxDOT approved locations near the reciver locations in the models.

* Receivers located in the ROW of the proposed alternative. Receiver would be displaced and no noise results are reported.

† Decibel addition was used for predicted noise levels for receivers with modeled results lower than the measured noise levels.

Table 2: Traffic Noise Results by Alternative Alignment Loop 9, Segment A Alternative 3

Representative Receiver[1]	NAC Category	NAC Level	Existing[2] (2020) dB(A) Leq	Alternative 3			Alternative 3 Mod A			Alternative 3 Mod B			Alternative 3 Mod C			Alternative 3 Mod D			Alternative 3 Mod A & C		
				Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact
R1 - Residential	B	67	48	59	11	**Yes**	59	11	**Yes**	59	11	**Yes**	59	11	**Yes**	59	11	**Yes**	59	11	**Yes**
R2 - Residential	B	67	48	53	5	No	53	5	No	53	5	No	53	5	No	54	6	No	53	5	No
R3 - Residential	B	67	48	52	4	No	52	4	No	52	4	No	52	4	No	54	6	No	52	4	No
R4 - Residential	B	67	48	65	17	**Yes**	65	17	**Yes**	65	17	**Yes**	65	17	**Yes**	N/A*	N/A*	N/A*	65	17	**Yes**
R5 - Residential	B	67	48	65	17	**Yes**	65	17	**Yes**	65	17	**Yes**	65	17	**Yes**	56	8	No	65	17	**Yes**
R6 - Residential	B	67	48	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	59	11	**Yes**	N/A*	N/A*	N/A*
R7 - Residential	B	67	48	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	60	12	**Yes**	N/A*	N/A*	N/A*
R8 - Residential	B	67	48	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	61	13	**Yes**	N/A*	N/A*	N/A*
R9 - Residential	B	67	48	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R10 - Residential	B	67	48	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R11 - Residential	B	67	48	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R12 - Residential	B	67	48	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R13 - Residential	B	67	48	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R14 - Residential	B	67	48	64	16	**Yes**	64	16	**Yes**	64	16	**Yes**	64	16	**Yes**	N/A*	N/A*	N/A*	64	16	**Yes**
R15 - Residential	B	67	48	49†	1	No	49†	1	No	49†	1	No	49†	1	No	50†	2	No	49†	1	No
R16 - Residential	B	67	48	60	12	**Yes**	60	12	**Yes**	60	12	**Yes**	60	12	**Yes**	N/A*	N/A*	N/A*	60	12	**Yes**
R17 - Residential	B	67	48	48†	0	No	48†	0	No	48†	0	No	48†	0	No	49†	1	No	48†	0	No
R18- Residential	B	67	47	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R19 - Residential	B	67	53	57	4	No	57	4	No	57	4	No	57	4	No	55	2	No	57	4	No
R20 - Residential	B	67	53	60	7	No	60	7	No	60	7	No	60	7	No	60	7	No	60	7	No
R21 - Residential	B	67	53	54†	1	No	54†	1	No	54†	1	No	54†	1	No	53†	0	No	54†	1	No
R22 - Residential	B	67	53	53†	0	No	53†	0	No	53†	0	No	53†	0	No	53†	0	No	53†	0	No
R23 - Residential	B	67	53	55	2	No	55	2	No	55	2	No	55	2	No	55	2	No	55	2	No
R24 - Residential	B	67	47	55	8	No	55	8	No	55	8	No	55	8	No	56	9	No	55	8	No
R25 - Residential	B	67	47	63	16	**Yes**	63	16	**Yes**	63	16	**Yes**	63	16	**Yes**	64	17	**Yes**	63	16	**Yes**
R26 - Residential	B	67	47	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R27 - Residential	B	67	47	59	12	**Yes**	59	12	**Yes**	59	12	**Yes**	59	12	**Yes**	60	13	**Yes**	59	12	**Yes**
R28 - Residential	B	67	47	54	7	No	54	7	No	54	7	No	54	7	No	54	7	No	54	7	No
R29 - Residential	B	67	47	51	4	No	51	4	No	51	4	No	51	4	No	52	5	No	51	4	No
R30 - Residential	B	67	53	54†	1	No	54†	1	No	54†	1	No	54†	1	No	54†	1	No	54†	1	No

Table 2: Traffic Noise Results by Alternative Alignment Loop 9, Segment A Alternative 3 (Continued)

Representative Receiver[1]	NAC Category	NAC Level	Existing[2] (2020) dB(A) Leq	Alternative 3			Alternative 3 Mod A			Alternative 3 Mod B			Alternative 3 Mod C			Alternative 3 Mod D			Alternative 3 Mod A & C		
				Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact
R31 - Residential	B	67	53	54†	1	No	54†	1	No	54†	1	No	54†	1	No	54†	1	No	54†	1	No
R32 - Residential	B	67	53	54†	1	No	54†	1	No	54†	1	No	54†	1	No	54†	1	No	54†	1	No
R33 - Residential	B	67	53	55†	2	No	55†	2	No	55†	2	No	55†	2	No	55†	2	No	55†	2	No
R34 - Residential	B	67	53	55†	2	No	55†	2	No	55†	2	No	55†	2	No	55†	2	No	55†	2	No
R35 - Residential	B	67	53	54	1	No	54	1	No	54	1	No	54	1	No	55	2	No	54	1	No
R36 - Residential	B	67	53	61	8	No	61	8	No	61	8	No	61	8	No	61	8	No	61	8	No
R37 - Residential	B	67	53	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R38 - Residential	B	67	53	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R39 - Residential	B	67	53	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R40 - Residential	B	67	53	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R41 - Residential	B	67	47	60	13	**Yes**	60	13	**Yes**	60	13	**Yes**	60	13	**Yes**	60	13	**Yes**	60	13	**Yes**
R42 - Residential	B	67	47	64	17	**Yes**	64	17	**Yes**	64	17	**Yes**	64	17	**Yes**	67	20	**Yes**	64	17	**Yes**
R43 - Residential	B	67	47	65	18	**Yes**	65	18	**Yes**	65	18	**Yes**	65	18	**Yes**	64	17	**Yes**	65	18	**Yes**
R44 - Residential	B	67	47	58	11	**Yes**	58	11	**Yes**	58	11	**Yes**	58	11	**Yes**	61	14	**Yes**	58	11	**Yes**
R45 - Equestrian	C	67	47	55	8	No	55	8	No	55	8	No	55	8	No	55	8	No	55	8	No
R46 - Residential	B	67	58	60†	2	No	60†	2	No	60†	2	No	60†	2	No	61	3	No	60†	2	No
R47 - Residential	B	67	58	61†	3	No	61†	3	No	61†	3	No	61†	3	No	61	3	No	61†	3	No
R48 - Residential	B	67	58	60†	2	No	60†	2	No	60†	2	No	60†	2	No	60	2	No	60†	2	No
R49 - Residential	B	67	53	62	9	No	62	9	No	62	9	No	62	9	No	61	8	No	62	9	No
R50 - Residential	B	67	53	54	1	No	54	1	No	54	1	No	54	1	No	54	1	No	54	1	No
R51 - Residential	B	67	53	55†	2	No	55†	2	No	55†	2	No	53	0	No	55†	2	No	53	0	No
R52 - Residential	B	67	53	55†	2	No	55†	2	No	55†	2	No	54	1	No	55†	2	No	54	1	No
R53 - Residential	B	67	53	55†	2	No	55†	2	No	55†	2	No	54†	1	No	55†	2	No	54†	1	No
R54 - Residential	B	67	53	60	7	No	60	7	No	60	7	No	N/A*	N/A*	N/A*	60	7	No	N/A*	N/A*	N/A*
R55 - Residential	B	67	53	62	9	No	62	9	No	62	9	No	N/A*	N/A*	N/A*	62	9	No	N/A*	N/A*	N/A*
R56 - Residential	B	67	53	55	2	No	55	2	No	55	2	No	56	3	No	55	2	No	56	3	No
R57 - Residential	B	67	45	55	10	No	55	10	No	55	10	No	54	9	No	55	10	No	54	9	No
R58 - Residential	B	67	45	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	64	19	**Yes**	N/A*	N/A*	N/A*	64	19	**Yes**
R59 - Residential	B	67	45	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	63	18	**Yes**	N/A*	N/A*	N/A*	63	18	**Yes**
R60 - Residential	B	67	45	66	21	**Yes**	66	21	Yes	66	21	**Yes**	60	15	**Yes**	66	21	**Yes**	60	15	**Yes**

Table 2: Traffic Noise Results by Alternative Alignment Loop 9, Segment A Alternative 3 (Continued)

Representative Receiver[1]	NAC Category	NAC Level	Existing[2] (2020) dB(A) Leq	Alternative 3			Alternative 3 Mod A			Alternative 3 Mod B			Alternative 3 Mod C			Alternative 3 Mod D			Alternative 3 Mod A & C		
				Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact
R61 - Recreation	B	67	45	53	8	No	53	8	No	53	8	No	50	5	No	53	8	No	50	5	No
R62 - Residential	C	67	45	65	20	**Yes**	64	19	**Yes**	63	18	**Yes**	65	20	**Yes**	65	20	**Yes**	64	19	**Yes**
R63 - Residential	B	67	44	56	12	**Yes**	59	15	**Yes**	55	11	**Yes**	56	12	**Yes**	56	12	**Yes**	59	15	**Yes**
R64 - Residential	B	67	44	63	19	**Yes**	65	21	**Yes**	65	21	**Yes**	63	19	**Yes**	63	19	**Yes**	65	21	**Yes**
R65 - Residential	B	67	48	60	12	**Yes**	61	13	**Yes**	61	13	**Yes**	60	12	**Yes**	60	12	**Yes**	61	13	**Yes**
R66 - Residential	B	67	48	60	12	**Yes**	62	14	**Yes**	61	13	**Yes**	60	12	**Yes**	60	12	**Yes**	62	14	**Yes**
R67 - Residential	B	67	48	56	8	No	61	13	**Yes**	61	13	**Yes**	56	8	No	56	8	No	61	13	**Yes**
R68 - Residential	B	67	48	62	14	**Yes**	59	11	**Yes**	59	11	**Yes**	62	14	**Yes**	62	14	**Yes**	59	11	**Yes**
R69 - Residential	B	67	48	69	21	**Yes**	63	15	**Yes**	63	15	**Yes**	69	21	**Yes**	69	21	**Yes**	63	15	**Yes**
R70 - Residential	B	67	48	67	19	**Yes**	63	15	**Yes**	62	14	**Yes**	67	19	**Yes**	67	19	**Yes**	63	15	**Yes**
R71 - Residential	B	67	48	67	19	**Yes**	62	14	**Yes**	62	14	**Yes**	67	19	**Yes**	67	19	**Yes**	62	14	**Yes**
R72 - Residential	B	67	48	65	17	**Yes**	60	12	**Yes**	60	12	**Yes**	65	17	**Yes**	65	17	**Yes**	60	12	**Yes**
R73 - Residential	B	67	48	64	16	**Yes**	60	12	**Yes**	60	12	**Yes**	64	16	**Yes**	64	16	**Yes**	60	12	**Yes**
R74 - Residential	B	67	48	66	18	**Yes**	65	17	**Yes**	65	17	**Yes**	66	18	**Yes**	66	18	**Yes**	65	17	**Yes**
R75 - Residential	B	67	46	61	15	**Yes**	55	9	No	55	9	No	61	15	**Yes**	61	15	**Yes**	55	9	No
R76 - Residential	B	67	46	63	17	**Yes**	50	4	No	51	5	No	63	17	**Yes**	63	17	**Yes**	50	4	No
R77 - Residential	B	67	46	66	20	**Yes**	49	3	No	51	5	No	66	20	**Yes**	66	20	**Yes**	49	3	No
R78 - Residential	B	67	46	N/A*	N/A*	N/A*	67	21	**Yes**	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	67	21	**Yes**
R79 - Residential	B	67	46	N/A*	N/A*	N/A*	60	14	**Yes**	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	60	14	**Yes**
R80 - Residential	B	67	46	N/A*	N/A*	N/A*	57	11	**Yes**	69	23	**Yes**	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	57	11	**Yes**
R81 - Residential	B	67	46	N/A*	N/A*	N/A*	55	9	No	69	23	**Yes**	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	55	9	No
R82 - Residential	B	67	46	N/A*	N/A*	N/A*	55	9	No	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	55	9	No
R83 - Residential	B	67	46	60	14	**Yes**	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	60	14	**Yes**	60	14	**Yes**	N/A*	N/A*	N/A*
R84 - Residential	B	67	46	63	17	**Yes**	64	18	**Yes**	53	7	No	63	17	**Yes**	63	17	**Yes**	64	18	**Yes**
R85 - Residential	B	67	46	68	22	**Yes**	50	4	No	54	8	No	68	22	**Yes**	68	22	**Yes**	50	4	No
R86- Residential	B	67	46	67	21	**Yes**	50	4	No	55	9	No	67	21	**Yes**	67	21	**Yes**	50	4	No
R87 - Residential	B	67	46	69	23	**Yes**	50	4	No	55	9	No	69	23	**Yes**	69	23	**Yes**	50	4	No
R88 - Residential	B	67	46	62	16	**Yes**	51	5	No	55	9	No	62	16	**Yes**	62	16	**Yes**	51	5	No
R89 - Residential	B	67	46	63	17	**Yes**	52	6	No	55	9	No	63	17	**Yes**	63	17	**Yes**	52	6	No
R90 - Residential	B	67	46	61	15	**Yes**	51	5	No	55	9	No	61	15	**Yes**	61	15	**Yes**	51	5	No

Table 2: Traffic Noise Results by Alternative Alignment Loop 9, Segment A Alternative 3 (Continued)

Representative Receiver[1]	NAC Category	NAC Level	Existing[2] (2020) dB(A) Leq	Alternative 3			Alternative 3 Mod A			Alternative 3 Mod B			Alternative 3 Mod C			Alternative 3 Mod D			Alternative 3 Mod A & C		
				Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact
R91 - Residential	B	67	46	61	15	**Yes**	53	7	No	57	11	**Yes**	61	15	**Yes**	61	15	**Yes**	53	7	No
R92 - Residential	B	67	46	60	14	**Yes**	54	8	No	57	11	**Yes**	60	14	**Yes**	60	14	**Yes**	54	8	No
R93 - Residential	B	67	46	59	13	**Yes**	58	12	**Yes**	59	13	**Yes**	59	13	**Yes**	59	13	**Yes**	58	12	**Yes**

[1] Bold receiver number indicates an absolute or relative criterion potential noise impact.

[2] Existing noise levels were determined by measurements of a sound level meter at TxDOT approved locations near the reciver locations in the models.

* Receivers located in the ROW of the proposed alternative. Receiver would be displaced and no noise results are reported.

† Decibel addition was used for predicted noise levels for receivers with modeled results lower than the measured noise levels.

Table 2: Traffic Noise Results by Alternative Alignment Loop 9, Segment A Alternative 3 (Continued)

Representative Receiver[1]	NAC Category	NAC Level	Existing[2] (2020) dB(A) Leq	Alternative 3 Mod A & D			Alternative 3 Mod A, C & D			Alternative 3 Mod B & C			Alternative 3 Mod B & D			Alternative 3 Mod B, C & D			Alternative 3 Mod C & D		
				Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact
R1 - Residential	B	67	48	59	11	**Yes**	59	11	**Yes**	59	11	**Yes**	59	11	**Yes**	59	11	**Yes**	59	11	**Yes**
R2 - Residential	B	67	48	54	6	No	54	6	No	53	5	No	54	6	No	54	6	No	54	6	No
R3 - Residential	B	67	48	54	6	No	54	6	No	52	4	No	54	6	No	54	6	No	54	6	No
R4 - Residential	B	67	48	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	65	17	**Yes**	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R5 - Residential	B	67	48	56	8	No	56	8	No	65	17	**Yes**	56	8	No	56	8	No	56	8	No
R6 - Residential	B	67	48	59	11	**Yes**	59	11	**Yes**	N/A*	N/A*	N/A*	59	11	**Yes**	59	11	**Yes**	59	11	**Yes**
R7 - Residential	B	67	48	60	12	**Yes**	60	12	**Yes**	N/A*	N/A*	N/A*	60	12	**Yes**	60	12	**Yes**	60	12	**Yes**
R8 - Residential	B	67	48	61	13	**Yes**	61	13	**Yes**	N/A*	N/A*	N/A*	61	13	**Yes**	61	13	**Yes**	61	13	**Yes**
R9 - Residential	B	67	48	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R10 - Residential	B	67	48	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R11 - Residential	B	67	48	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R12 - Residential	B	67	48	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R13 - Residential	B	67	48	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R14 - Residential	B	67	48	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	64	16	Yes	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R15 - Residential	B	67	48	50†	2	No	50†	2	No	49†	1	No	50†	2	No	50†	2	No	50†	2	No
R16 - Residential	B	67	48	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	60	12	**Yes**	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R17 - Residential	B	67	48	49†	1	No	49†	1	No	48†	0	No	49†	1	No	49†	1	No	49†	1	No
R18- Residential	B	67	47	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R19 - Residential	B	67	53	55	2	No	55	2	No	57	4	No	55	2	No	55	2	No	55	2	No
R20 - Residential	B	67	53	60	7	No	60	7	No	60	7	No	60	7	No	60	7	No	60	7	No
R21 - Residential	B	67	53	53†	0	No	53†	0	No	54†	1	No	53†	0	No	53†	0	No	53†	0	No
R22 - Residential	B	67	53	53†	0	No	53†	0	No	53†	0	No	53†	0	No	53†	0	No	53†	0	No
R23 - Residential	B	67	53	55	2	No	55	2	No	55	2	No	55	2	No	55	2	No	55	2	No
R24 - Residential	B	67	47	56	9	No	56	9	No	55	8	No	56	9	No	56	9	No	56	9	No
R25 - Residential	B	67	47	64	17	**Yes**	64	17	**Yes**	63	16	**Yes**	64	17	**Yes**	64	17	**Yes**	64	17	**Yes**
R26 - Residential	B	67	47	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R27 - Residential	B	67	47	60	13	**Yes**	60	13	**Yes**	59	12	**Yes**	60	13	**Yes**	60	13	**Yes**	60	13	**Yes**
R28 - Residential	B	67	47	54	7	No	54	7	No	54	7	No	54	7	No	54	7	No	54	7	No
R29 - Residential	B	67	47	52	5	No	52	5	No	51	4	No	52	5	No	52	5	No	52	5	No
R30 - Residential	B	67	53	54†	1	No	54†	1	No	54†	1	No	54†	1	No	54†	1	No	54†	1	No

Table 2: Traffic Noise Results by Alternative Alignment Loop 9, Segment A Alternative 3 (Continued)

Representative Receiver[1]	NAC Category	NAC Level	Existing[2] (2020) dB(A) Leq	Alternative 3 Mod A & D			Alternative 3 Mod A, C & D			Alternative 3 Mod B & C			Alternative 3 Mod B & D			Alternative 3 Mod B, C & D			Alternative 3 Mod C & D		
				Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact
R31 - Residential	B	67	53	54†	1	No	54†	1	No	54†	1	No	54†	1	No	54†	1	No	54†	1	No
R32 - Residential	B	67	53	54†	1	No	54†	1	No	54†	1	No	54†	1	No	54†	1	No	54†	1	No
R33 - Residential	B	67	53	55†	2	No	55†	2	No	55†	2	No	55†	2	No	55†	2	No	55†	2	No
R34 - Residential	B	67	53	55†	2	No	55†	2	No	55†	2	No	55†	2	No	55†	2	No	55†	2	No
R35 - Residential	B	67	53	55	2	No	55	2	No	54	2	No	55	2	No	55	2	No	55	2	No
R36 - Residential	B	67	53	61	8	No	61	8	No	61	8	No	61	8	No	61	8	No	61	8	No
R37 - Residential	B	67	53	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R38 - Residential	B	67	53	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R39 - Residential	B	67	53	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R40 - Residential	B	67	53	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R41 - Residential	B	67	47	60	13	**Yes**	60	13	**Yes**	60	13	**Yes**	60	13	**Yes**	60	13	**Yes**	60	13	**Yes**
R42 - Residential	B	67	47	67	20	**Yes**	67	20	**Yes**	67	20	**Yes**	67	20	**Yes**	67	20	**Yes**	67	20	**Yes**
R43 - Residential	B	67	47	64	17	**Yes**	64	17	**Yes**	64	17	**Yes**	64	17	**Yes**	64	17	**Yes**	64	17	**Yes**
R44 - Residential	B	67	47	61	14	**Yes**	61	14	**Yes**	61	14	**Yes**	61	14	**Yes**	61	14	**Yes**	61	14	**Yes**
R45 - Equestrian	C	67	47	55	8	No	55	8	No	55	8	No	55	8	No	55	8	No	55	8	No
R46 - Residential	B	67	58	61	3	No	61	3	No	60	2	No	61	3	No	61	3	No	61	3	No
R47 - Residential	B	67	58	61	3	No	61	3	No	60	2	No	61	3	No	61	3	No	61	3	No
R48 - Residential	B	67	58	60	2	No	60	2	No	59	1	No	60	2	No	60	2	No	60	2	No
R49 - Residential	B	67	53	62	9	No	62	9	No	62	9	No	62	9	No	62	9	No	62	9	No
R50 - Residential	B	67	53	54	1	No	54	1	No	54	1	No	54	1	No	54	1	No	54	1	No
R51 - Residential	B	67	53	55†	2	No	53	0	No	53	0	No	55†	2	No	53	0	No	53	0	No
R52 - Residential	B	67	53	55†	2	No	54	1	No	54	1	No	55†	2	No	54	1	No	54	1	No
R53 - Residential	B	67	53	54†	1	No	54†	1	No	54	1	No	55†	2	No	54†	1	No	54†	1	No
R54 - Residential	B	67	53	56	3	No	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	60	7	No	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R55 - Residential	B	67	53	59	6	No	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	62	9	No	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R56 - Residential	B	67	53	56	3	No	56	3	No	56	2	No	55	2	No	56	3	No	56	3	No
R57 - Residential	B	67	45	54	9	No	54	9	No	54	9	No	55	10	No	54	9	No	54	9	No
R58 - Residential	B	67	45	N/A*	N/A*	N/A*	64	19	**Yes**	64	19	**Yes**	N/A*	N/A*	N/A*	64	19	**Yes**	64	19	**Yes**
R59 - Residential	B	67	45	N/A*	N/A*	N/A*	63	18	**Yes**	63	18	**Yes**	N/A*	N/A*	N/A*	63	18	**Yes**	63	18	**Yes**
R60 - Residential	B	67	45	60	15	**Yes**	60	15	**Yes**	60	15	**Yes**	66	21	**Yes**	60	15	**Yes**	60	15	**Yes**

Table 2: Traffic Noise Results by Alternative Alignment Loop 9, Segment A Alternative 3 (Continued)

Representative Receiver[1]	NAC Category	NAC Level	Existing[2] (2020) dB(A) Leq	Alternative 3 Mod A & D			Alternative 3 Mod A, C & D			Alternative 3 Mod B & C			Alternative 3 Mod B & D			Alternative 3 Mod B, C & D			Alternative 3 Mod C & D		
				Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact
R61 - Recreation	B	67	45	50	5	No	50	5	No	50	5	No	53	8	No	50	5	No	50	5	No
R62 - Residential	C	67	45	64	19	**Yes**	64	19	**Yes**	63	18	**Yes**	63	18	**Yes**	63	18	**Yes**	65	20	**Yes**
R63 - Residential	B	67	44	59	15	**Yes**	59	15	**Yes**	55	11	**Yes**	55	11	**Yes**	55	11	**Yes**	56	12	**Yes**
R64 - Residential	B	67	44	65	21	**Yes**	65	21	**Yes**	65	21	**Yes**	65	21	**Yes**	65	21	**Yes**	63	19	**Yes**
R65 - Residential	B	67	48	61	13	**Yes**	61	13	**Yes**	61	13	**Yes**	61	13	**Yes**	61	13	**Yes**	60	12	**Yes**
R66 - Residential	B	67	48	62	14	**Yes**	62	14	**Yes**	61	13	**Yes**	61	13	**Yes**	61	13	**Yes**	60	12	**Yes**
R67 - Residential	B	67	48	61	13	**Yes**	61	13	**Yes**	61	13	**Yes**	61	13	**Yes**	61	13	**Yes**	56	8	No
R68 - Residential	B	67	48	59	11	**Yes**	59	11	**Yes**	59	11	**Yes**	59	11	**Yes**	59	11	**Yes**	62	14	**Yes**
R69 - Residential	B	67	48	63	15	**Yes**	63	15	**Yes**	63	15	**Yes**	63	15	**Yes**	63	15	**Yes**	69	21	**Yes**
R70 - Residential	B	67	48	63	15	**Yes**	63	15	**Yes**	62	14	**Yes**	62	14	**Yes**	62	14	**Yes**	67	19	**Yes**
R71 - Residential	B	67	48	62	14	**Yes**	62	14	**Yes**	62	14	**Yes**	62	14	**Yes**	62	14	**Yes**	67	19	**Yes**
R72 - Residential	B	67	48	60	12	**Yes**	60	12	**Yes**	60	12	**Yes**	60	12	**Yes**	60	12	**Yes**	65	17	**Yes**
R73 - Residential	B	67	48	60	12	**Yes**	60	12	**Yes**	60	12	**Yes**	60	12	**Yes**	60	12	**Yes**	64	16	**Yes**
R74 - Residential	B	67	48	65	17	**Yes**	65	17	**Yes**	65	17	**Yes**	65	17	**Yes**	65	17	**Yes**	66	18	**Yes**
R75 - Residential	B	67	46	55	9	No	55	9	No	55	9	No	55	9	No	55	9	No	61	15	**Yes**
R76 - Residential	B	67	46	50	4	No	50	4	No	51	5	No	51	5	No	51	5	No	63	17	**Yes**
R77 - Residential	B	67	46	49	3	No	49	3	No	51	5	No	51	5	No	51	5	No	66	20	**Yes**
R78 - Residential	B	67	46	67	21	**Yes**	67	21	**Yes**	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R79 - Residential	B	67	46	60	14	**Yes**	60	14	**Yes**	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R80 - Residential	B	67	46	57	11	**Yes**	57	11	**Yes**	69	23	**Yes**	69	23	**Yes**	69	23	**Yes**	N/A*	N/A*	N/A*
R81 - Residential	B	67	46	55	9	No	55	9	No	69	23	**Yes**	69	23	**Yes**	69	23	**Yes**	N/A*	N/A*	N/A*
R82 - Residential	B	67	46	55	9	No	55	9	No	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R83 - Residential	B	67	46	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	60	14	**Yes**
R84 - Residential	B	67	46	64	18	**Yes**	64	18	**Yes**	53	7	No	53	7	No	53	7	No	63	17	**Yes**
R85 - Residential	B	67	46	50	4	No	50	4	No	54	8	No	54	8	No	54	8	No	68	22	**Yes**
R86- Residential	B	67	46	50	4	No	50	4	No	55	9	No	55	9	No	55	9	No	67	21	**Yes**
R87 - Residential	B	67	46	50	4	No	50	4	No	55	9	No	55	9	No	55	9	No	69	23	**Yes**
R88 - Residential	B	67	46	51	5	No	51	5	No	55	9	No	55	9	No	55	9	No	62	16	**Yes**
R89 - Residential	B	67	46	52	6	No	52	6	No	55	9	No	55	9	No	55	9	No	63	17	**Yes**
R90 - Residential	B	67	46	51	5	No	51	5	No	55	9	No	55	9	No	55	9	No	61	15	**Yes**

Table 2: Traffic Noise Results by Alternative Alignment Loop 9, Segment A Alternative 3 (Continued)

Representative Receiver[1]	NAC Category	NAC Level	Existing[2] (2020) dB(A) Leq	Alternative 3 Mod A & D			Alternative 3 Mod A, C & D			Alternative 3 Mod B & C			Alternative 3 Mod B & D			Alternative 3 Mod B, C & D			Alternative 3 Mod C & D		
				Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact
R91 - Residential	B	67	46	53	7	No	53	7	No	57	11	**Yes**	57	11	**Yes**	57	11	**Yes**	61	15	**Yes**
R92 - Residential	B	67	46	54	8	No	54	8	No	57	11	**Yes**	57	11	**Yes**	57	11	**Yes**	60	14	**Yes**
R93 - Residential	B	67	46	58	12	**Yes**	58	12	**Yes**	59	13	**Yes**	59	13	**Yes**	59	13	**Yes**	59	13	**Yes**

[1] Bold receiver number indicates an absolute or relative criterion potential nois

[2] Existing noise levels were determined by measurements of a sound level met

* Receivers located in the ROW of the proposed alternative. Receiver would be

† Decibel addition was used for predicted noise levels for receivers with modele

Table 2: Traffic Noise Results by Alternative Alignment Loop 9, Segment A Alternative 4

Representative Receiver[1]	NAC Category	NAC Level	Existing[2] (2020) dB(A) Leq	Alternative 4			Alternative 4 Mod A			Alternative 4 Mod B			Alternative 4 Mod C			Alternative 4 Mod A & C			Alternative 4 Mod B & C		
				Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact
R1 - Residential	B	67	48	59	11	**Yes**	59	11	**Yes**	59	11	**Yes**	59	11	**Yes**	59	11	**Yes**	59	11	**Yes**
R2 - Residential	B	67	48	54	6	No	54	6	No	54	6	No	54	6	No	54	6	No	54	6	No
R3 - Residential	B	67	48	55	7	No	55	7	No	55	7	No	55	7	No	55	7	No	55	7	No
R4 - Residential	B	67	48	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R5 - Residential	B	67	48	53	5	No	53	5	No	53	5	No	53	5	No	53	5	No	53	5	No
R6 - Residential	B	67	48	52	4	No	52	4	No	52	4	No	52	4	No	52	4	No	52	4	No
R7 - Residential	B	67	48	51	3	No	51	3	No	51	3	No	51	3	No	51	3	No	51	3	No
R8 - Residential	B	67	48	49	1	No	49	1	No	49	1	No	49	1	No	49	1	No	49	1	No
R9 - Residential	B	67	48	65	17	**Yes**	65	17	**Yes**	65	17	**Yes**	65	17	**Yes**	65	17	**Yes**	65	17	**Yes**
R10 - Residential	B	67	48	60	12	**Yes**	60	12	**Yes**	60	12	**Yes**	60	12	**Yes**	60	12	**Yes**	60	12	**Yes**
R11 - Residential	B	67	48	58	10	No	58	10	No	58	10	No	58	10	No	58	10	No	58	10	No
R12 - Residential	B	67	48	57	9	No	57	9	No	57	9	No	57	9	No	57	9	No	57	9	No
R13 - Residential	B	67	48	56	8	No	56	8	No	56	8	No	56	8	No	56	8	No	56	8	No
R14 - Residential	B	67	48	59	11	**Yes**	59	11	**Yes**	59	11	**Yes**	59	11	**Yes**	59	11	**Yes**	59	11	**Yes**
R15 - Residential	B	67	48	52	4	No	52	4	No	52	4	No	52	4	No	52	4	No	52	4	No
R16 - Residential	B	67	48	50†	2	No	50†	2	No	50†	2	No	50†	2	No	50†	2	No	50†	2	No
R17 - Residential	B	67	48	50	2	No	50	2	No	50	2	No	50	2	No	50	2	No	50	2	No
R18- Residential	B	67	47	48†	1	No	48†	1	No	48†	1	No	48†	1	No	48†	1	No	48†	1	No
R19 - Residential	B	67	53	54†	1	No	54†	1	No	54†	1	No	54†	1	No	54†	1	No	54†	1	No
R20 - Residential	B	67	53	58	5	No	58	5	No	58	5	No	58	5	No	58	5	No	58	5	No
R21 - Residential	B	67	53	61	8	No	61	8	No	61	8	No	61	8	No	61	8	No	61	8	No
R22 - Residential	B	67	53	66	13	**Yes**	66	13	**Yes**	66	13	**Yes**	66	13	**Yes**	66	13	**Yes**	66	13	**Yes**
R23 - Residential	B	67	53	58	5	No	58	5	No	58	5	No	58	5	No	58	5	No	58	5	No
R24 - Residential	B	67	47	48†	1	No	48†	1	No	48†	1	No	48†	1	No	48†	1	No	48†	1	No
R25 - Residential	B	67	47	48†	1	No	48†	1	No	48†	1	No	48†	1	No	48†	1	No	48†	1	No
R26 - Residential	B	67	47	48†	1	No	48†	1	No	48†	1	No	48†	1	No	48†	1	No	48†	1	No
R27 - Residential	B	67	47	48†	1	No	48†	1	No	48†	1	No	48†	1	No	48†	1	No	48†	1	No
R28 - Residential	B	67	47	48†	1	No	48†	1	No	48†	1	No	48†	1	No	48†	1	No	48†	1	No
R29 - Residential	B	67	47	48†	1	No	48†	1	No	48†	1	No	48†	1	No	48†	1	No	48†	1	No
R30 - Residential	B	67	53	63	10	No	63	10	No	63	10	No	63	10	No	63	10	No	63	10	No

Table 2: Traffic Noise Results by Alternative Alignment Loop 9, Segment A Alternative 4 (Continued)

Representative Receiver[1]	NAC Category	NAC Level	Existing[2] (2020) dB(A) Leq	Alternative 4			Alternative 4 Mod A			Alternative 4 Mod B			Alternative 4 Mod C			Alternative 4 Mod A & C			Alternative 4 Mod B & C		
				Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact
R31 - Residential	B	67	53	61	8	No	61	8	No	61	8	No	61	8	No	61	8	No	61	8	No
R32 - Residential	B	67	53	57	4	No	57	4	No	57	4	No	57	4	No	57	4	No	57	4	No
R33 - Residential	B	67	53	56	3	No	56	3	No	56	3	No	56	3	No	56	3	No	56	3	No
R34 - Residential	B	67	53	58	5	No	58	5	No	58	5	No	58	5	No	58	5	No	58	5	No
R35 - Residential	B	67	53	59	6	No	59	6	No	59	6	No	59	6	No	59	6	No	59	6	No
R36 - Residential	B	67	53	59	6	No	59	6	No	59	6	No	59	6	No	59	6	No	59	6	No
R37 - Residential	B	67	53	60	7	No	60	7	No	60	7	No	60	7	No	60	7	No	60	7	No
R38 - Residential	B	67	53	62	9	No	62	9	No	62	9	No	62	9	No	62	9	No	62	9	No
R39 - Residential	B	67	53	65	12	**Yes**	65	12	**Yes**	65	12	**Yes**	65	12	**Yes**	65	12	**Yes**	65	12	**Yes**
R40 - Residential	B	67	53	64	11	**Yes**	64	11	**Yes**	64	11	**Yes**	64	11	**Yes**	64	11	**Yes**	64	11	**Yes**
R41 - Residential	B	67	47	63	16	**Yes**	63	16	**Yes**	63	16	**Yes**	63	16	**Yes**	63	16	**Yes**	63	16	**Yes**
R42 - Residential	B	67	47	64	17	**Yes**	64	17	**Yes**	64	17	**Yes**	64	17	**Yes**	64	17	**Yes**	64	17	**Yes**
R43 - Residential	B	67	47	67	20	**Yes**	67	20	**Yes**	67	20	**Yes**	67	20	**Yes**	67	20	**Yes**	67	20	**Yes**
R44 - Residential	B	67	47	63	16	**Yes**	63	16	**Yes**	63	16	**Yes**	63	16	**Yes**	63	16	**Yes**	63	16	**Yes**
R45 - Equestrian	C	67	47	55	8	No	55	8	No	55	8	No	55	8	No	55	8	No	55	8	No
R46 - Residential	B	67	58	59	1	No	59	1	No	59	1	No	59	1	No	59	1	No	59	1	No
R47 - Residential	B	67	58	59	1	No	59	1	No	59	1	No	59	1	No	59	1	No	59	1	No
R48 - Residential	B	67	58	61†	3	No	61†	3	No	61†	3	No	61†	3	No	61†	3	No	61†	3	No
R49 - Residential	B	67	53	62	9	No	62	9	No	62	9	No	62	9	No	62	9	No	62	9	No
R50 - Residential	B	67	53	54	1	No	54	1	No	54	1	No	54	1	No	54	1	No	54	1	No
R51 - Residential	B	67	53	55†	2	No	55†	2	No	55†	2	No	53†	0	No	53†	0	No	53†	0	No
R52 - Residential	B	67	53	55†	2	No	55†	2	No	55†	1	No	54†	1	No	54†	1	No	54†	1	No
R53 - Residential	B	67	53	55†	2	No	55†	2	No	55†	2	No	54†	1	No	54†	1	No	54†	1	No
R54 - Residential	B	67	53	55	2	No	55	2	No	55	2	No	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R55 - Residential	B	67	53	60	7	No	60	7	No	60	7	No	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R56 - Residential	B	67	53	55	2	No	55	2	No	55	2	No	56	3	No	56	3	No	56	3	No
R57 - Residential	B	67	45	62	17	**Yes**	62	17	**Yes**	62	17	**Yes**	54	9	No	54	9	No	54	9	No
R58 - Residential	B	67	45	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	64	19	**Yes**	64	19	**Yes**	64	19	**Yes**
R59 - Residential	B	67	45	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	63	18	**Yes**	63	18	**Yes**	63	18	**Yes**
R60 - Residential	B	67	45	66	21	**Yes**	66	21	**Yes**	66	21	**Yes**	60	15	**Yes**	60	15	**Yes**	60	15	**Yes**

Table 2: Traffic Noise Results by Alternative Alignment Loop 9, Segment A Alternative 4 (Continued)

Representative Receiver[1]	NAC Category	NAC Level	Existing[2] (2020) dB(A) Leq	Alternative 4			Alternative 4 Mod A			Alternative 4 Mod B			Alternative 4 Mod C			Alternative 4 Mod A & C			Alternative 4 Mod B & C		
				Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact
R61 - Recreation	B	67	45	53	8	No	53	8	No	53	8	No	50	5	No	50	5	No	50	5	No
R62 - Residential	C	67	45	65	20	**Yes**	64	19	**Yes**	63	18	**Yes**	65	20	**Yes**	64	19	**Yes**	63	18	**Yes**
R63 - Residential	B	67	44	56	12	**Yes**	59	15	**Yes**	55	11	**Yes**	56	12	**Yes**	59	15	**Yes**	55	11	**Yes**
R64 - Residential	B	67	44	63	19	**Yes**	65	21	**Yes**	65	21	**Yes**	63	19	**Yes**	65	21	**Yes**	65	21	**Yes**
R65 - Residential	B	67	48	60	12	**Yes**	61	13	**Yes**	61	13	**Yes**	60	12	**Yes**	61	13	**Yes**	61	13	**Yes**
R66 - Residential	B	67	48	60	12	**Yes**	62	14	**Yes**	61	13	**Yes**	60	12	**Yes**	62	14	**Yes**	61	13	**Yes**
R67 - Residential	B	67	48	56	8	No	61	13	**Yes**	61	13	**Yes**	56	8	No	61	13	**Yes**	61	13	**Yes**
R68 - Residential	B	67	48	62	14	**Yes**	59	11	**Yes**	59	11	**Yes**	62	14	**Yes**	59	11	**Yes**	59	11	**Yes**
R69 - Residential	B	67	48	69	21	**Yes**	63	15	**Yes**	63	15	**Yes**	69	21	**Yes**	63	15	**Yes**	63	15	**Yes**
R70 - Residential	B	67	48	67	19	**Yes**	63	15	**Yes**	62	14	**Yes**	67	19	**Yes**	63	15	**Yes**	62	14	**Yes**
R71 - Residential	B	67	48	67	19	**Yes**	62	14	**Yes**	62	14	**Yes**	67	19	**Yes**	62	14	**Yes**	62	14	**Yes**
R72 - Residential	B	67	48	65	17	**Yes**	60	12	**Yes**	60	12	**Yes**	65	17	**Yes**	60	12	**Yes**	60	12	**Yes**
R73 - Residential	B	67	48	64	16	**Yes**	60	12	**Yes**	60	12	**Yes**	64	16	**Yes**	60	12	**Yes**	60	12	**Yes**
R74 - Residential	B	67	48	66	18	**Yes**	65	17	**Yes**	65	17	**Yes**	66	18	**Yes**	65	17	**Yes**	65	17	**Yes**
R75 - Residential	B	67	46	61	15	**Yes**	55	9	No	55	9	No	61	15	**Yes**	55	9	No	55	9	No
R76 - Residential	B	67	46	63	17	**Yes**	50	4	No	51	5	No	63	17	**Yes**	50	4	No	51	5	No
R77 - Residential	B	67	46	67	21	**Yes**	49	3	No	51	5	No	67	21	**Yes**	49	3	No	51	5	No
R78 - Residential	B	67	46	N/A*	N/A*	N/A*	67	21	**Yes**	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	67	21	**Yes**	N/A*	N/A*	N/A*
R79 - Residential	B	67	46	N/A*	N/A*	N/A*	60	14	**Yes**	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	60	14	**Yes**	N/A*	N/A*	N/A*
R80 - Residential	B	67	46	N/A*	N/A*	N/A*	57	11	**Yes**	69	23	**Yes**	N/A*	N/A*	N/A*	57	11	**Yes**	69	23	**Yes**
R81 - Residential	B	67	46	N/A*	N/A*	N/A*	55	9	No	69	23	**Yes**	N/A*	N/A*	N/A*	55	9	No	69	23	**Yes**
R82 - Residential	B	67	46	N/A*	N/A*	N/A*	55	9	No	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	55	9	No	N/A*	N/A*	N/A*
R83 - Residential	B	67	46	60	14	**Yes**	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	60	14	**Yes**	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
R84 - Residential	B	67	46	63	17	**Yes**	64	18	**Yes**	53	7	No	63	17	**Yes**	64	18	**Yes**	53	7	No
R85 - Residential	B	67	46	68	22	**Yes**	50	4	No	54	8	No	68	22	**Yes**	50	4	No	54	8	No
R86- Residential	B	67	46	67	21	**Yes**	50	4	No	55	9	No	67	21	**Yes**	50	4	No	55	9	No
R87 - Residential	B	67	46	69	23	**Yes**	50	4	No	55	9	No	69	23	**Yes**	50	4	No	55	9	No
R88 - Residential	B	67	46	62	16	**Yes**	51	5	No	55	9	No	62	16	**Yes**	51	5	No	55	9	No
R89 - Residential	B	67	46	63	17	**Yes**	52	6	No	55	9	No	63	17	**Yes**	52	6	No	55	9	No
R90 - Residential	B	67	46	61	15	**Yes**	51	5	No	55	9	No	61	15	**Yes**	51	5	No	55	9	No

Table 2: Traffic Noise Results by Alternative Alignment Loop 9, Segment A Alternative 4 (Continued)

Representative Receiver[1]	NAC Category	NAC Level	Existing[2] (2020) dB(A) Leq	Alternative 4			Alternative 4 Mod A			Alternative 4 Mod B			Alternative 4 Mod C			Alternative 4 Mod A & C			Alternative 4 Mod B & C		
				Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact	Predicted (2048)	Change (+/-)	Noise Impact
R91 - Residential	B	67	46	61	15	**Yes**	53	7	No	57	11	**Yes**	61	15	**Yes**	53	7	No	57	11	**Yes**
R92 - Residential	B	67	46	60	14	**Yes**	54	8	No	57	11	**Yes**	60	14	**Yes**	54	8	No	57	11	**Yes**
R93 - Residential	B	67	46	59	13	**Yes**	58	12	**Yes**	59	13	**Yes**	59	13	**Yes**	58	12	**Yes**	59	13	**Yes**

[1] Bold receiver number indicates an absolute or relative criterion potential noise impact.

[2] Existing noise levels were determined by measurements of a sound level meter at TxDOT approved locations near the reciver locations in the models.

* Receivers located in the ROW of the proposed alternative. Receiver would be displaced and no noise results are reported.

† Decibel addition was used for predicted noise levels for receivers with modeled results lower than the measured noise levels.

As indicated in **Table 2**, the proposed project would result in a traffic noise impact at one or more representative receiver locations.

Abatement Analysis

Before any abatement measure can be proposed for incorporation into the project, it must be both feasible and reasonable. Feasibility and reasonableness considerations include constructability, the predicted acoustic reductions provided by an abatement measure, a cost allowance, and whether the adjacent receptors desire abatement. Receptors associated with an abatement measure that achieve a noise reduction of five dB(A) or greater are called benefited receptors.

In order to be "feasible," the abatement measure must benefit a minimum of two impacted receptors AND reduce the predicted noise level by at least five dB(A) at greater than 50% of first-row impacted receptors.

In order to be "reasonable," the abatement measure must also reduce the predicted noise level by at least seven dB(A) for at least one benefited receptor (noise reduction design goal) and not exceed the standard barrier cost of 1,500 square feet per benefited receptor. In addition, an abatement measure may not be reasonable if the construction costs are unreasonably high due to site constraints, as determined through an alternate barrier cost assessment.

The following noise abatement measures would be considered: traffic management, alteration of horizontal and/or vertical alignments, acquisition of undeveloped property to act as a buffer zone, and the construction of noise barriers.

Traffic management – Control devices could be used to reduce the speed of the traffic; however, the minor benefit of one dB(A) per five mph reduction in speed does not outweigh the associated increase in congestion and air pollution. Other measures such as time or use restrictions for certain vehicles are prohibited on state highways.

Alteration of horizontal and/or vertical alignments – Any alteration of the existing alignment would displace existing businesses and residences, require additional right of way and not be cost effective/reasonable.

Buffer zone – The acquisition of undeveloped property to act as a buffer zone is designed to avoid rather than abate traffic noise impacts and, therefore, is not feasible.

Noise barriers – Noise barriers in the form of noise walls are the most commonly used noise abatement measures and were considered for this project.

A preliminary noise abatement analysis was conducted for this study. A more comprehensive noise abatement analysis will be conducted as more detailed design data becomes available for the Preferred Alternative. This future analysis will be documented in the Final Environmental Impact Statement (FEIS).

Noise barriers would not be feasible and reasonable for any of the following impacted receptors, and therefore, are not proposed for incorporation into the project:

R1 – This receiver represents a single residence located along Edgefield Lane adjacent to the ROW. A barrier must benefit at least two or more receivers. Therefore, a barrier is not proposed at this location.

R4 – This receiver represents one residence located along the north side of Tar Road adjacent to the ROW. R4 is impacted in Alternatives 1, 2, and 3 only. A barrier must benefit at least two or more receivers. Therefore, a barrier is not proposed at this location.

R5 – This receiver represents one residence located along the east side of Tar Road south of Knight Street adjacent to the ROW. R5 is impacted in Alternatives 1, 2, and 3 only. A barrier must benefit at least two or more receivers. Therefore, a barrier is not proposed at this location.

R6 through R8 – These receivers represent three residences located along Knight Street with a driveway connecting to the roadway along the ROW of Modification D. A continuous noise barrier would restrict access to these residences. Gaps in the noise barrier would satisfy access requirements, but the resulting non-continuous wall segments would not be sufficient to achieve the minimum, feasible reduction of 5 dB(A) at impacted receptors or the noise reduction design goal of 7 dB(A).

R9, R10 and R14 – These receivers represent single residences located along Knight Street adjacent to the Alternative 4 ROW. A continuous noise barrier 14 feet in height and approximately 969 feet in length was modeled along the ROW. This barrier would achieve the minimum feasible reduction of 5 dB(A) for two receptors while meeting the 7 dB(A) noise reduction design goal at one of those receptors. However, the square footage of abatement (13,566 square feet or 6,783 square feet per benefited receptor) would exceed the reasonable, cost-reasonableness criterion of 1,500 square feet per benefited receptor.

R16 – This receiver represents one residence located along Hidden Valley Lane adjacent to the Alternative 3 ROW. A barrier must benefit at least two or more receivers. Therefore, a barrier is not proposed at this location.

R22 – This receiver represents a single residence located along S. Joe Wilson Road adjacent to the Alternative 4 ROW. A barrier must benefit at least two or more receivers. Therefore, a barrier is not proposed at this location.

R25 and R27 – These receivers represent two residences located along the Alternative 3 ROW and Modification D at S. Joe Wilson Road with a driveway connecting to the roadway. A continuous noise barrier would restrict access to these residences. Gaps in the noise barrier would satisfy access requirements, but the resulting non-continuous wall segments would not be sufficient to achieve the minimum, feasible reduction of 5 dB(A) at impacted receptors or the noise reduction design goal of 7 dB(A).

R39 and R40 – These receivers represent three residences located along West Bear Creek Road with a driveway connecting to the roadway. A continuous noise barrier would restrict access to these residences. Gaps in the noise barrier would satisfy access requirements, but the resulting non-continuous wall segments would not be sufficient to achieve the minimum, feasible reduction of 5 dB(A) at impacted receptors or the noise reduction design goal of 7 dB(A).

R41 – This receiver represents a single residence located along Duncanville Road adjacent to the ROW of Alternatives 1-4. A barrier must benefit at least two or more receivers. Therefore, a barrier is not proposed at this location.

R42 through R44 Alternative 1, 2, and 3 - These receivers represent 10 residences in the Bear Creek Ranch subdivision located along Quail Ridge Lane and Madison Drive. Based on preliminary calculations, a noise barrier approximately 1,605 feet in length and 20 feet in height in two segments was modeled along the Alternatives 1, 2, and 3 ROW. A noise barrier up to 20 feet in height, placed along the ROW would not be sufficient to benefit a majority of the impacted receptors or meet the 7 dB(A) noise reduction design goal. Therefore, a noise barrier is not proposed for this location. A brick privacy wall is present surrounding the neighborhood and limits the effectiveness of any proposed noise barrier.

R42 through R44 Alternative 4 - These receivers represent 10 residences in the Bear Creek Ranch subdivision located along Quail Ridge Lane and Madison Drive. Based on preliminary calculations, a noise barrier approximately 1,646 feet in length and 10 feet in height would reduce noise levels by at least 5 dB(A) for eight benefited receptors and meet the noise reduction design goal of 7 dB(A) for four of those receptors. However, the square footage of abatement (16,460 square feet or 2,058 square feet per benefited receptor) would exceed the reasonable, cost-reasonableness criterion of 1,500 square feet per benefited receptor. A brick privacy wall is present surrounding the neighborhood and limits the effectiveness of any proposed noise barrier.

R57 through R60 - These receivers represent 15 residences impacted along Shady Meadows Lane in Glenn Heights. R58 and R59 are displaced in Alternative 1-4, but R58 and R59 are adjacent to the Modification C ROW. Undeveloped land would lie between the ROW and the impacted receivers. The barrier would restrict access to the undeveloped property. Therefore, a barrier is not proposed at this location.

R62 through R63 - These receivers represent 16 residences in a subdivision located along Pearly Top Road and one individual residence located along S. Hampton Road. Only R62 is adjacent to the ROW. Undeveloped land would lie between the ROW and the impacted receivers. A barrier would restrict access to the undeveloped property. Therefore, a noise barrier is not proposed for this location.

R64 through R67 - These receivers represent 35 residences in the Stone Creek subdivision located along Stone Creek Parkway. Based on preliminary calculations, a noise barrier approximately 2,613 feet in length and 16 feet in height would reduce noise levels by at least 5 dB(A) for 13 benefited receptors and meet the noise reduction design goal of 7 dB(A) for one of those receptors. However, the square footage of abatement (21,248 square feet or 1,634 square feet per benefited receptor) would exceed the reasonable, cost-reasonableness criterion of 1,500 square feet per benefited receptor.

R68 and R69 – These receivers represent two single residences located along S. Hampton Road adjacent to the ROW. A continuous noise barrier 12 feet in height and approximately 1,121 feet in length was modeled along the ROW. This barrier would achieve the minimum feasible reduction of 5 dB(A) for two receptors while meeting the 7 dB(A) noise reduction design goal at one of those receptors. However, the square footage of abatement (13,452 square feet or 6,726 square feet per benefited receptor) would exceed the reasonable, cost-reasonableness criterion of 1,500 square feet per benefited receptor.

R70 through R74 - These receivers represent 27 residences in Glenn Heights located along Craddock Drive. For Modifications A and B, undeveloped land would lie between the ROW and the impacted receivers. A barrier would restrict access to the undeveloped property. Therefore, a noise barrier is not proposed for this location.

R75 through R77 - These receivers represent nine residences in the Lindell Estates subdivision located along Overhill Drive. A continuous noise barrier 20 feet in height and approximately 2,686 feet in length was modeled along the ROW. A continuous noise barrier up to 20 feet in height, placed along the ROW would not be sufficient to benefit a majority of the impacted receptors or meet the 7 dB(A) noise reduction design goal. Therefore, a noise barrier is not proposed for this location.

R78 through R81 - These receivers represent nine residences in the Lindell Estates subdivision located along Green Mound Drive. For Modifications A, undeveloped land would lie between the ROW and the impacted receivers. A barrier would restrict access to the undeveloped property. Therefore, a noise barrier is not proposed for this location. For Modification B, a continuous noise barrier 10 feet in height and approximately 817 feet in length was modeled along the ROW. This

barrier would achieve the minimum feasible reduction of 5 dB(A) for three receptors while meeting the 7 dB(A) noise reduction design goal at three of those receptors. However, the square footage of abatement (8,170 square feet or 2,723 square feet per benefited receptor) would exceed the reasonable, cost-reasonableness criterion of 1,500 square feet per benefited receptor.

R83 – This receiver represents a single residence located along S. Uhl Road adjacent to the ROW. A barrier must benefit at least two or more receivers. Therefore, a barrier is not proposed at this location.

R84 – This receiver represents a single residence located along S. Uhl Road adjacent to the ROW. A barrier must benefit at least two or more receivers. Therefore, a barrier is not proposed at this location.

R85 through R93 - These receivers represent 35 residences in the Harmony subdivision located along Gatehouse Drive. In the undeveloped section, receiver numbers were based on the average lot width of 85 feet, as measured in the developed section of the subdivision. A continuous noise barrier 18 feet in height and approximately 3,074 feet in length was modeled along the ROW. A continuous noise barrier up to 18 feet in height, placed along the ROW would not be sufficient to benefit a majority of the impacted receptors but would meet the 7 dB(A) noise reduction design goal for at least one receiver. Therefore, a noise barrier is not proposed for this location.

Proposed Abatement

A noise barrier would be feasible and reasonable for the following impacted receptors, and therefore, is proposed for incorporation into the project depending on the selected alternative (**Table 3**).

R70 through R74 - These receivers represent 27 residences in Glenn Heights located along Craddock Drive along all the alternatives, but not along the ROW of Modification A or B. Based on preliminary calculations, a noise barrier approximately 1,807 feet in length and 14 feet in height would reduce noise levels by at least 5 dB(A) for 19 benefited receptors and meet the noise reduction design goal of 7 dB(A) for 10 of those receptors. With a total area of abatement of 25,298 square feet or 1,100 square feet per benefited receptor, the barrier would also be cost reasonable.

Table 3. Noise Barrier Proposal (preliminary)

Barrier	Representative Receivers	Total # Benefited	Length (feet)	Height (feet)	Total Sq. Ft.	Sq. Ft. per Benefited Receptor
1	R70 through R74 (Not for Modification A or B)	19	1,807	14	25,298	1,100

Any subsequent project design changes may require a reevaluation of this preliminary noise barrier proposal. The final decision to construct the proposed noise barrier will not be made until completion of the project design, utility evaluation, and polling of all benefited and adjacent property owners and residents.

Once the preferred alternative is selected in the DEIS, the mitigative measures presented above would be considered and the traffic noise models would be updated. Likewise, any necessary additional modeling and analysis would be performed which may incorporate additional project design details with the potential to change the impacts. Results of the traffic noise modeling and analysis performed for the preferred alternative would be presented in the FEIS.

Noise Contours for Land Use Planning

To avoid noise impacts that may result from future development of properties adjacent to the project, local officials responsible for land use control programs must ensure, to the maximum extent possible, that no new activities are planned or constructed along or within the following predicted (2045) noise impact contours. The future 66 dB(A) and 71 dB(A) noise impact contour for predicted traffic volumes are shown in **Table 4**.

Table 4. Traffic Noise Contours

Land Use	Impact Contour*	Distance from Right of Way	Alignment
NAC category B & C	66 dB(A)	25 Feet	Common Alignment
NAC category E†	71 dB(A)	Within ROW	Common Alignment
NAC category B & C	66 dB(A)	Within ROW	Alt 1, 2, 3, and 4
NAC category E†	71 dB(A)	Within ROW	Alt 1, 2, 3, and 4

* Impact contours are one dB(A) lower than the NAC per category to reflect impacts that would occur as a result of approaching the NAC for the respective contours.
† The undeveloped areas identified above were based on aerial review and field verification conducted in January 2022. Permit research was conducted using the best available online data from the City of Cedar Hill, Ovilla, Glenn Heights, and Red Oak as of January 2022. This research was based on available online permit search and address information from the county appraisal district database.

Construction Noise

Noise associated with the construction of the project is difficult to predict. Heavy machinery, the major source of noise in construction, is constantly moving in unpredictable patterns. However, construction normally occurs during daylight hours when occasional loud noises are more tolerable. None of the receptors is expected to be exposed to construction noise for a long duration; therefore, any extended disruption of normal activities is not expected. Provisions will be included in the plans and specifications that require the contractor to make every reasonable effort to minimize construction noise through abatement measures such as work-hour controls and proper maintenance of muffler systems.

Local Official Notification and Date of Public Knowledge Statement

A copy of this traffic noise analysis will be available to local officials. On the date of the environmental decision for this project (Date of Public Knowledge), FHWA and TxDOT are no longer responsible for providing noise abatement for new development adjacent to the project.

List of Attachments

A. Map figures

   Figure 1: Project Vicinity Map

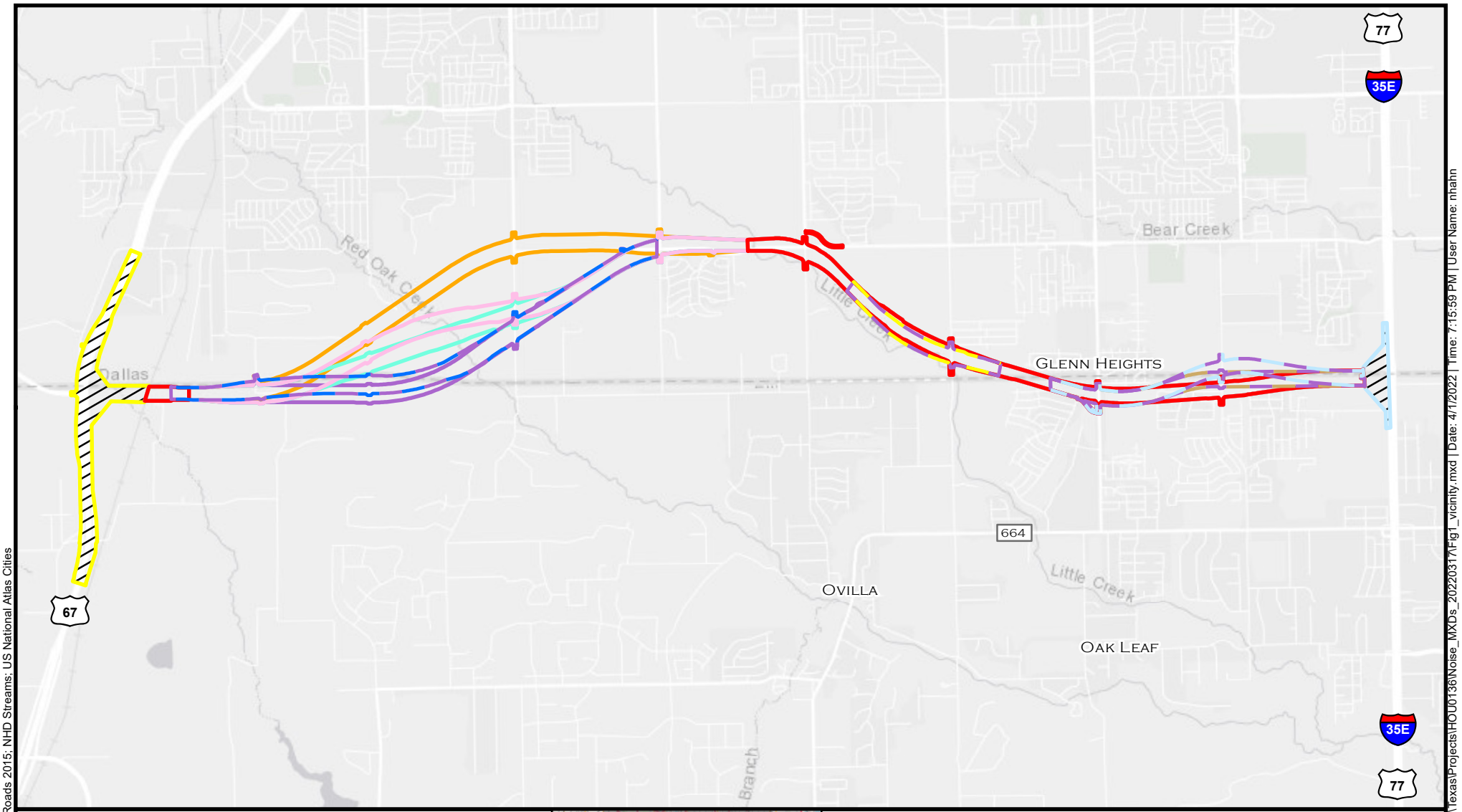
   Figure 2: Noise Receiver Maps

B. Traffic data

C. Field measurements data sheets

Attachment A: Map figures

Figure 1: Project Vicinity Map



- Modification A
- Modification B
- Modification C
- Modification D
- Common Alignment Proposed ROW
- Alternative 1 Proposed ROW
- Alternative 2 Proposed ROW
- Alternative 3 Proposed ROW
- Alternative 4 Proposed ROW
- US 67 Project Area (Evaluated Under Separate Document)
- IH 35E Project Area (Evaluated Under Separate Document)

Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Vicinity Map
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 0.45 0.9 Miles

1:60,000

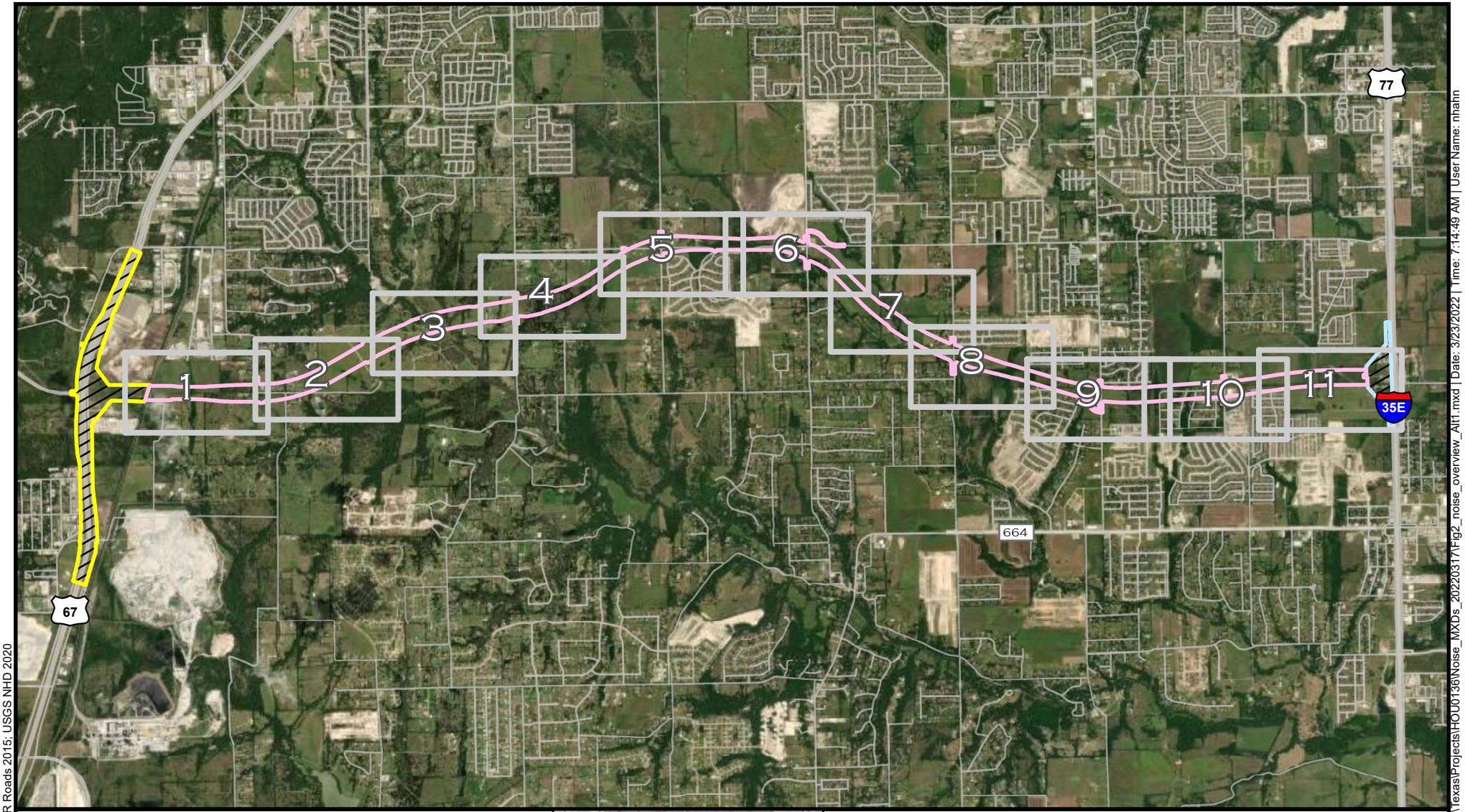
FIGURE 1

DATE:
April 2022

Sources: ESRI Gray Scale; Open Street Map; TIGER Roads 2015; NHD Streams; US National Atlas Cities

Path: C:\Users\nhahn\Documents\EPRUSA\State_Data\Texas\Projects\HOU0136\Noise_MXDs_20220317\Fig1_vicinity.mxd | Date: 4/1/2022 | Time: 7:15:59 PM | User Name: nhahn

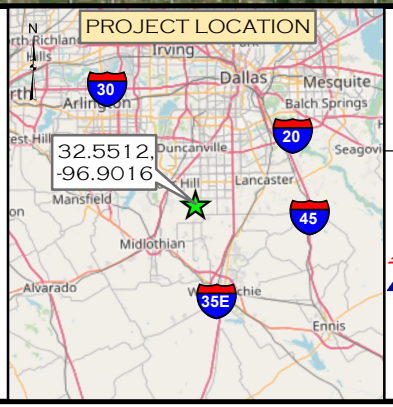
Figure 2: Noise Receiver Maps



ALTERNATIVE 1 PROPOSED

US 67 PROJECT AREA (EVALUATED UNDER SEPARATE DOCUMENT)

IH 35E PROJECT AREA (EVALUATED UNDER SEPARATE DOCUMENT)



LOOP 9, SEGMENT A: US 67 TO IH 35E
CSJ: 2964-10-006
NOISE RECEIVER LOCATIONS OVERVIEW MAP - ALT 1
DALLAS AND ELLIS COUNTIES, TEXAS

Texas Department of Transportation

N

0 2,400 4,800 Feet

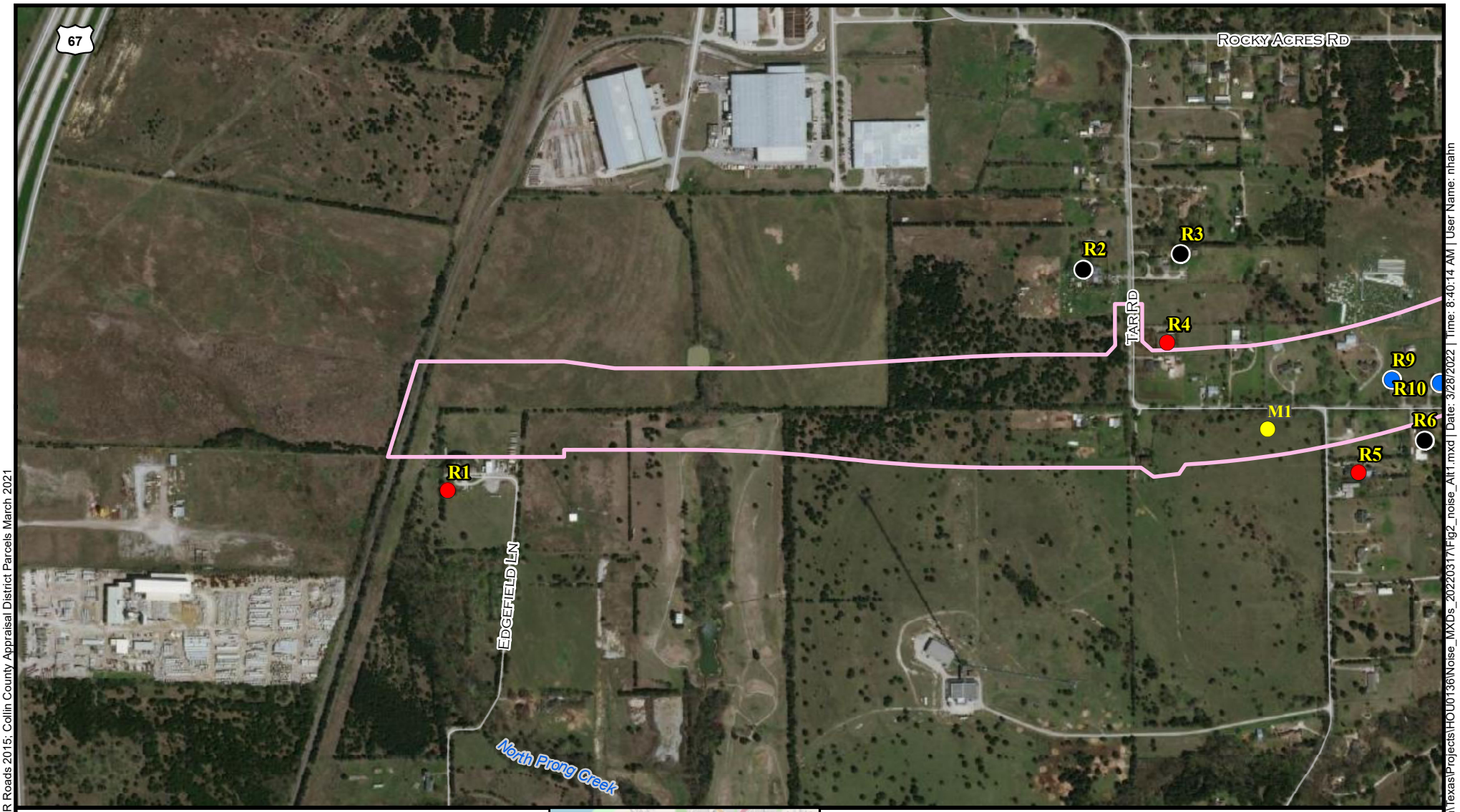
1:60,000

FIGURE 2

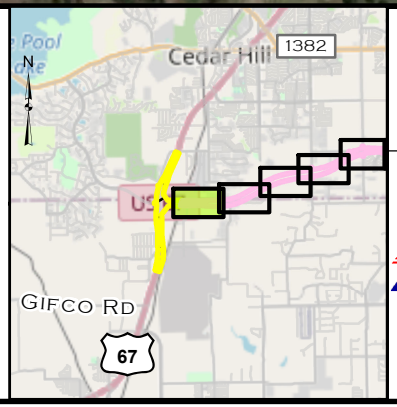
DATE:
MARCH 2022

Sources: ESRI Imagery 2021; Open Street Map; TIGER Roads 2015; USGS NHD 2020

Path: C:\Users\nhahn\Documents\EPRUSA\State_Data\Texas\Projects\HOU0136\Noise_MXDs_20220317\Fig2_noise_overview_Alt1.mxd | Date: 3/23/2022 | Time: 7:14:49 AM | User Name: nhahn



- Non-Impacted Receiver
- Displaced Receiver within the ROW
- Impacted Receiver
- Measurement Point
- Alternative 1 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 1
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

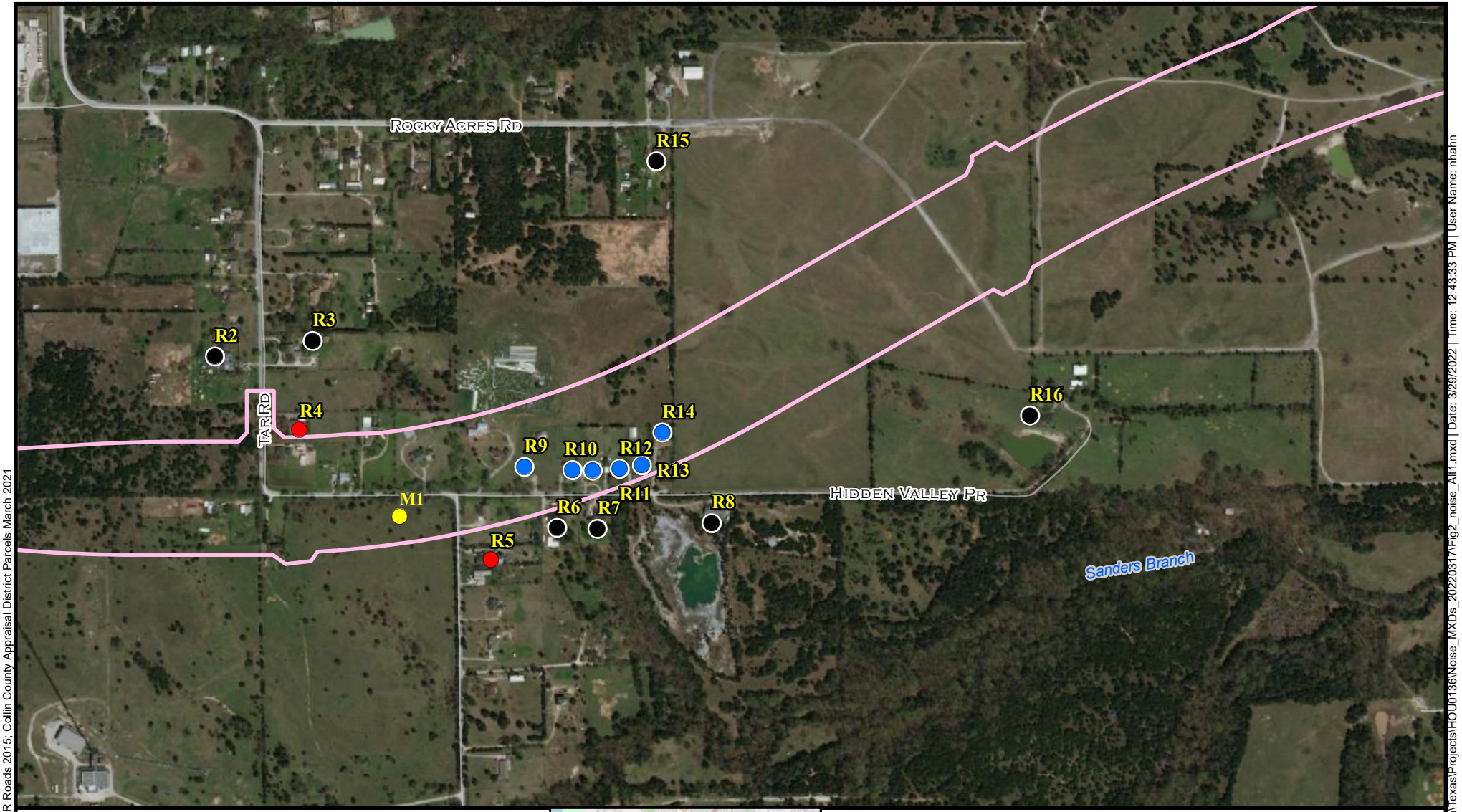
1:8,977

FIGURE 2
SHEET 1 OF 11

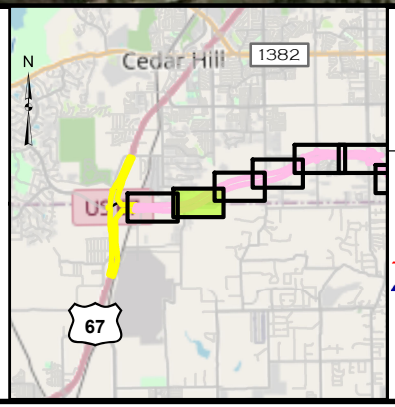
DATE:
March 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

Path: C:\Users\nhahn\Documents\EPRUSA\State_Data\Texas\Projects\HOU0136\Noise_MXDs_20220317\Fig2_noise_Alt1.mxd | Date: 3/28/2022 | Time: 8:40:14 AM | User Name: nhahn



- Non-Impacted Receiver
- Displaced Receiver within the ROW
- Impacted Receiver
- Measurement Point
- Alternative 1 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 1
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

1:8,977

FIGURE 2
SHEET 2 OF 11

DATE:
March 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

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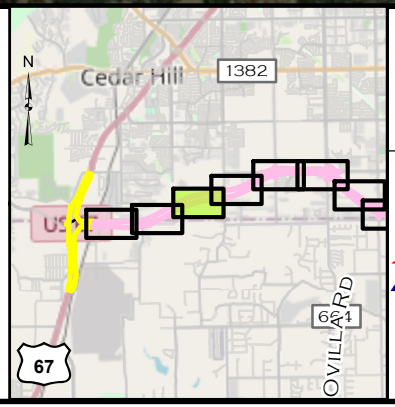
Non-Impacted Receiver

Alternative 1 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 1
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

1:8,977

FIGURE 2
SHEET 3 OF 11

DATE:
MARCH 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

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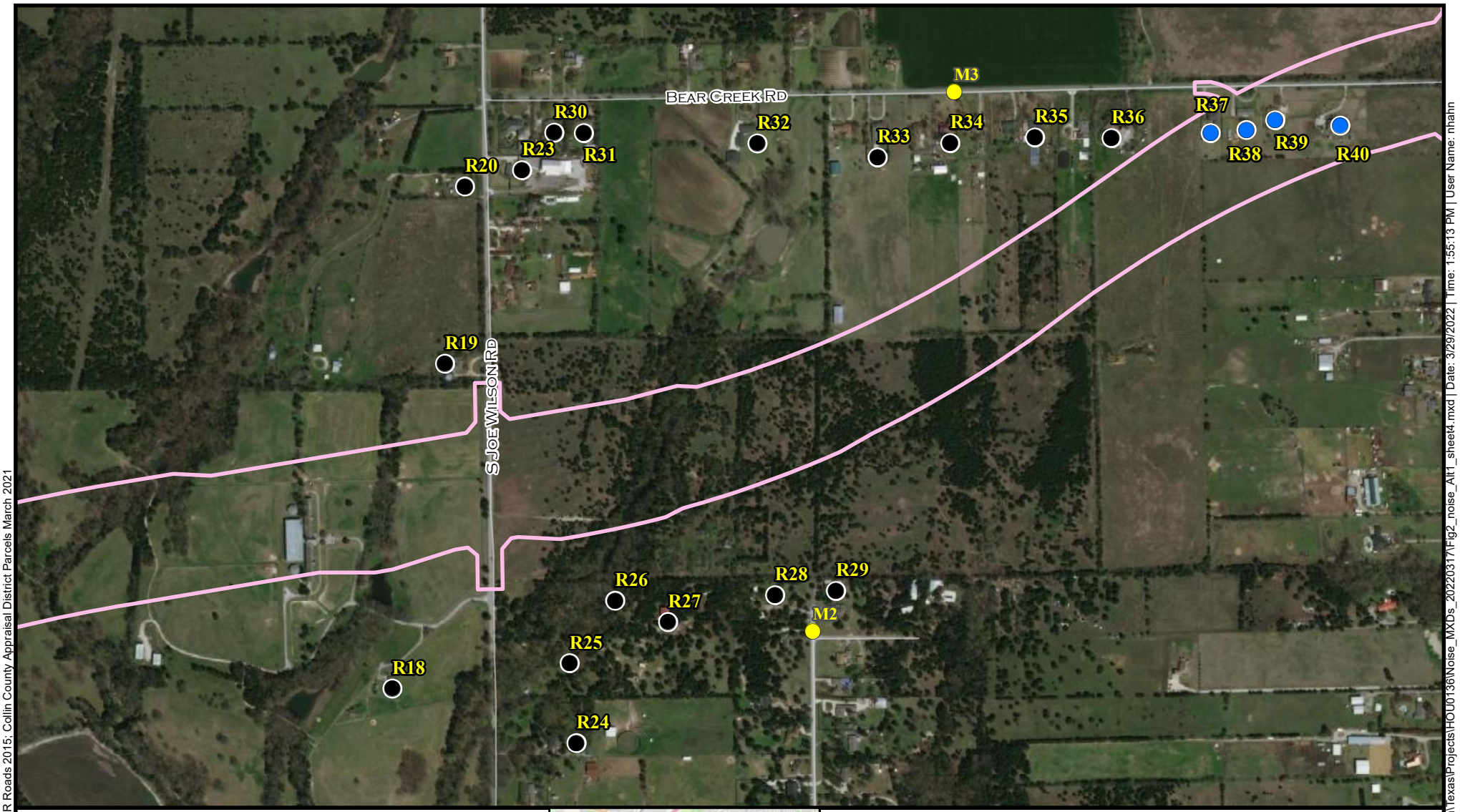
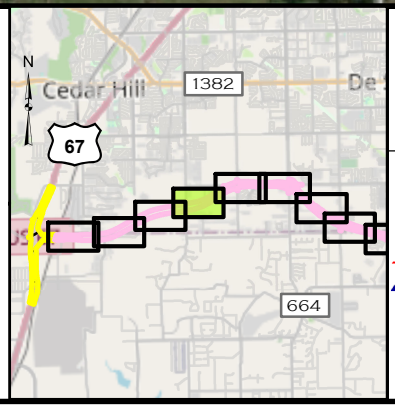


- Non-Impacted Receiver
- Displaced Receiver within the ROW
- Measurement Point
- Alternative 1 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 1
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

1:8,977

FIGURE 2
SHEET 4 OF 11

DATE:
MARCH 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

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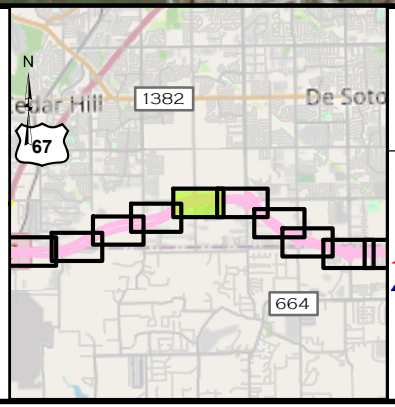
- Non-Impacted Receiver
- Displaced Receiver within the ROW
- Impacted Receiver
- Measurement Point
- Alternative 1 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 1
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

1:8,977

FIGURE 2
SHEET 5 OF 11

DATE:
MARCH 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

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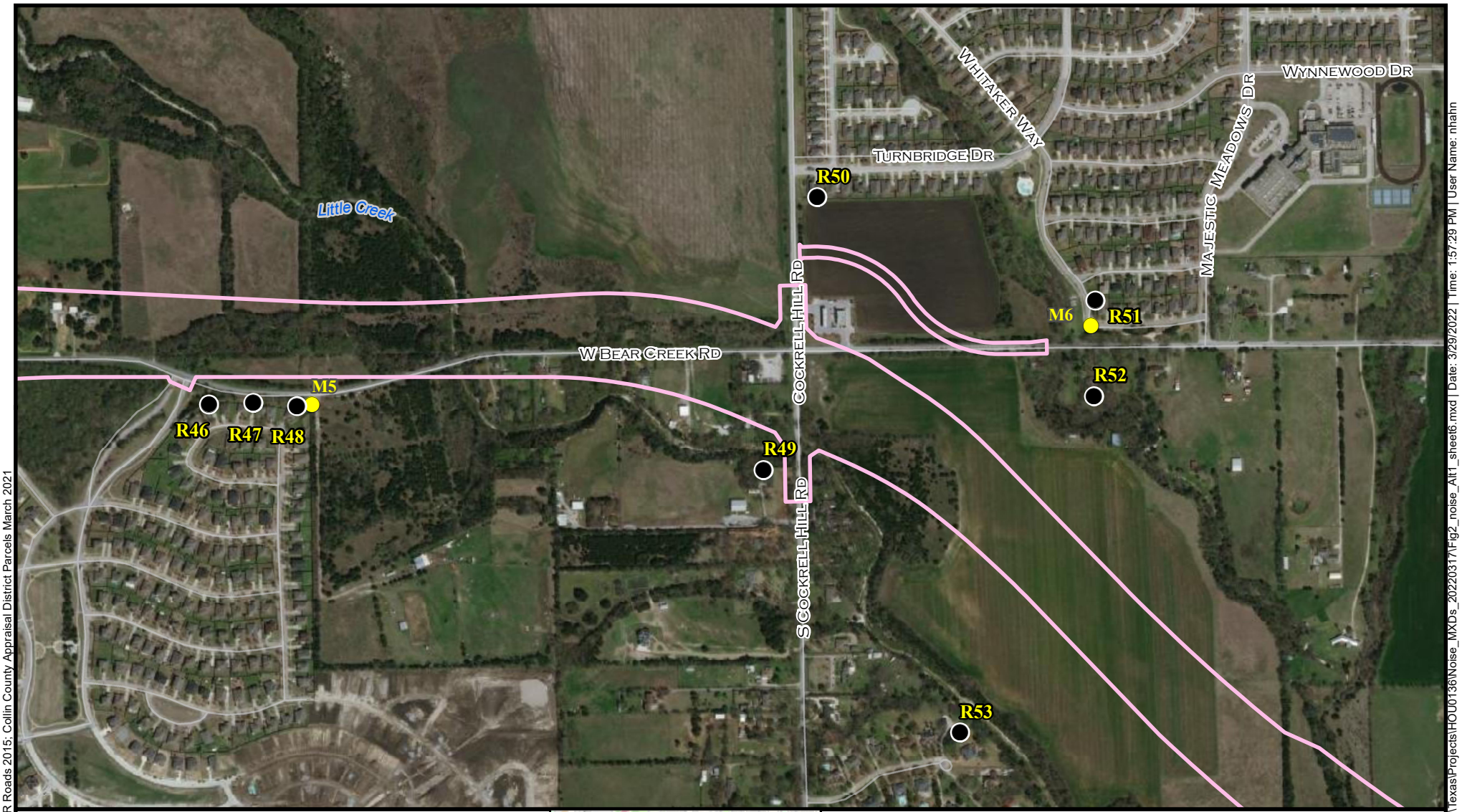
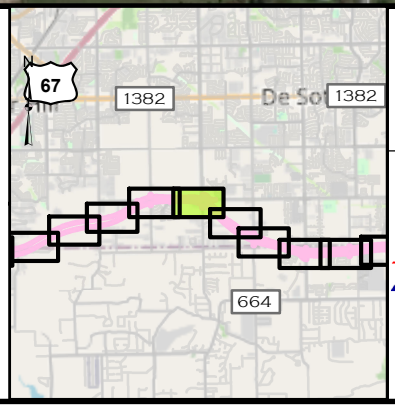


Non-Impacted Receiver
Measurement Point
Alternative 1 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 1
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

1:8,977

FIGURE 2
SHEET 6 OF 11

DATE:
MARCH 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

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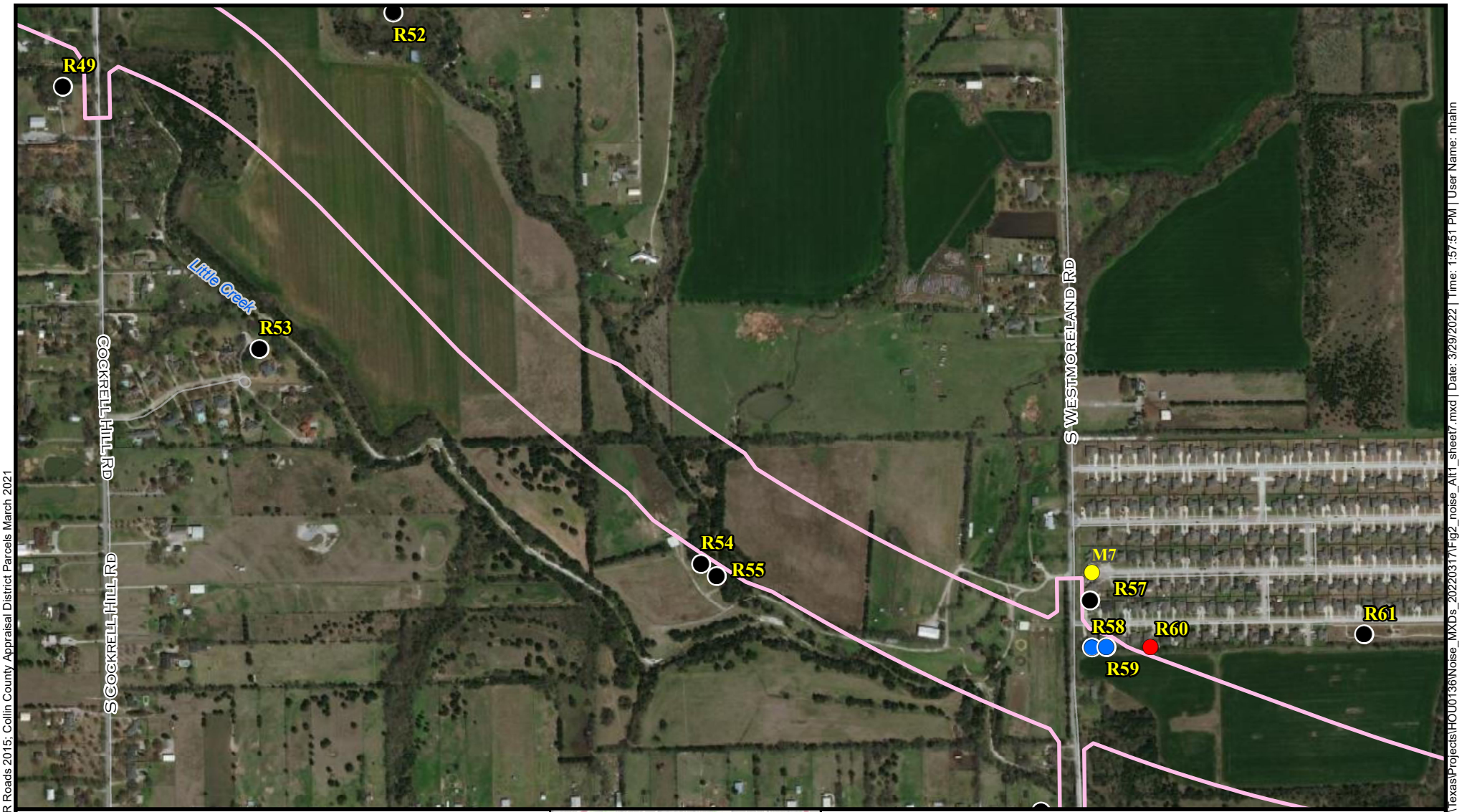
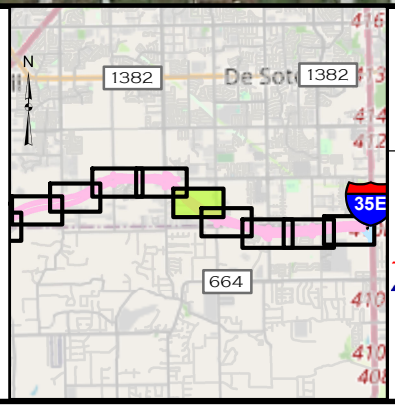


- Non-Impacted Receiver
- Displaced Receiver within the ROW
- Impacted Receiver
- Measurement Point
- Alternative 1 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 1
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

1:8,977

FIGURE 2
SHEET 7 OF 11

DATE:
MARCH 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

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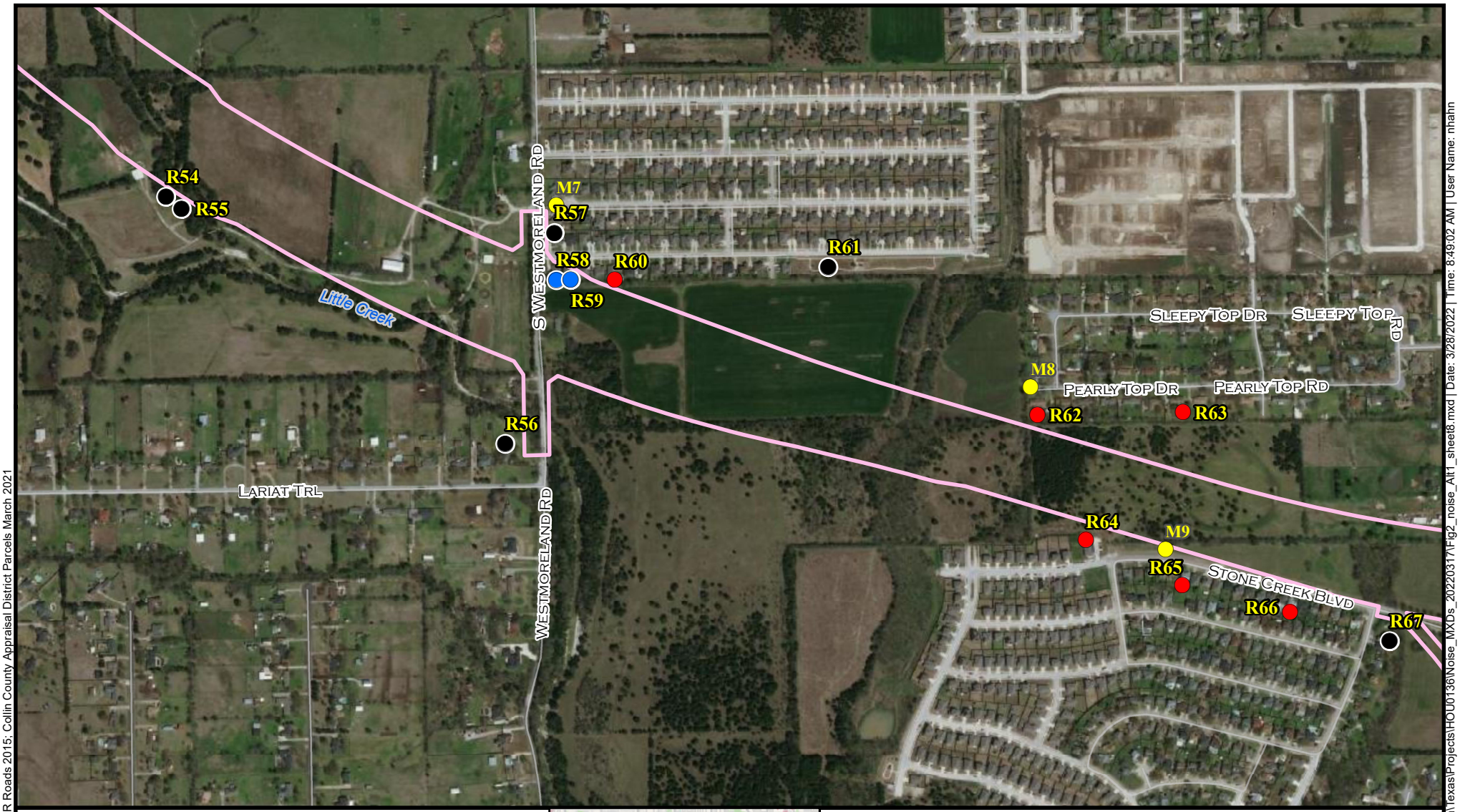
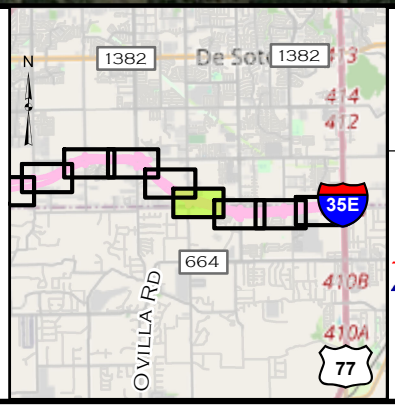


- Non-Impacted Receiver
- Displaced Receiver within the ROW
- Impacted Receiver
- Measurement Point
- Alternative 1 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 1
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

1:8,977

FIGURE 2
SHEET 8 OF 11

DATE:
March 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

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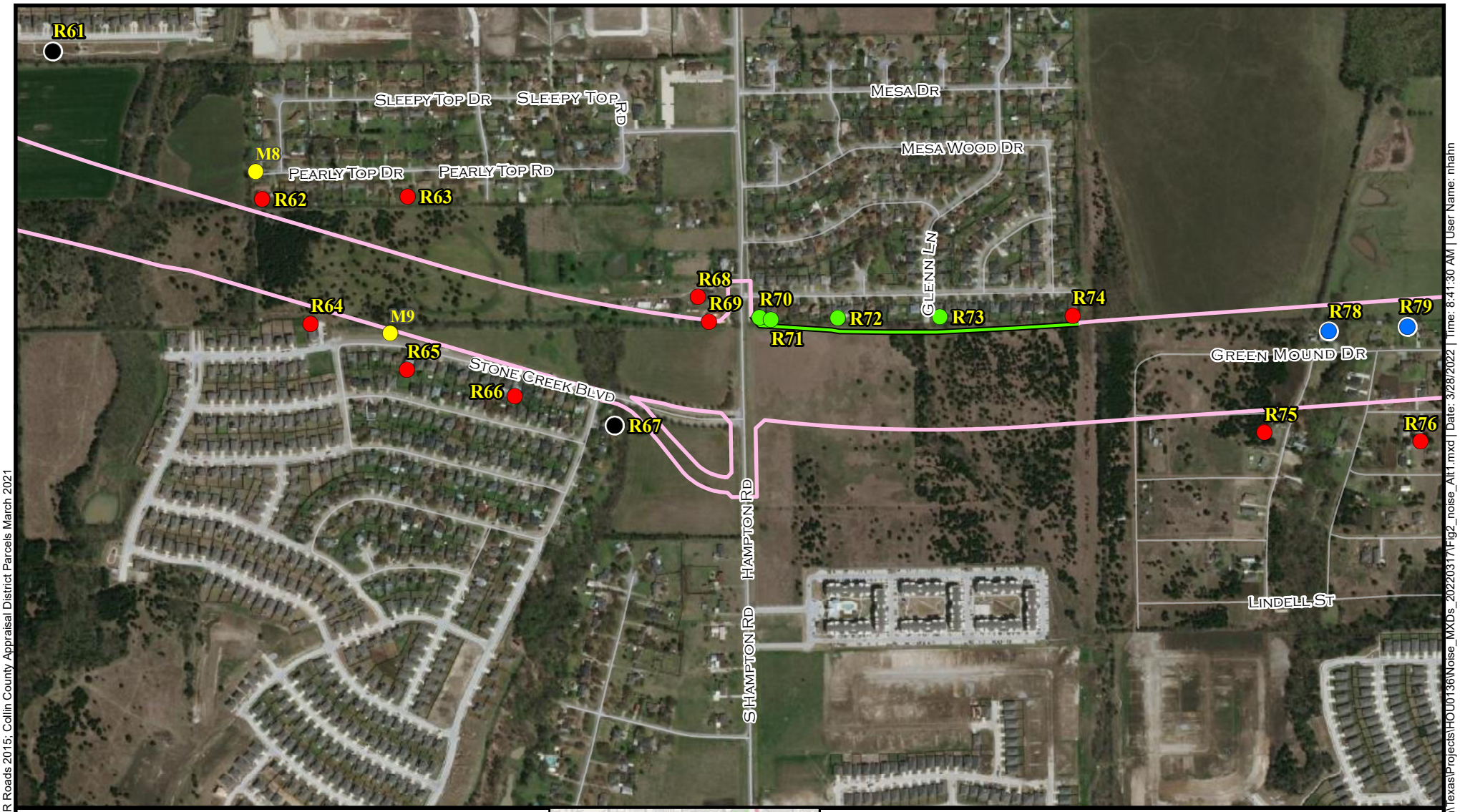
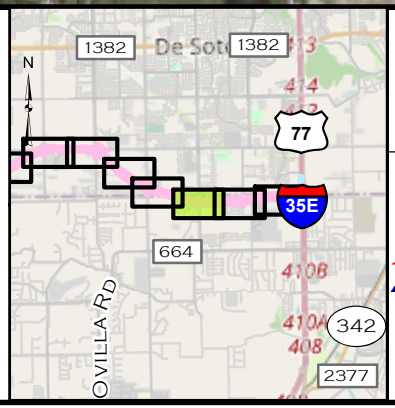


- Non-Impacted Receiver
- Displaced Receiver within the ROW
- Benefited Receiver
- Impacted Receiver
- Measurement Point
- Proposed Barrier
- Alternative 1 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 1
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

1:8,977

FIGURE 2
SHEET 9 OF 11

DATE:
March 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

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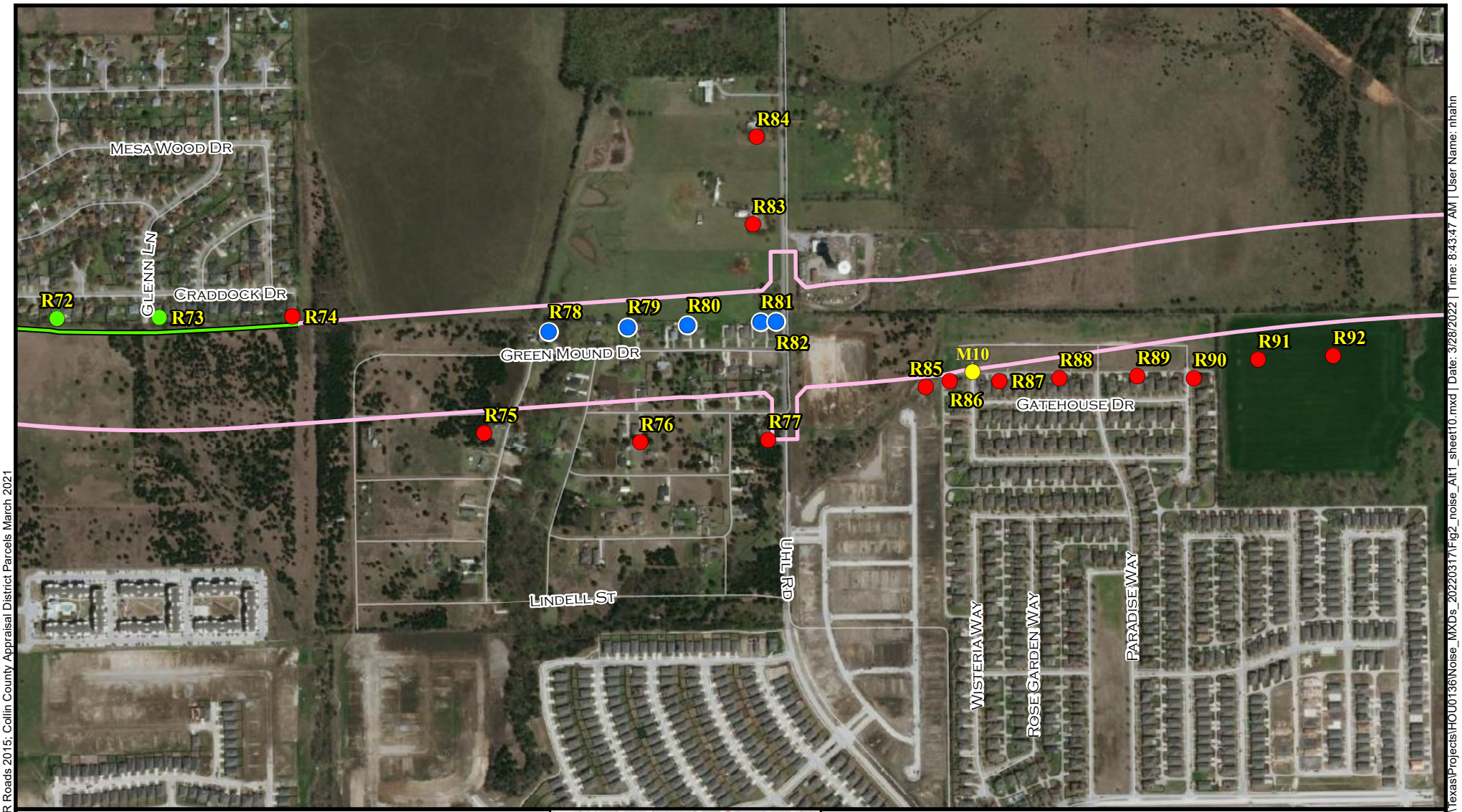
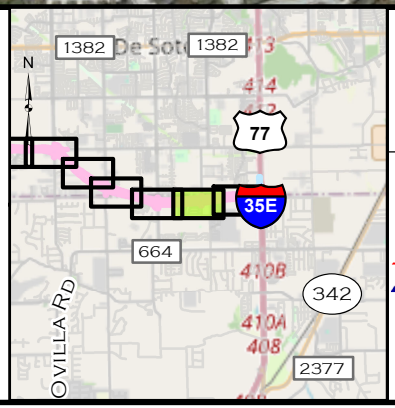


- Displaced Receiver within the ROW
- Benefited Receiver
- Impacted Receiver
- Measurement Point
- Proposed Barrier
- Alternative 1 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 1
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

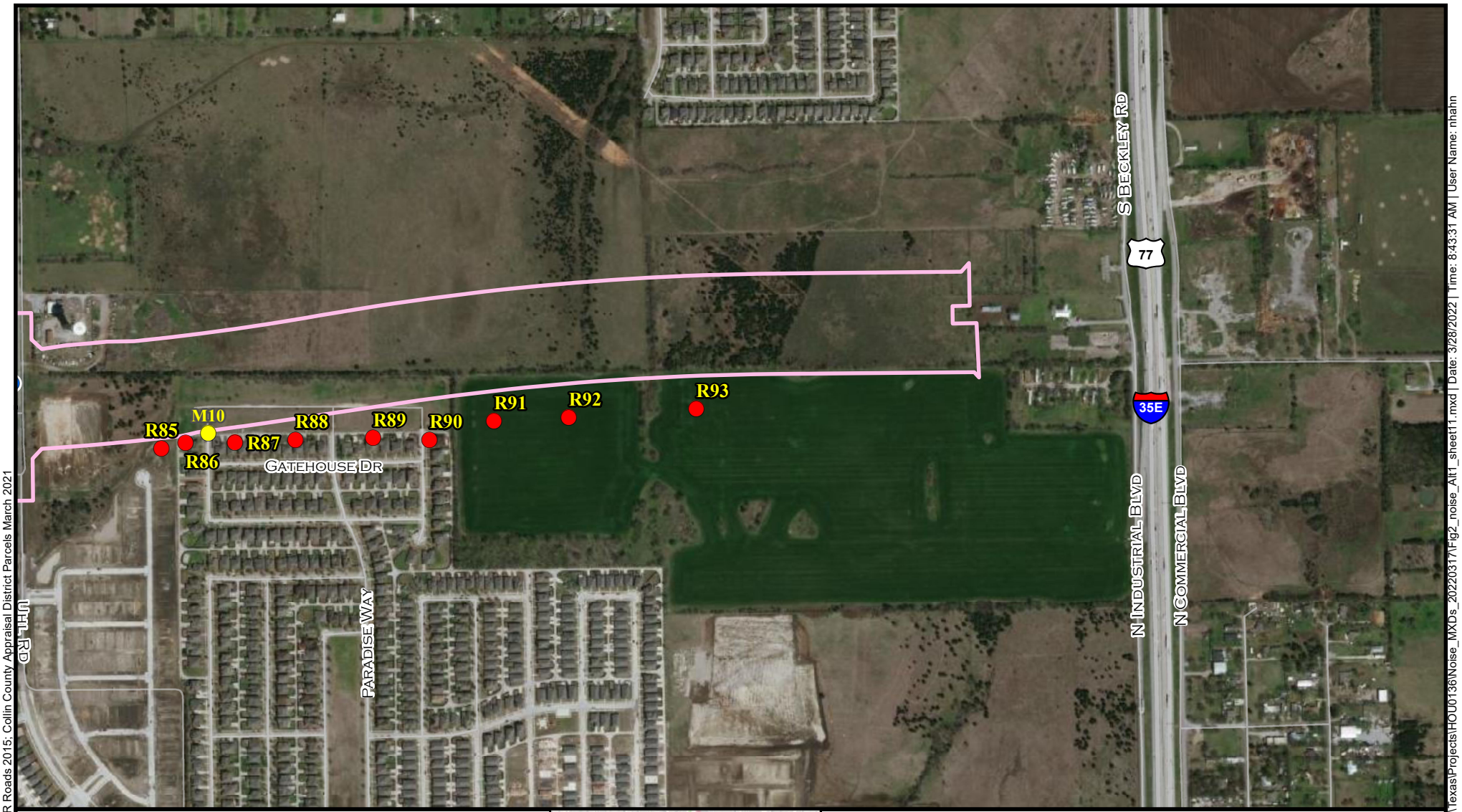
1:8,977

FIGURE 2
SHEET 10 OF 11

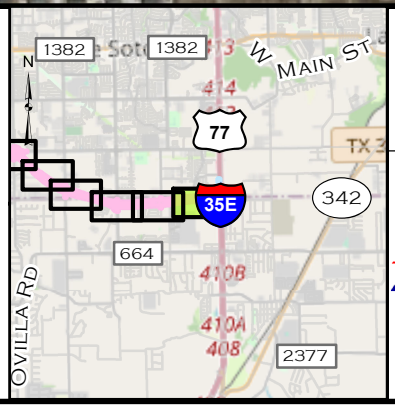
DATE:
March 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

Path: C:\Users\nhahn\Documents\EPRUSA\State_Data\Texas\Projects\HOU0136\Noise_MXDs_20220317\Fig2_noise_Alt1_sheet10.mxd | Date: 3/28/2022 | Time: 8:43:47 AM | User Name: nhahn



- Displaced Receiver within the ROW
- Impacted Receiver
- Measurement Point
- Alternative 1 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 1
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

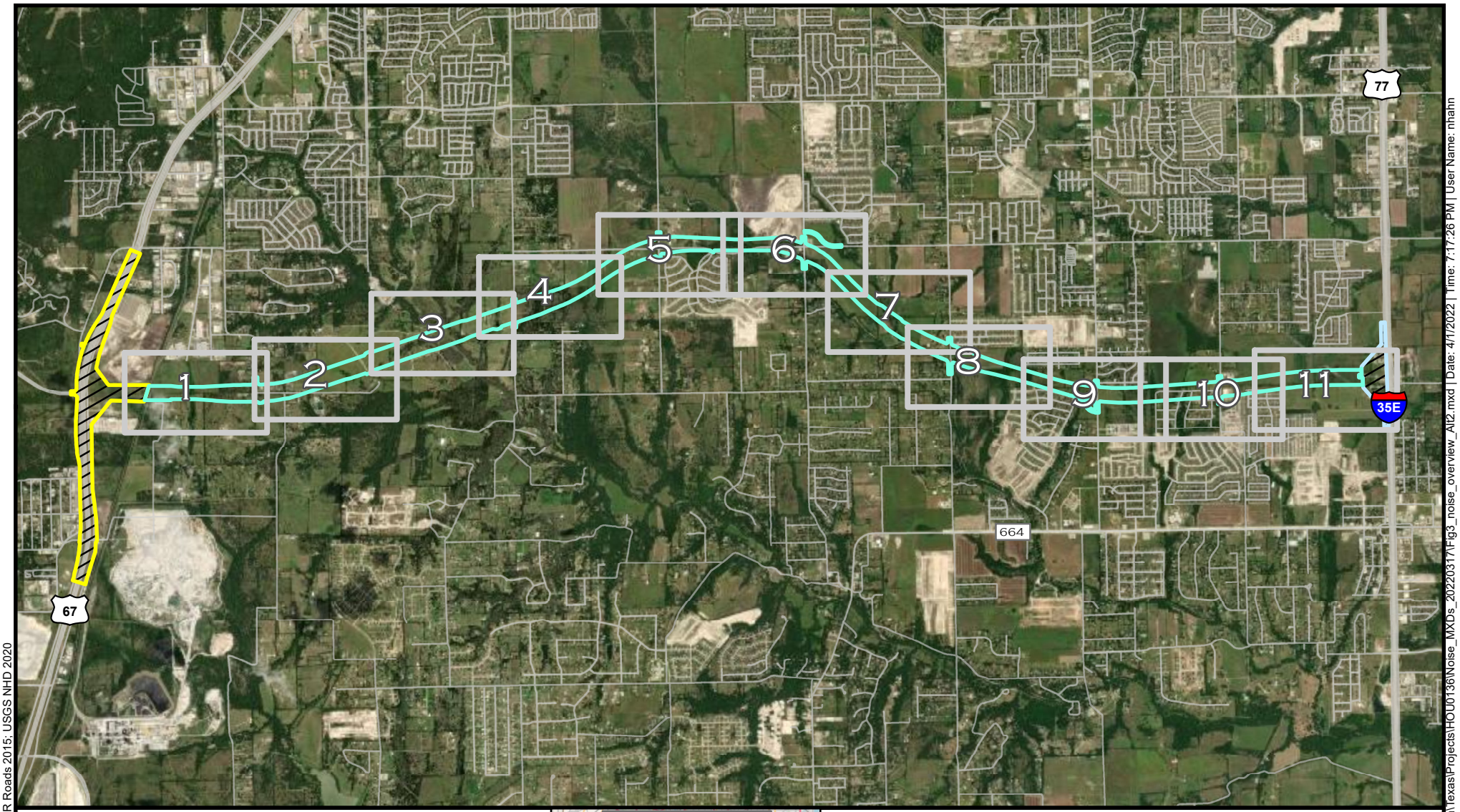
1:8,977

FIGURE 2
SHEET 11 OF 11

DATE:
MARCH 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

Path: C:\Users\nhahn\Documents\EPRUSA\State_Data\Texas\Projects\HOU0136\Noise_MXDs_20220317\Fig2_noise_Alt1_sheet11.mxd | Date: 3/28/2022 | Time: 8:43:31 AM | User Name: nhahn



ALTERNATIVE 2 PROPOSED ROW

US 67 PROJECT AREA (EVALUATED UNDER SEPARATE DOCUMENT)

IH 35E PROJECT AREA (EVALUATED UNDER SEPARATE DOCUMENT)

LOOP 9, SEGMENT A: US 67 TO IH 35E
CSJ: 2964-10-006
NOISE RECEIVER LOCATIONS OVERVIEW MAP - ALT 2
DALLAS AND ELLIS COUNTIES, TEXAS

Texas Department of Transportation

N

0 2,500 5,000 Feet

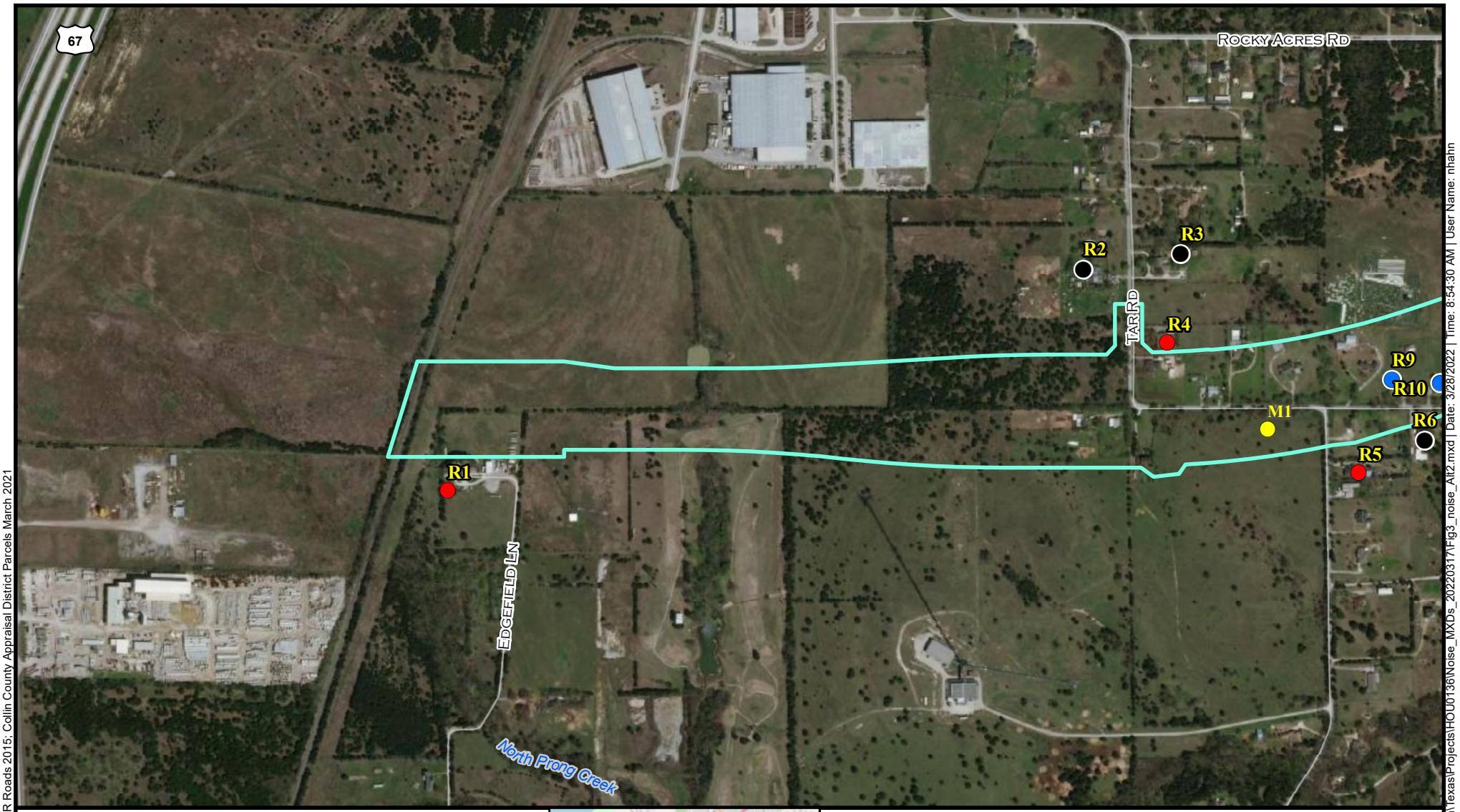
1:60,000

FIGURE 3

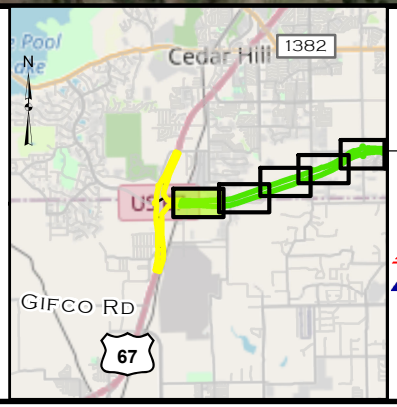
DATE:
APRIL 2022

Sources: ESRI Imagery 2021; Open Street Map; TIGER Roads 2015; USGS NHD 2020

Path: C:\Users\nhahn\Documents\EPRUSA\State_Data\Texas\Projects\HOU0136\Noise_MXDs_20220317\Fig3_noise_overview_Alt2.mxd | Date: 4/1/2022 | Time: 7:17:26 PM | User Name: nhahn



- Non-Impacted Receiver
- Displaced Receiver within the ROW
- Impacted Receiver
- Measurement Point
- Alternative 2 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 2
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

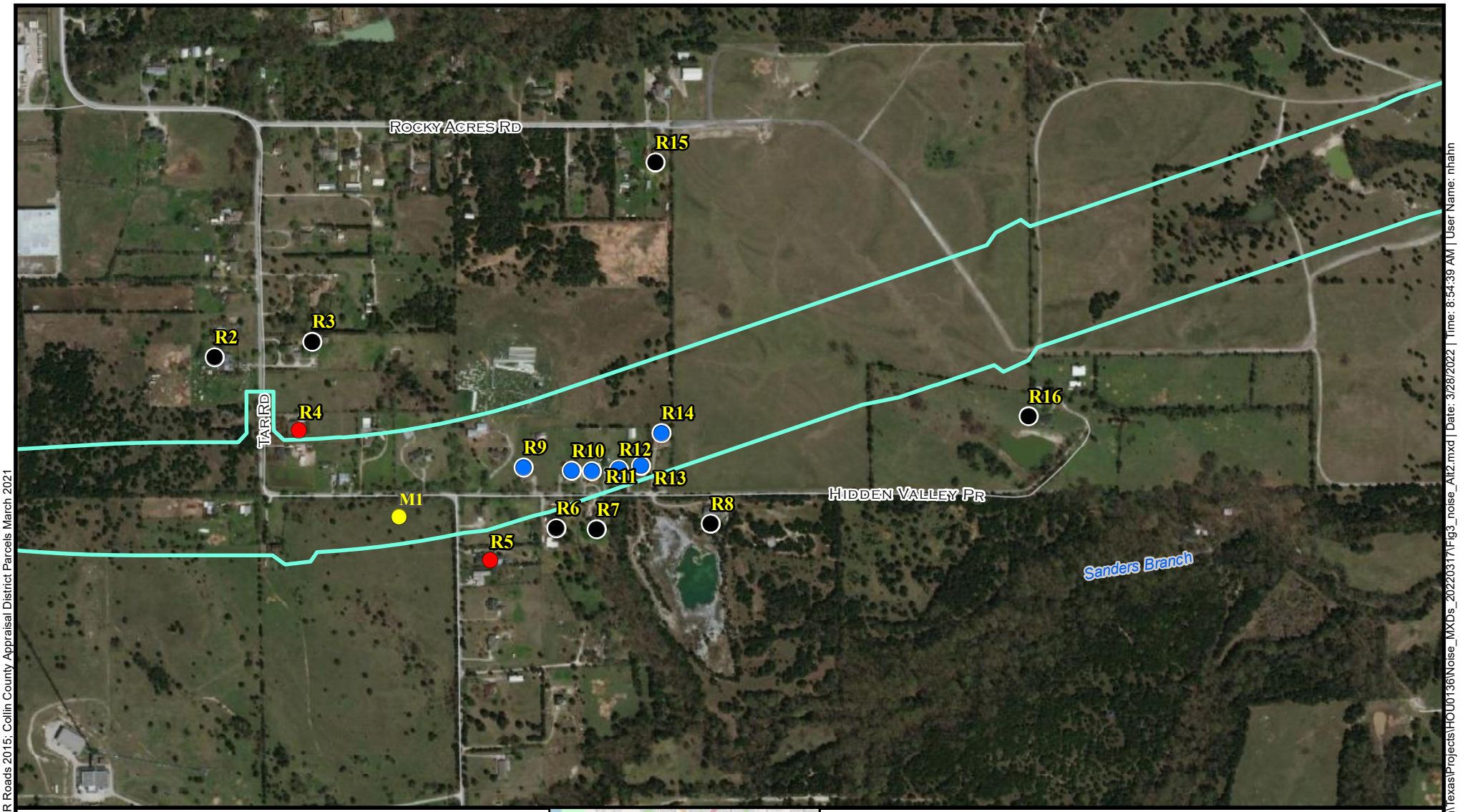
1:8,977

FIGURE 3
SHEET 1 OF 11

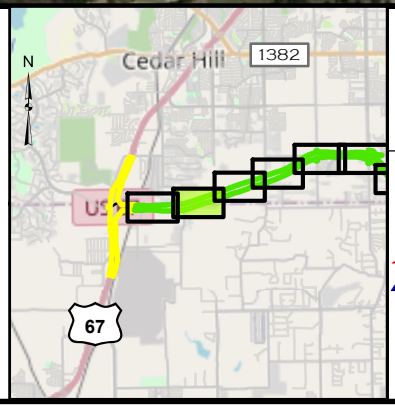
DATE:
March 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

Path: C:\Users\nhahn\Documents\EPRUSA\State_Data\Texas\Projects\HOU0136\Noise_MXDs_20220317\Fig3_noise_Alt2.mxd | Date: 3/28/2022 | Time: 8:54:30 AM | User Name: nhahn



- Non-Impacted Receiver
- Displaced Receiver within the ROW
- Impacted Receiver
- Measurement Point
- Alternative 2 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 2
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

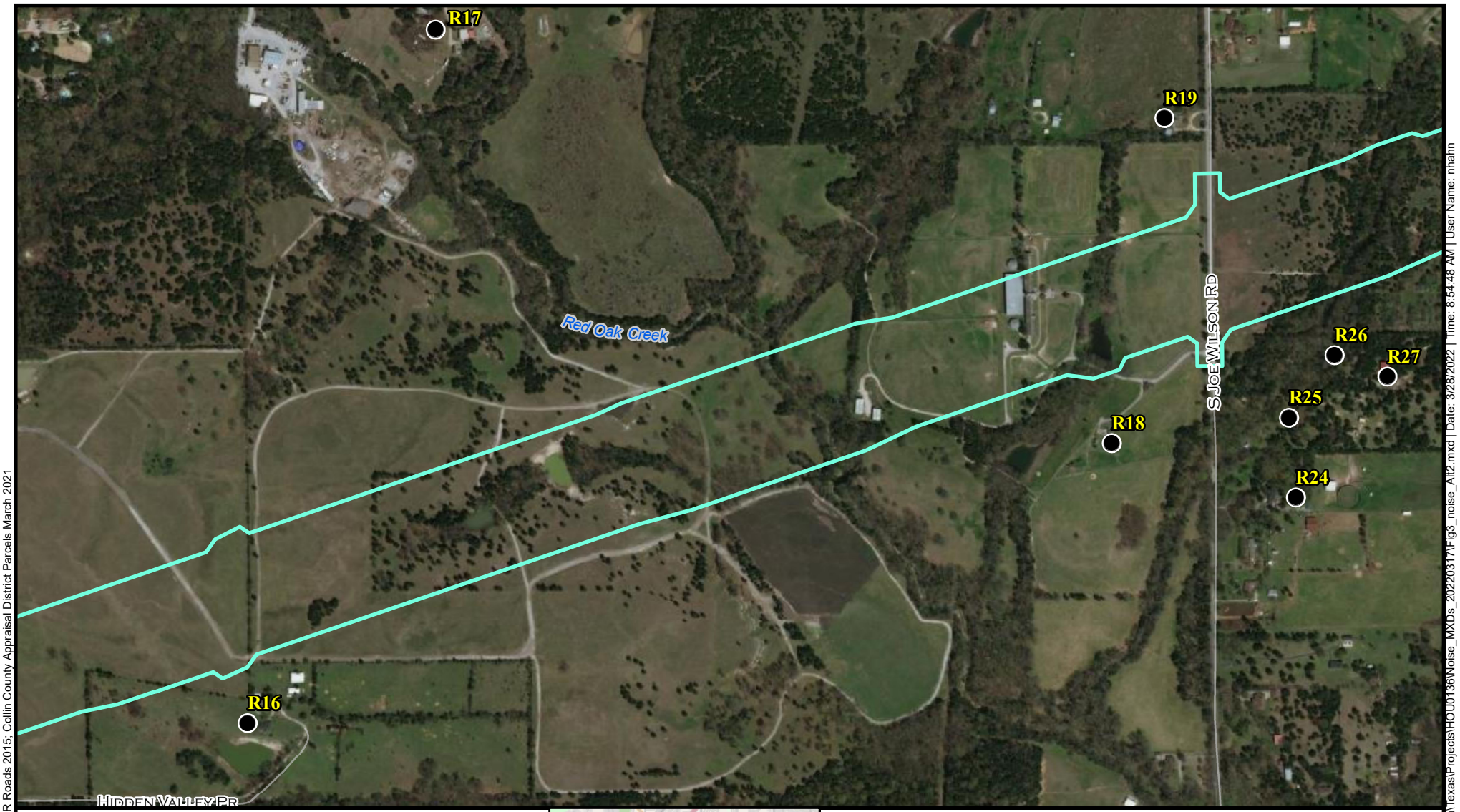
1:8,977

FIGURE 3
SHEET 2 OF 11

DATE:
MARCH 2022

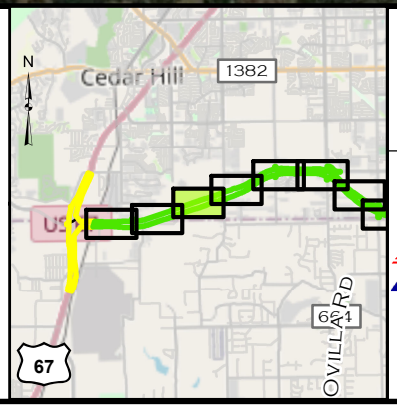
Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

Path: C:\Users\nhahn\Documents\EPRUSA\State_Data\Texas\Projects\HOU0136\Noise_MXDs_20220317\Fig3_noise_Alt2.mxd | Date: 3/28/2022 | Time: 8:54:39 AM | User Name: nhahn



Non-Impacted Receiver

Alternative 2 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 2
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

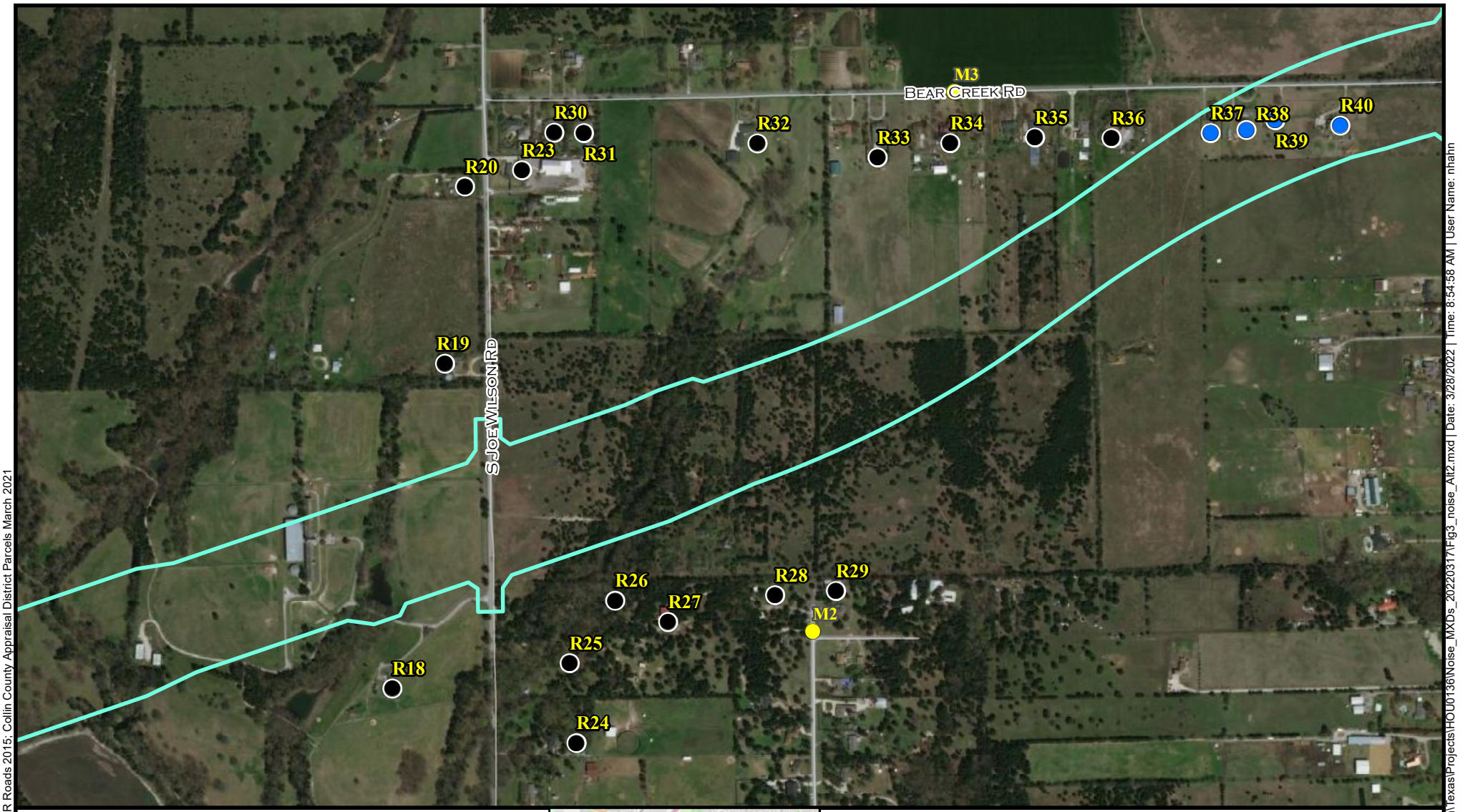
1:8,977

FIGURE 3
SHEET 3 OF 11

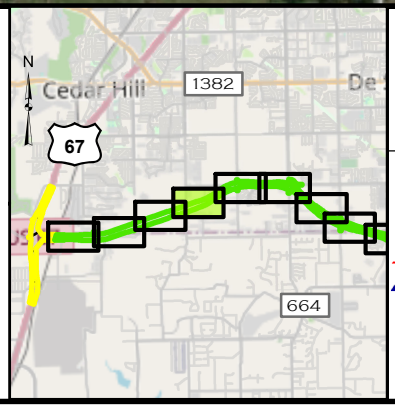
DATE:
MARCH 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

Path: C:\Users\nhahn\Documents\EPRUSA\State_Data\Texas\Projects\HOU0136\Noise_MXDs_20220317\Fig3_noise_Alt2.mxd | Date: 3/28/2022 | Time: 8:54:48 AM | User Name: nhahn



- Non-Impacted Receiver
- Displaced Receiver within the ROW
- Measurement Point
- Alternative 2 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 2
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

1:8,977

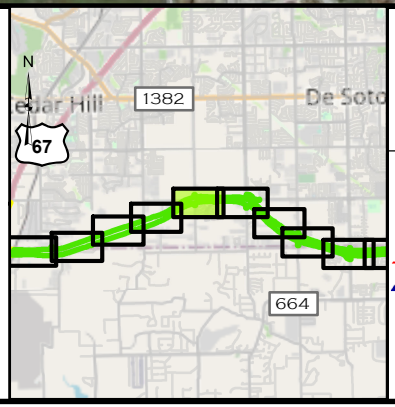
FIGURE 3
SHEET 4 OF 11

DATE:
March 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

Path: C:\Users\nhahn\Documents\EPRUSA\State_Data\Texas\Projects\HOU0136\Noise_MXDs_20220317\Fig3_noise_Alt2.mxd | Date: 3/28/2022 | Time: 8:54:58 AM | User Name: nhahn

- Non-Impacted Receiver
- Displaced Receiver within the ROW
- Impacted Receiver
- Measurement Point
- Alternative 2 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 2
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

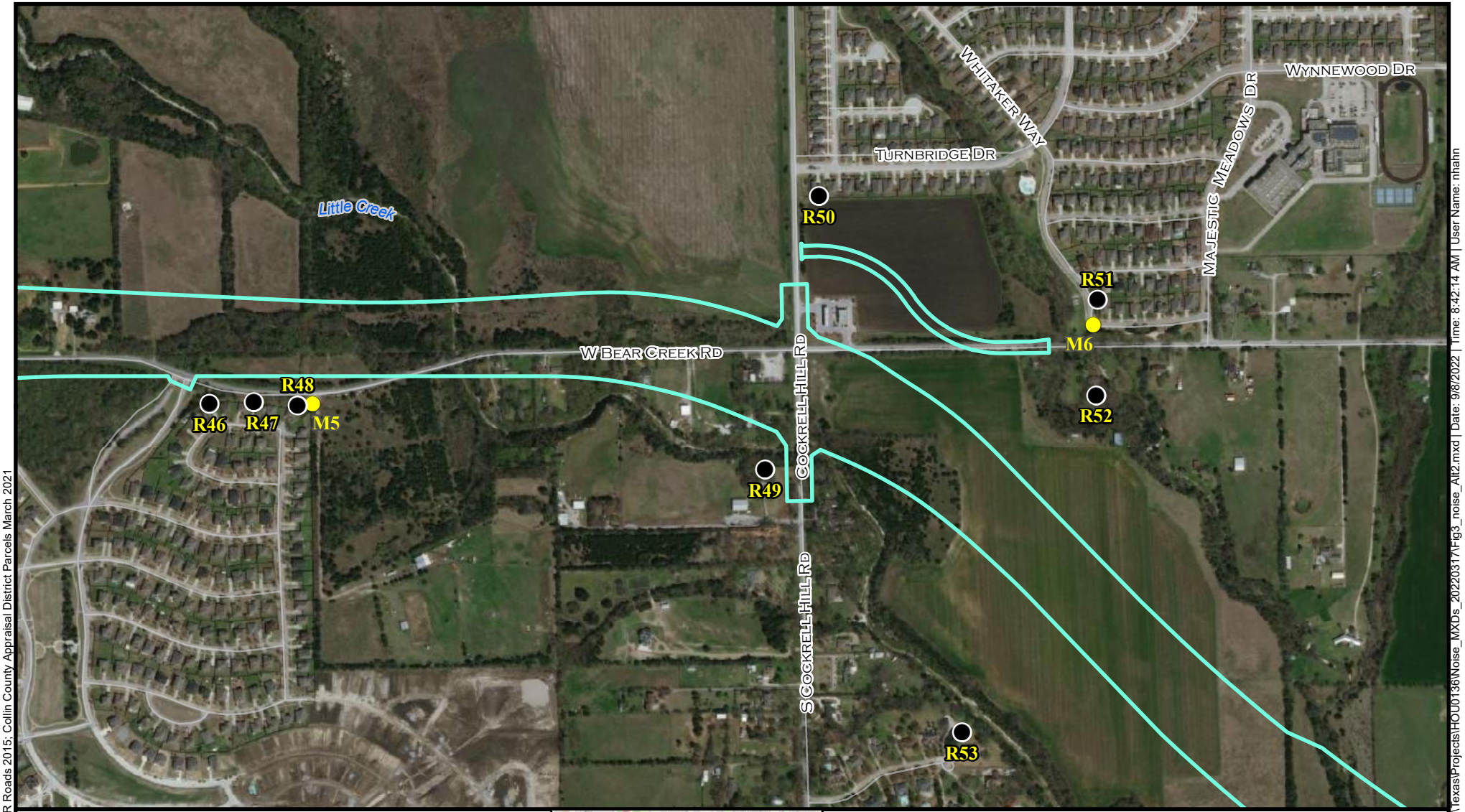
1:8,977

FIGURE 3
SHEET 5 OF 11

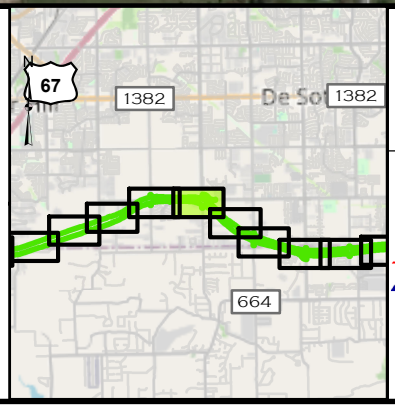
DATE:
MAY 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

Path: C:\Users\nhahn\Documents\EPRUSA\State_Data\Texas\Projects\HOU0136\Noise_MXDs_20220317\Fig3_noise_Alt2.mxd | Date: 5/20/2022 | Time: 8:02:11 AM | User Name: nhahn



Non-Impacted Receiver
Measurement Point
Alternative 2 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 2
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

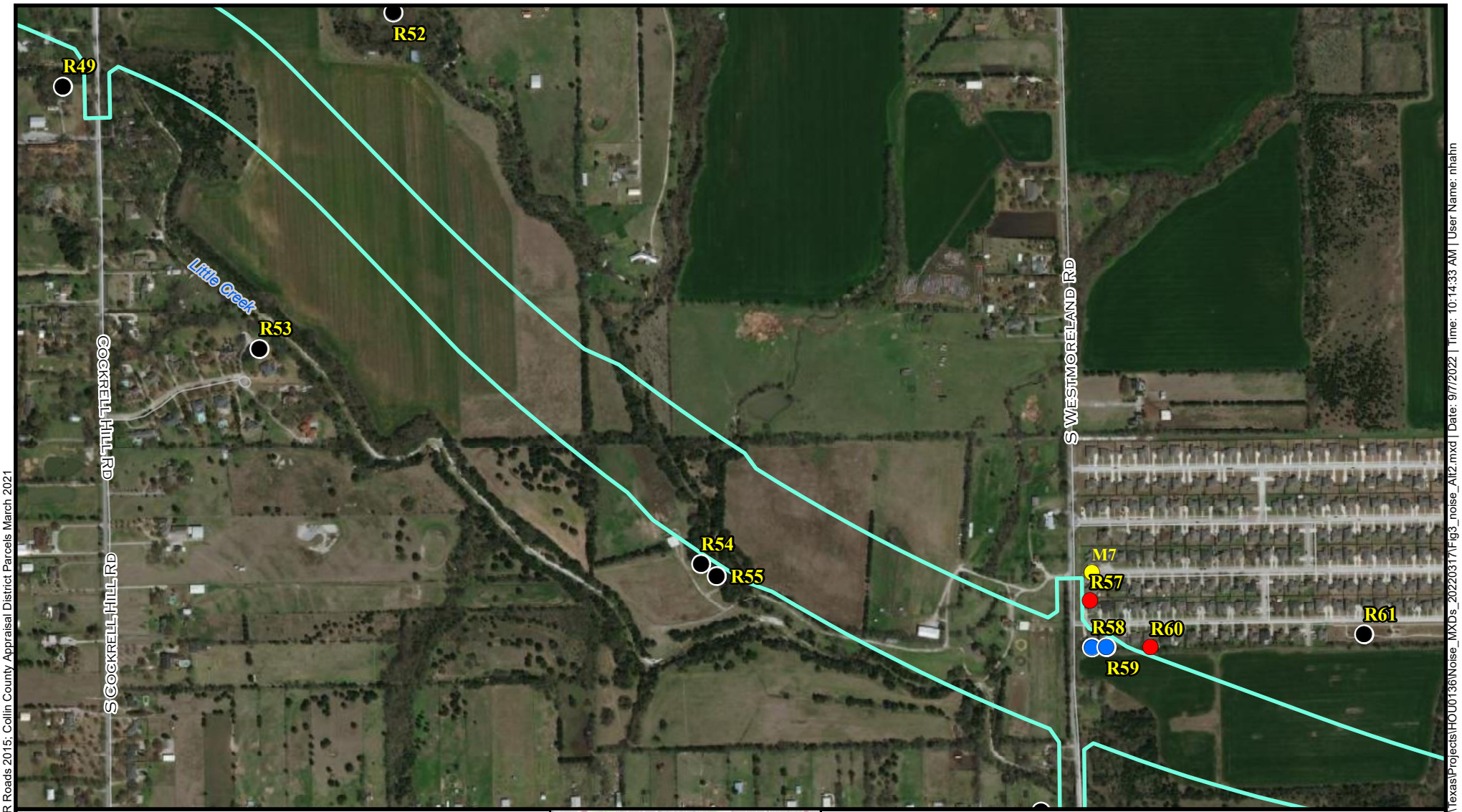
1:8,977

FIGURE 3
SHEET 6 OF 11

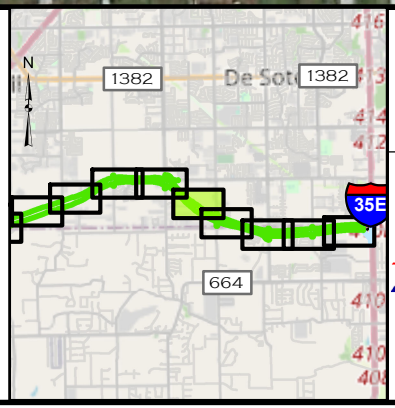
DATE:
SEPTEMBER 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

Path: C:\Users\nhahn\Documents\EPRUSA\State_Data\Texas\Projects\HOU0136\Noise_MXDs_20220317\Fig3_noise_Alt2.mxd | Date: 9/8/2022 | Time: 8:42:14 AM | User Name: nhahn



- Non-Impacted Receiver
- Displaced Receiver within the ROW
- Impacted Receiver
- Measurement Point
- Alternative 2 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 2
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

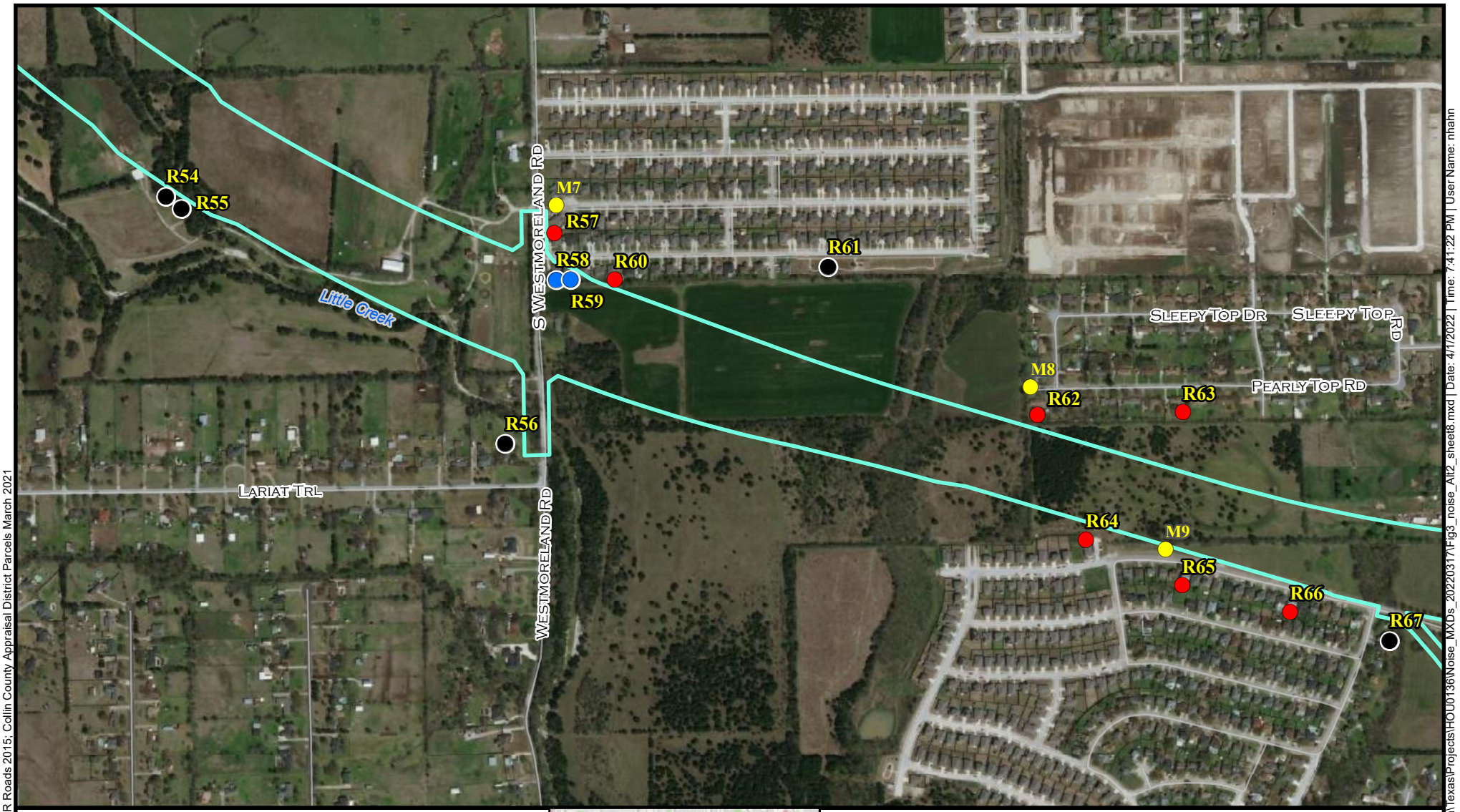
1:8,977

FIGURE 3
SHEET 7 OF 11

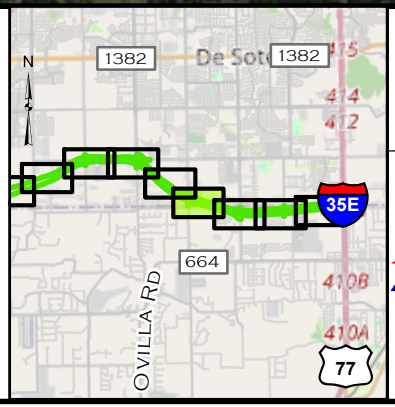
DATE:
SEPTEMBER 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

Path: C:\Users\nhahn\Documents\EPRUSA\State_Data\Texas\Projects\HOU0136\Noise_MXDs_20220317\Fig3_noise_Alt2.mxd | Date: 9/7/2022 | Time: 10:14:33 AM | User Name: nhahn



- Non-Impacted Receiver
- Displaced Receiver within the ROW
- Impacted Receiver
- Measurement Point
- Alternative 2 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 2
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

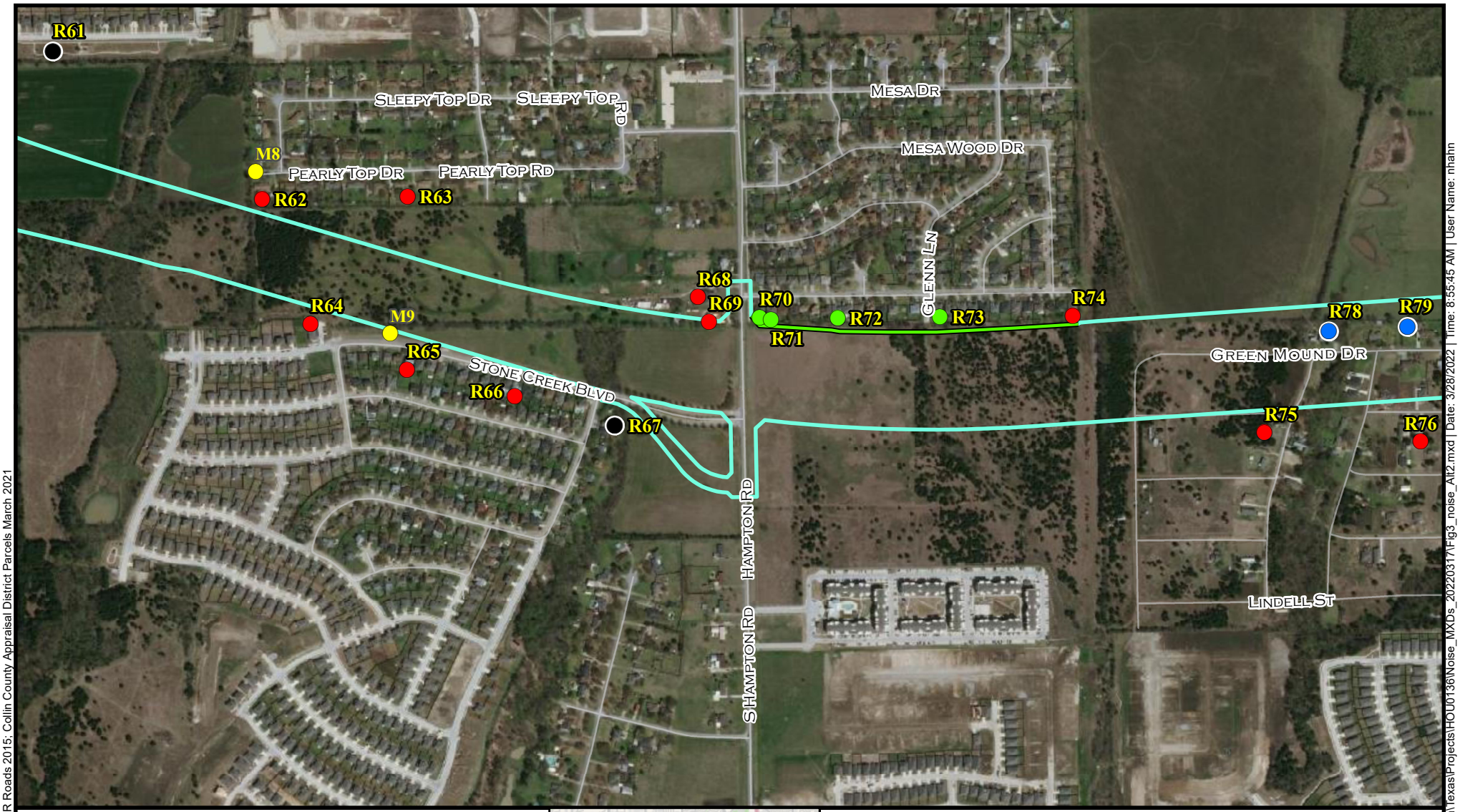
1:8,977

FIGURE 3
SHEET 8 OF 11

DATE:
APRIL 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

Path: C:\Users\nhahn\Documents\EPRUSA\State_Data\Texas\Projects\HOU0136\Noise_MXDs_20220317\Fig3_noise_Alt2_sheet8.mxd | Date: 4/1/2022 | Time: 7:41:22 PM | User Name: nhahn



- Non-Impacted Receiver
- Displaced Receiver within the ROW
- Benefited Receiver
- Impacted Receiver
- Measurement Point
- Proposed Barrier
- Alternative 2 Proposed ROW

Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 2
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

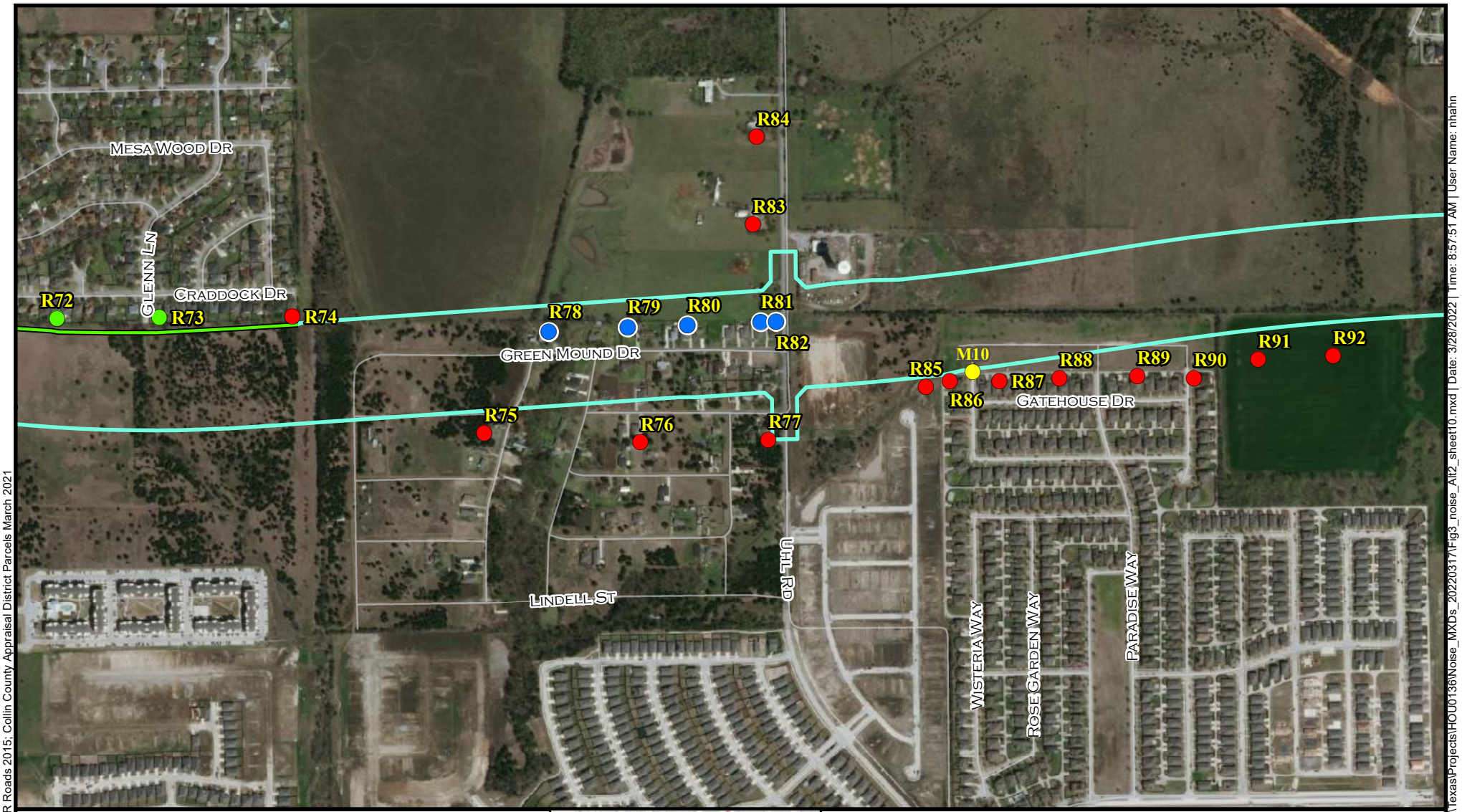
1:8,977

FIGURE 3
SHEET 9 OF 11

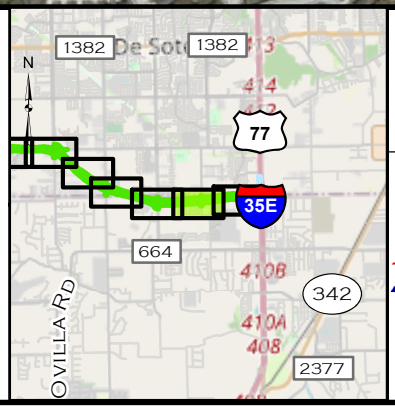
DATE:
March 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

Path: C:\Users\nhahn\Documents\EPRUSA\State_Data\Texas\Projects\HOU0136\Noise_MXDs_20220317\Fig3_noise_Alt2.mxd | Date: 3/28/2022 | Time: 8:55:45 AM | User Name: nhahn



- Displaced Receiver within the ROW
- Benefited Receiver
- Impacted Receiver
- Measurement Point
- Proposed Barrier
- Alternative 2 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 2
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

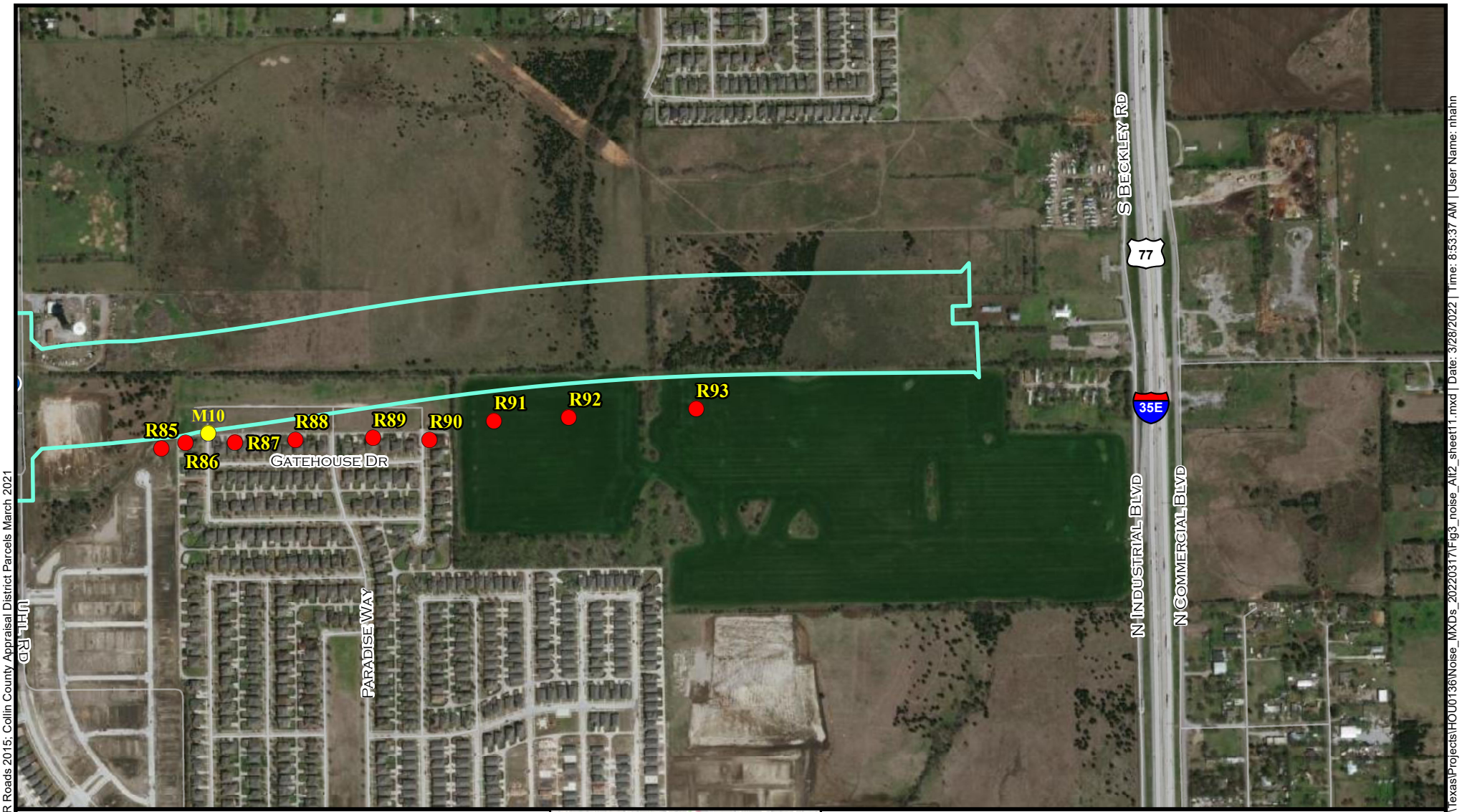
1:8,977

FIGURE 3
SHEET 10 OF 11

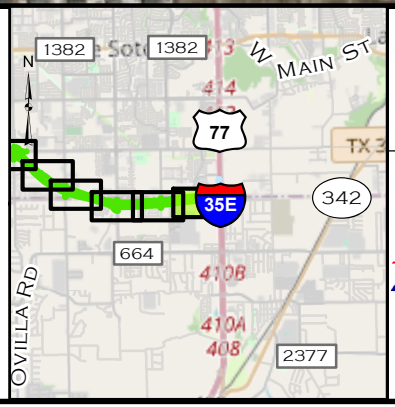
DATE:
March 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

Path: C:\Users\nhahn\Documents\EPRUSA\State_Data\Texas\Projects\HOU0136\Noise_MXDs_20220317\Fig3_noise_Alt2_sheet10.mxd | Date: 3/28/2022 | Time: 8:57:51 AM | User Name: nhahn



- Displaced Receiver within the ROW
- Impacted Receiver
- Measurement Point
- Alternative 2 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 2
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

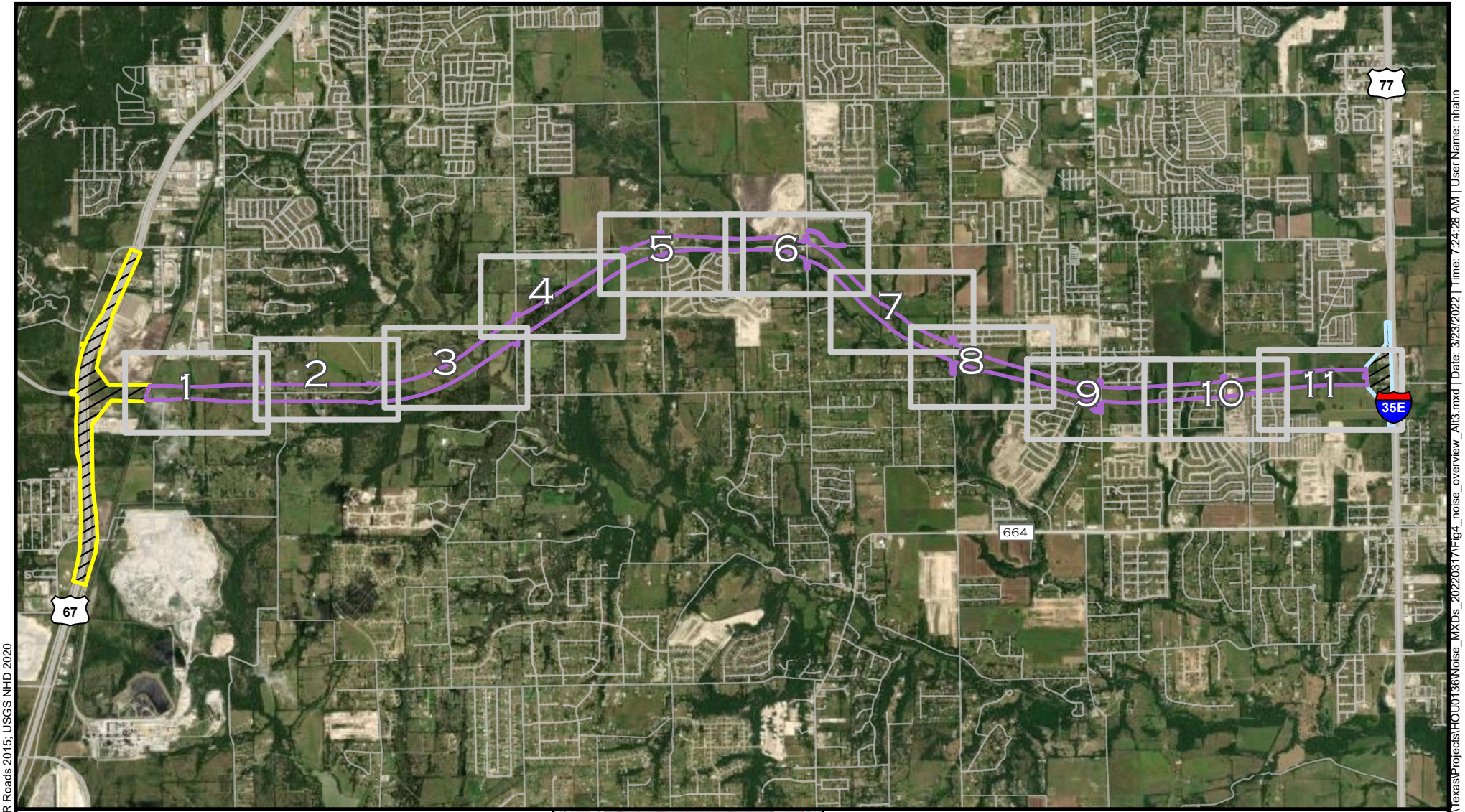
1:8,977

FIGURE 3
SHEET 11 OF 11

DATE:
MARCH 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

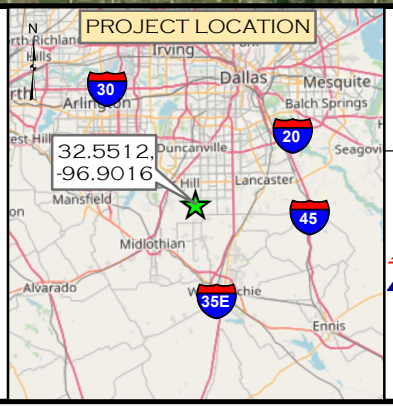
Path: C:\Users\nhahn\Documents\EPRUSA\State_Data\Texas\Projects\HOU0136\Noise_MXDs_20220317\Fig3_noise_Alt2_sheet11.mxd | Date: 3/28/2022 | Time: 8:53:37 AM | User Name: nhahn



ALTERNATIVE 3 PROPOSED

US 67 PROJECT AREA (EVALUATED UNDER SEPARATE DOCUMENT)

IH 35E PROJECT AREA (EVALUATED UNDER SEPARATE DOCUMENT)



LOOP 9, SEGMENT A: US 67 TO IH 35E
CSJ: 2964-10-006
NOISE RECEIVER LOCATIONS OVERVIEW MAP - ALT 3
DALLAS AND ELLIS COUNTIES, TEXAS

Texas Department of Transportation

N

0 2,400 4,800 Feet

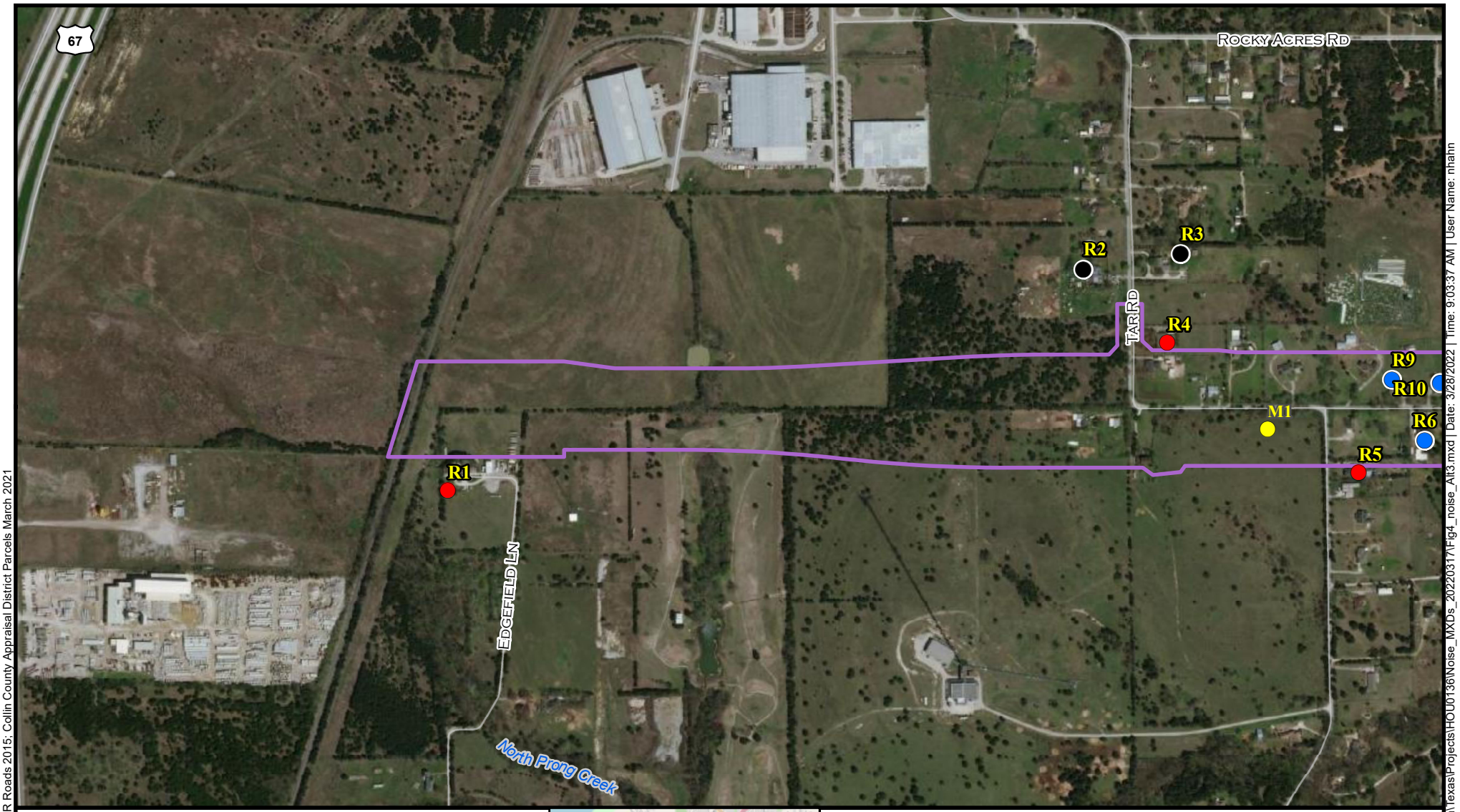
1:60,000

FIGURE 4

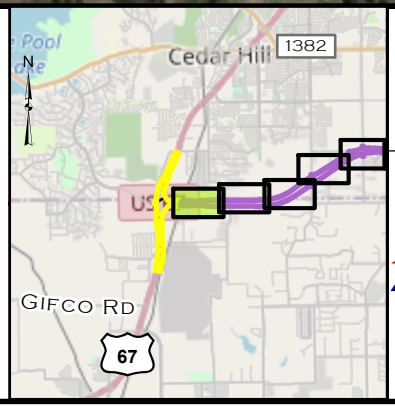
DATE:
MARCH 2022

Sources: ESRI Imagery 2021; Open Street Map; TIGER Roads 2015; USGS NHD 2020

Path: C:\Users\nhahn\Documents\EPRUSA\State_Data\Texas\Projects\HOU0136\Noise_MXDs_20220317\Fig4_noise_overview_Alt3.mxd | Date: 3/23/2022 | Time: 7:24:28 AM | User Name: nhahn



- Non-Impacted Receiver
- Displaced Receiver within the ROW
- Impacted Receiver
- Measurement Point
- Alternative 3 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 3
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

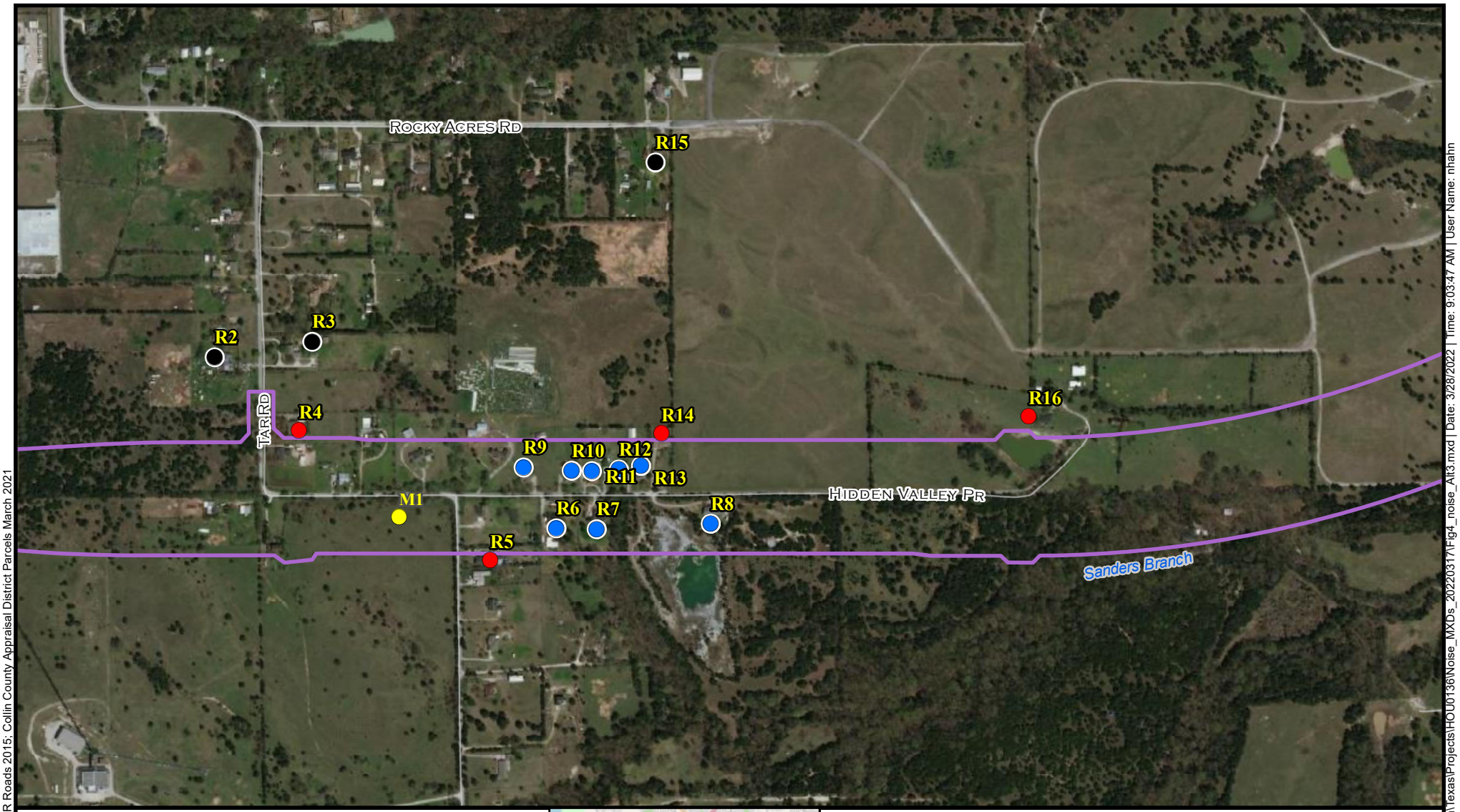
1:8,977

FIGURE 4
SHEET 1 OF 11

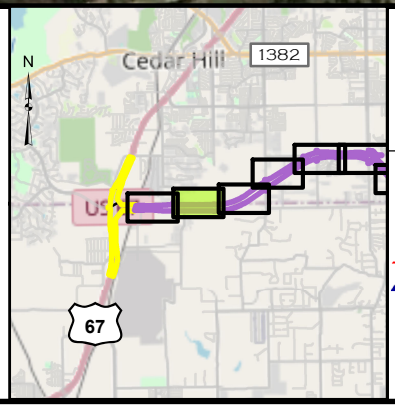
DATE:
March 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

Path: C:\Users\nhahn\Documents\EPRUSA\State_Data\Texas\Projects\HOU0136\Noise_MXDs_20220317\Fig4_noise_Alt3.mxd | Date: 3/28/2022 | Time: 9:03:37 AM | User Name: nhahn



- Non-Impacted Receiver
- Displaced Receiver within the ROW
- Impacted Receiver
- Measurement Point
- Alternative 3 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 3
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

1:8,977

FIGURE 4
SHEET 2 OF 11

DATE:
MARCH 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

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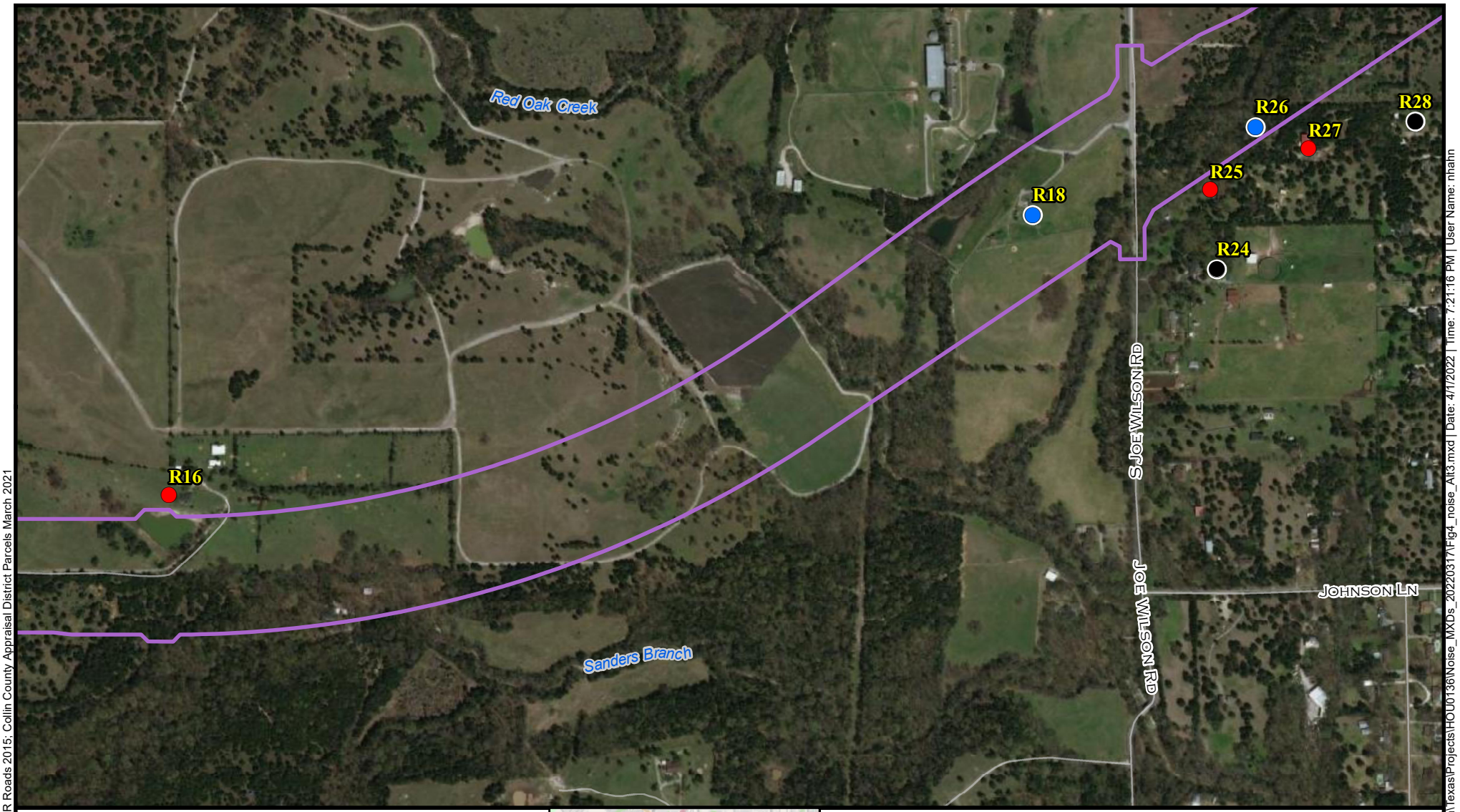
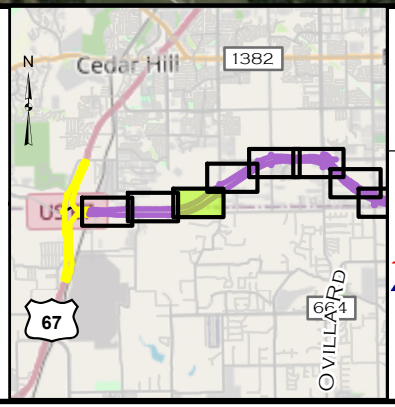


- Non-Impacted Receiver
- Displaced Receiver within the ROW
- Impacted Receiver
- Alternative 3 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 3
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

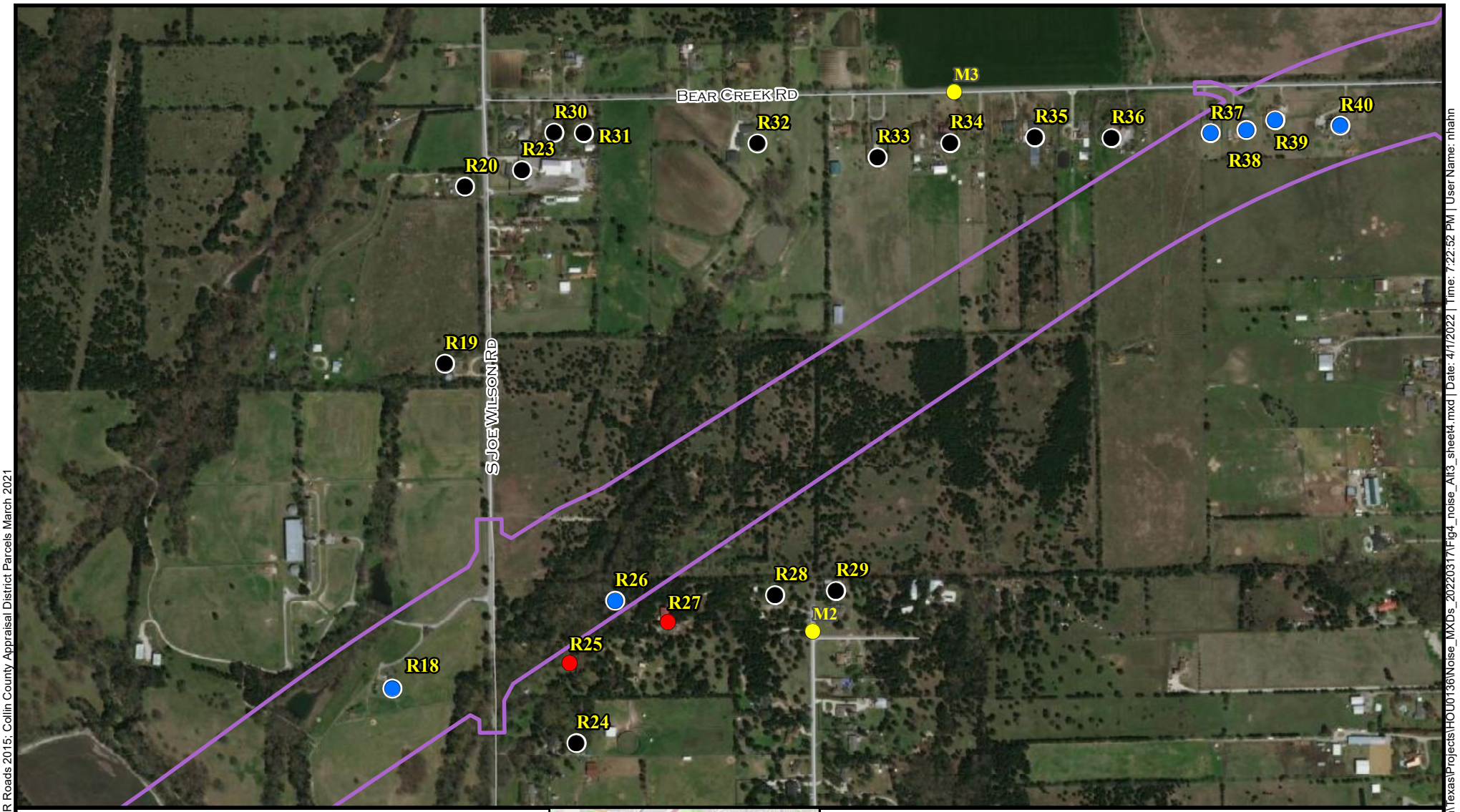
1:8,977

FIGURE 4
SHEET 3 OF 11

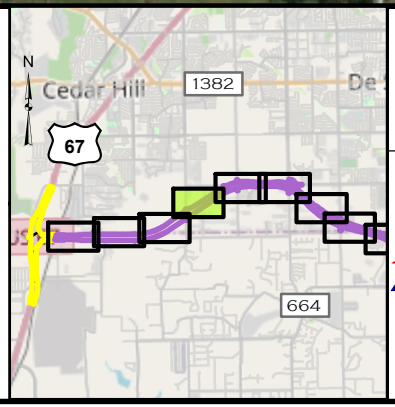
DATE:
APRIL 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

Path: C:\Users\nhahn\Documents\EPRUSA\State_Data\Texas\Projects\HOU0136\Noise_MXDs_20220317\Fig4_noise_Alt3.mxd | Date: 4/1/2022 | Time: 7:21:16 PM | User Name: nhahn



- Non-Impacted Receiver
- Displaced Receiver within the ROW
- Impacted Receiver
- Measurement Point
- Alternative 3 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 3
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

1:8,977

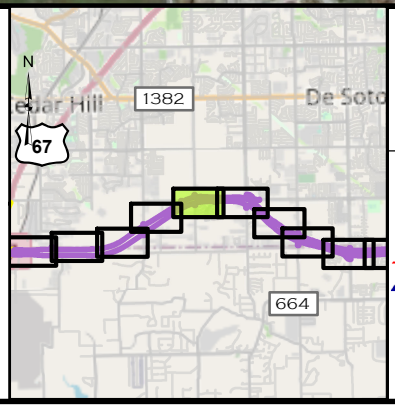
FIGURE 4
SHEET 4 OF 11

DATE:
APRIL 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

Path: C:\Users\nhahn\Documents\EPRUSA\State_Data\Texas\Projects\HOU0136\Noise_MXDs_20220317\Fig4_noise_Alt3_sheet4.mxd | Date: 4/1/2022 | Time: 7:22:52 PM | User Name: nhahn

- Non-Impacted Receiver
- Displaced Receiver within the ROW
- Impacted Receiver
- Measurement Point
- Alternative 3 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 3
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

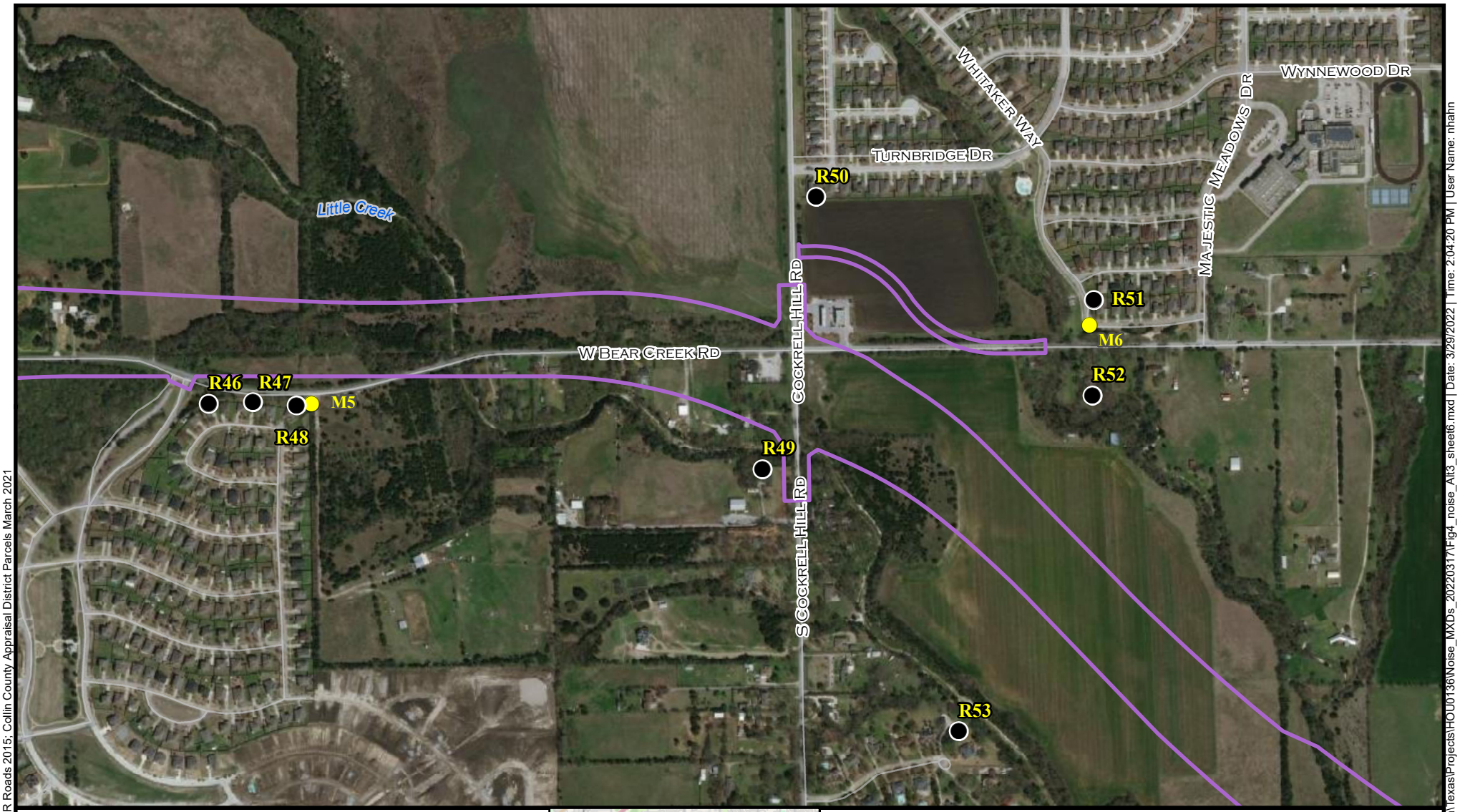
1:8,977

FIGURE 4
SHEET 5 OF 11

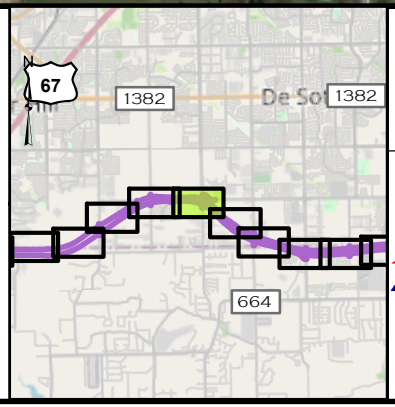
DATE:
MARCH 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

Path: C:\Users\nhahn\Documents\EPRUSA\State_Data\Texas\Projects\HOU0136\Noise_MXDs_20220317\Fig4_noise_Alt3_sheet5.mxd | Date: 3/29/2022 | Time: 2:02:17 PM | User Name: nhahn



- Non-Impacted Receiver
- Measurement Point
- Alternative 3 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 3
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

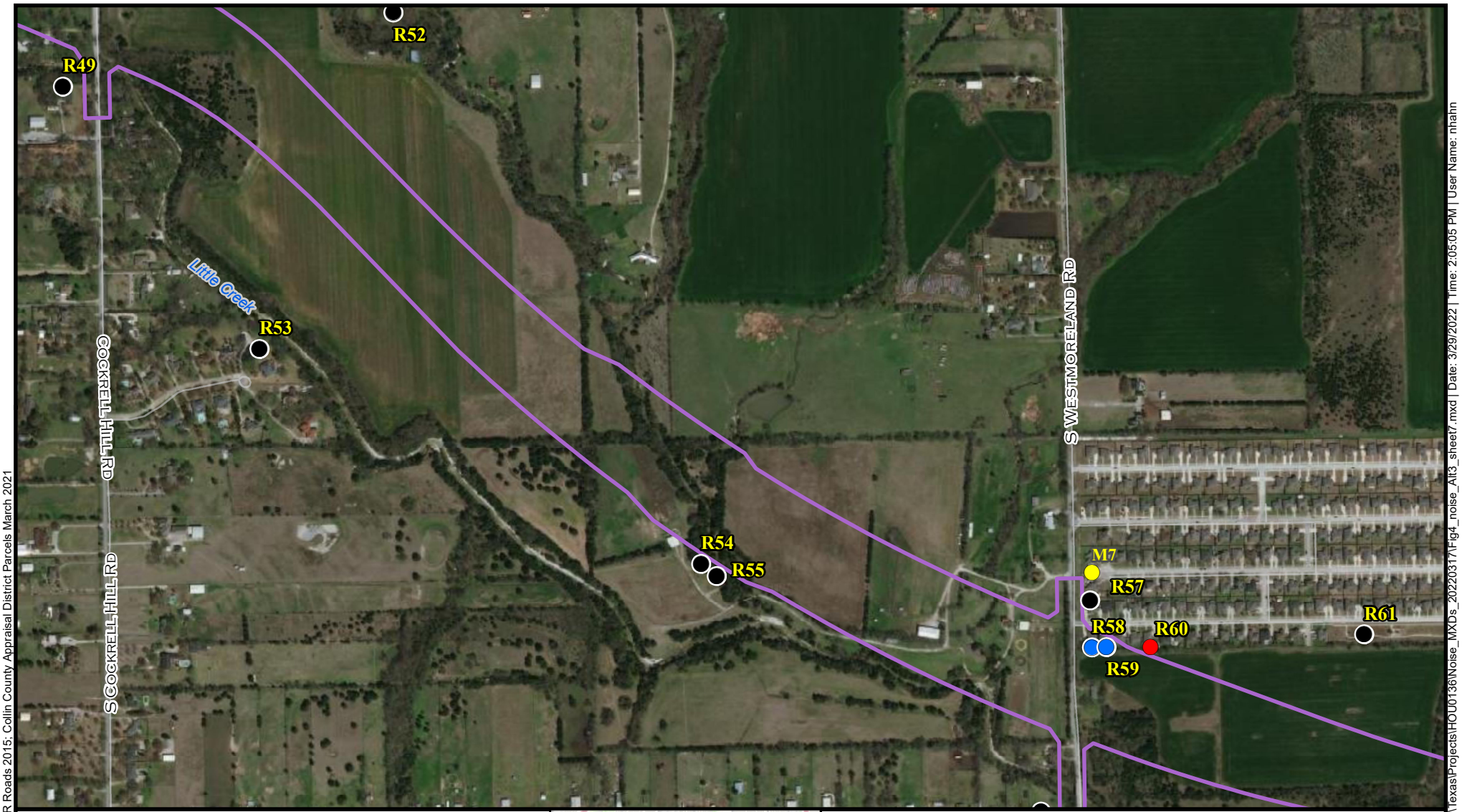
1:8,977

FIGURE 4
SHEET 6 OF 11

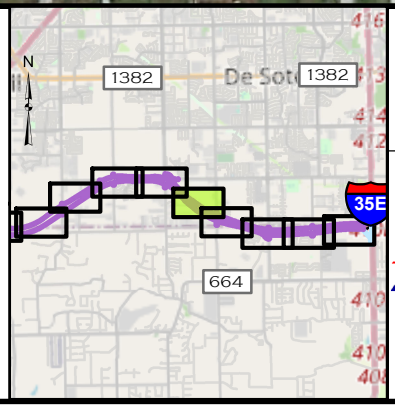
DATE:
MARCH 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

Path: C:\Users\nhahn\Documents\EPRUSA\State_Data\Texas\Projects\HOU0136\Noise_MXDs_20220317\Fig4_noise_Alt3_sheet6.mxd | Date: 3/29/2022 | Time: 2:04:20 PM | User Name: nhahn



- Non-Impacted Receiver
- Displaced Receiver within the ROW
- Impacted Receiver
- Measurement Point
- Alternative 3 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 3
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

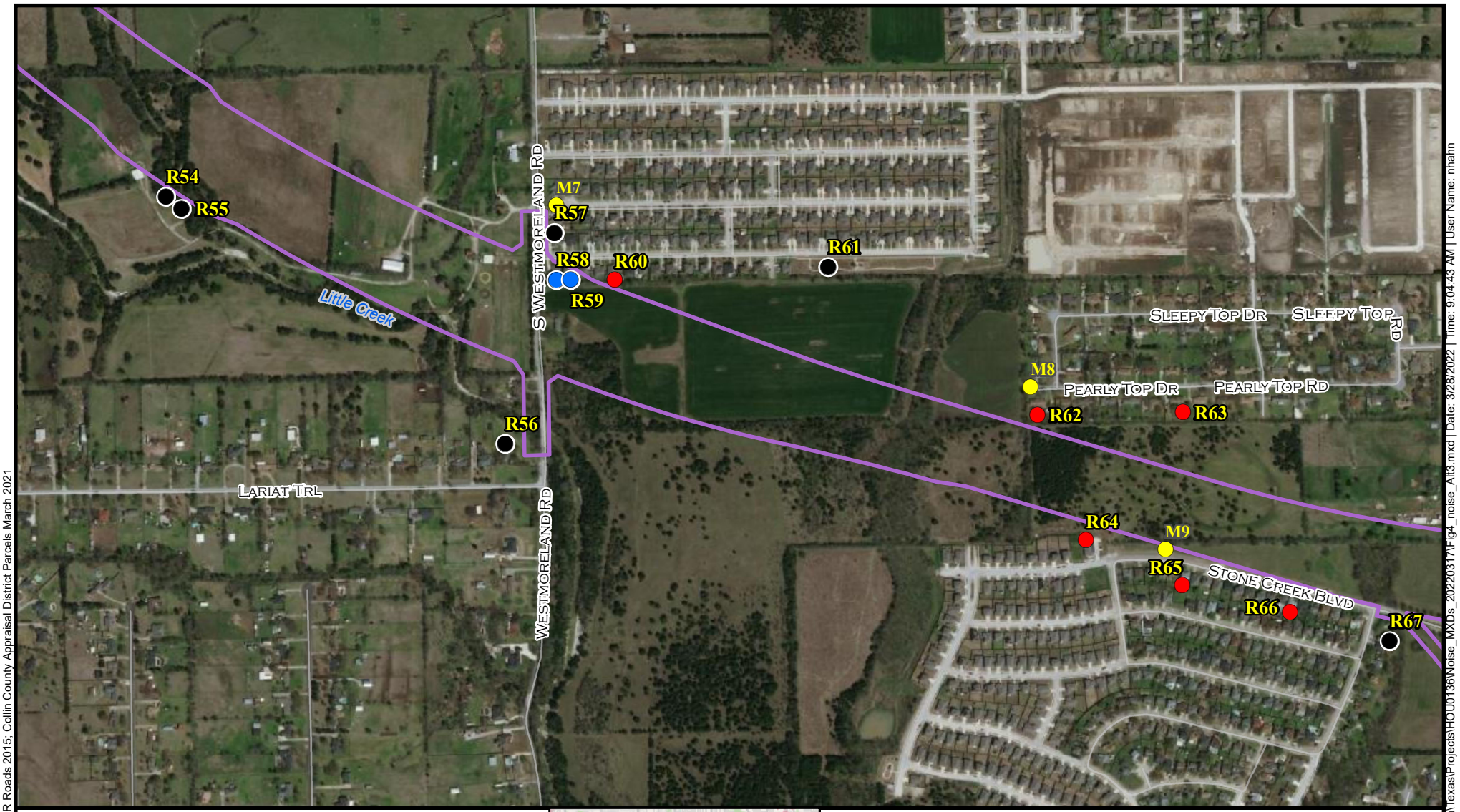
1:8,977

FIGURE 4
SHEET 7 OF 11

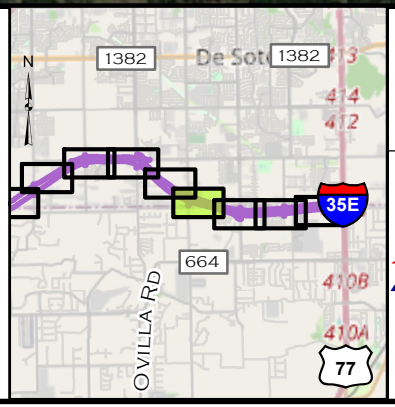
DATE:
MARCH 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

Path: C:\Users\nhahn\Documents\EPRUSA\State_Data\Texas\Projects\HOU0136\Noise_MXDs_20220317\Fig4_noise_Alt3_sheet7.mxd | Date: 3/29/2022 | Time: 2:05:05 PM | User Name: nhahn



- Non-Impacted Receiver
- Displaced Receiver within the ROW
- Impacted Receiver
- Measurement Point
- Alternative 3 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 3
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

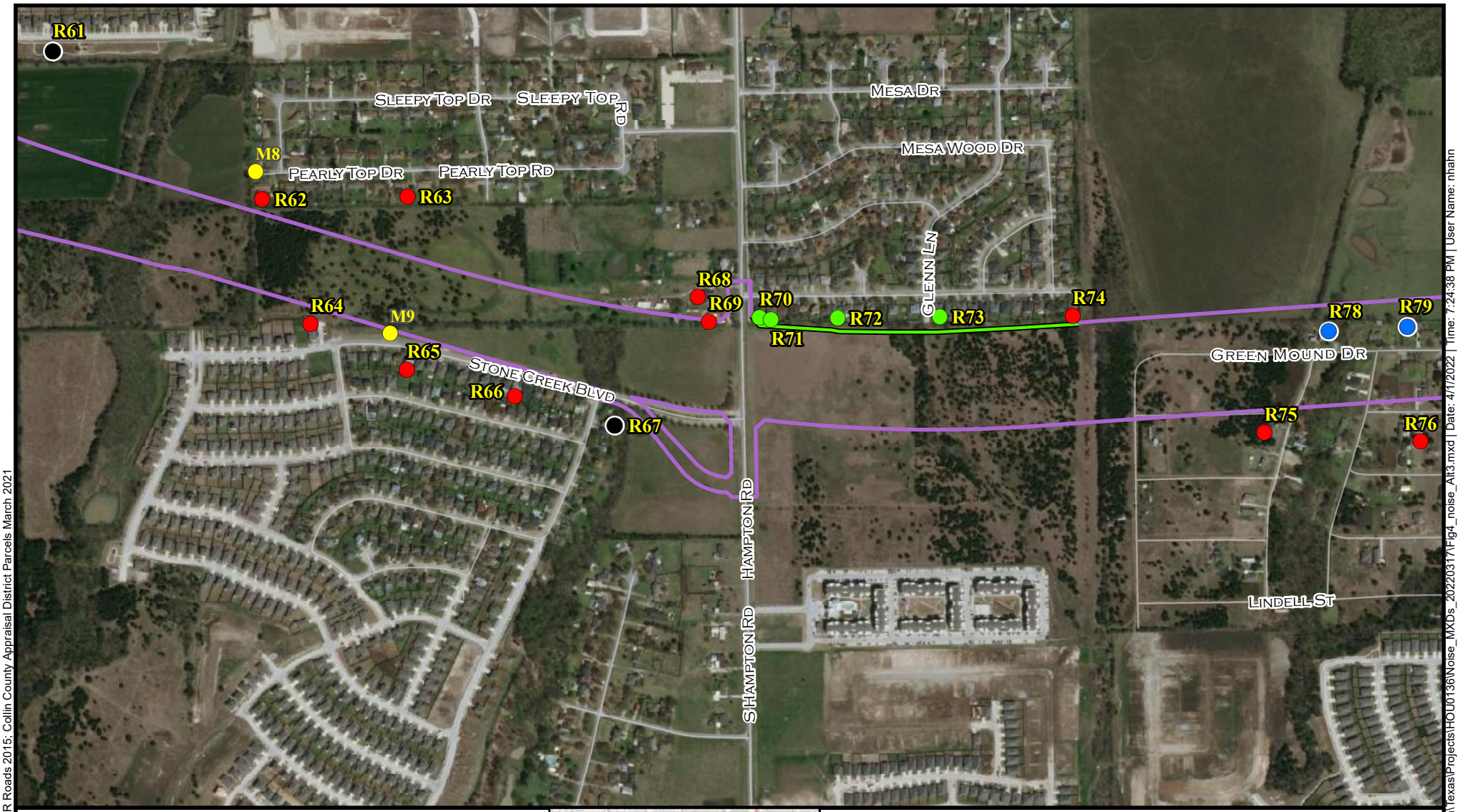
1:8,977

FIGURE 4
SHEET 8 OF 11

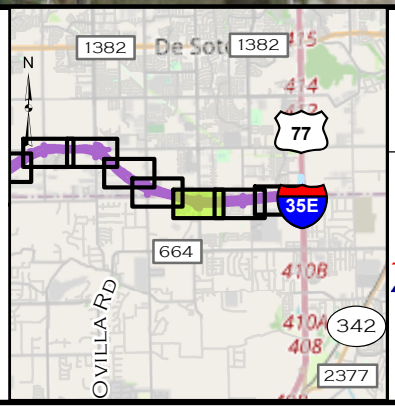
DATE:
March 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

Path: C:\Users\nhahn\Documents\EPRUSA\State_Data\Texas\Projects\HOU0136\Noise_MXDs_20220317\Fig4_noise_Alt3.mxd | Date: 3/28/2022 | Time: 9:04:43 AM | User Name: nhahn



- Non-Impacted Receiver
- Displaced Receiver within the ROW
- Benefited Receiver
- Impacted Receiver
- Measurement Point
- Proposed Barrier
- Alternative 3 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 3
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

1:8,977

FIGURE 4
SHEET 9 OF 11

DATE:
APRIL 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

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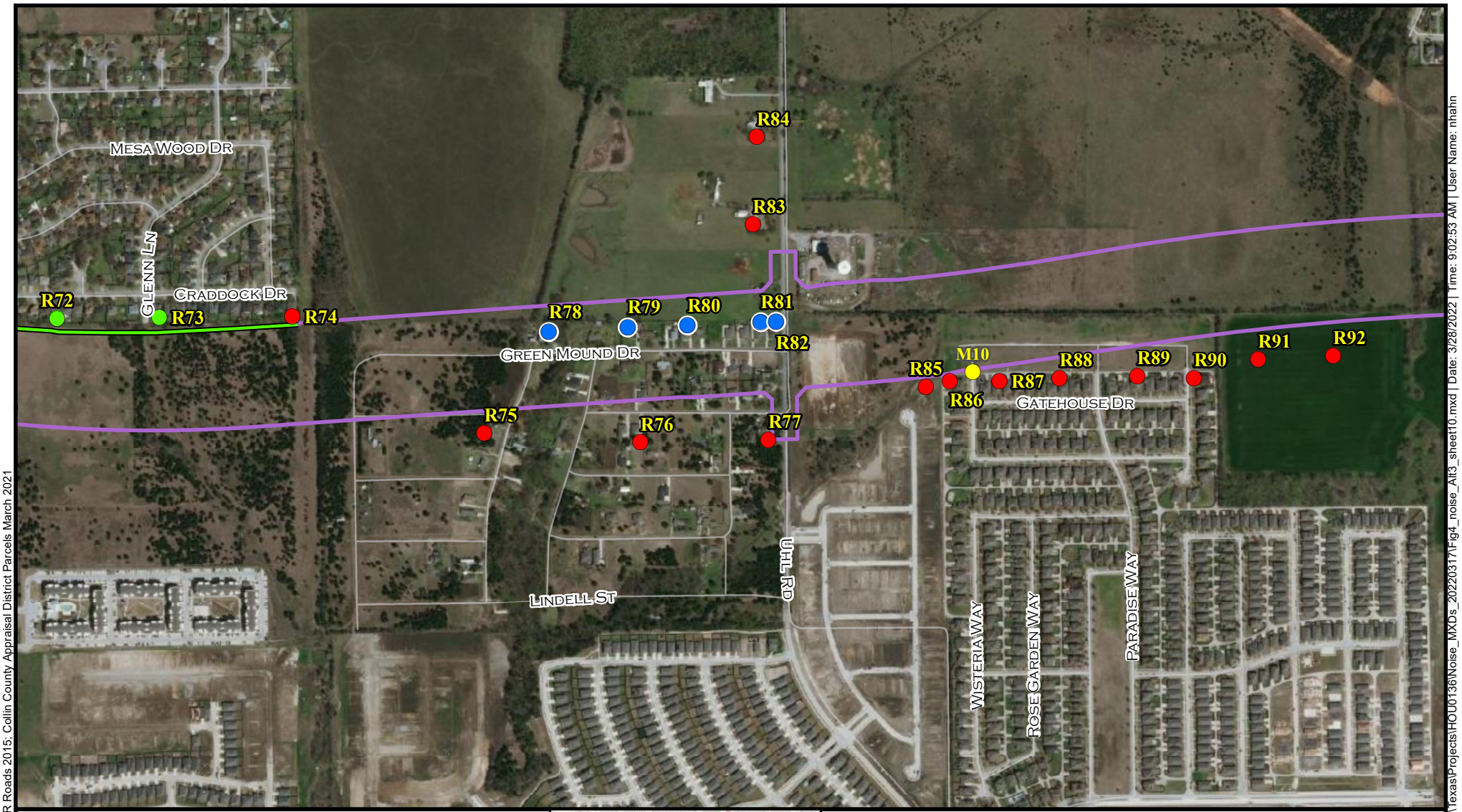
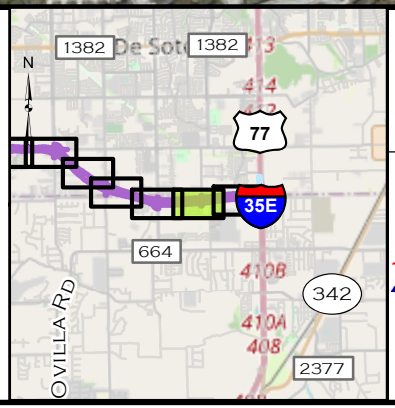


Displaced Receiver within the ROW
Benefited Receiver
Impacted Receiver
Measurement Point
Proposed Barrier
Alternative 3 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 3
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

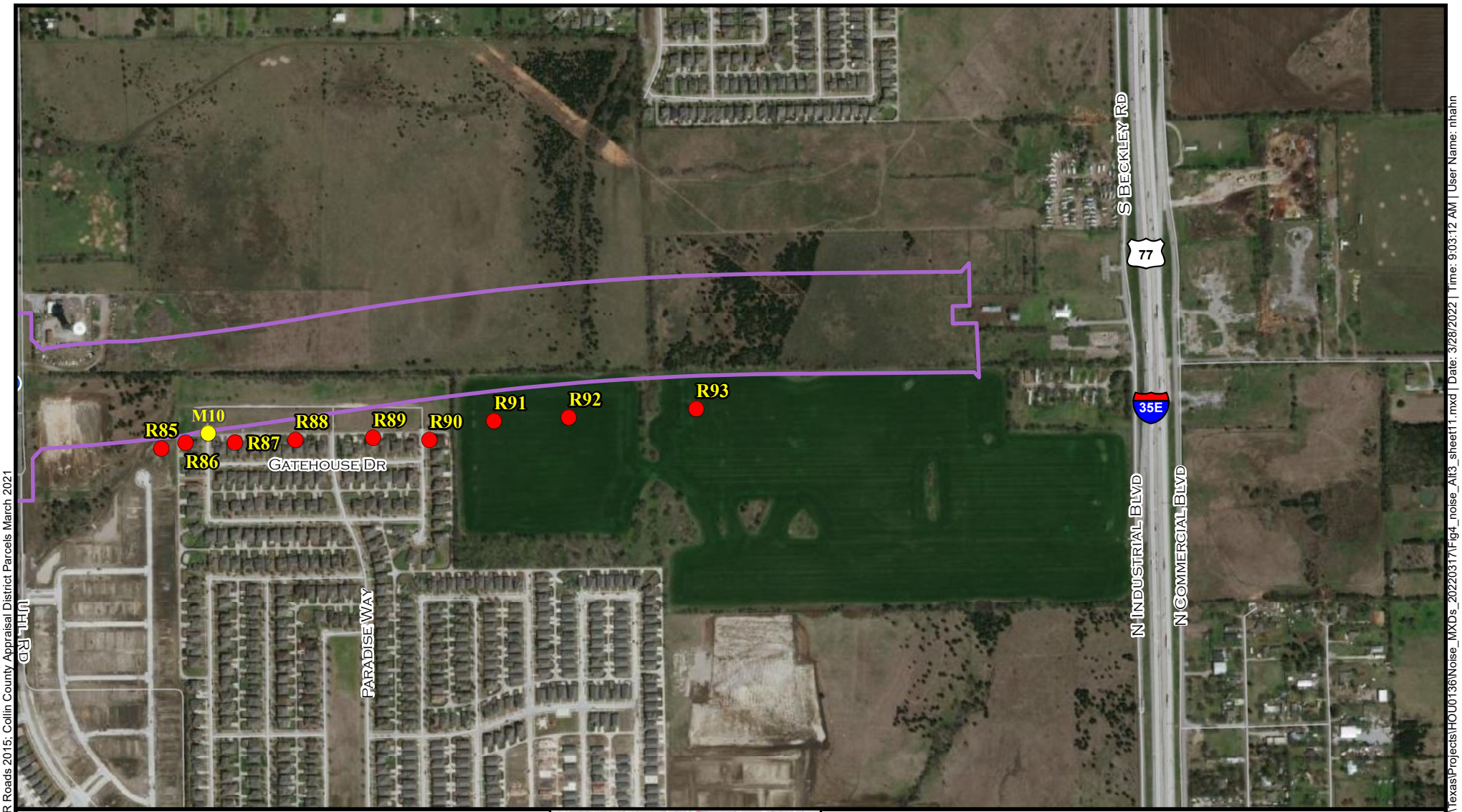
1:8,977

FIGURE 4
SHEET 10 OF 11

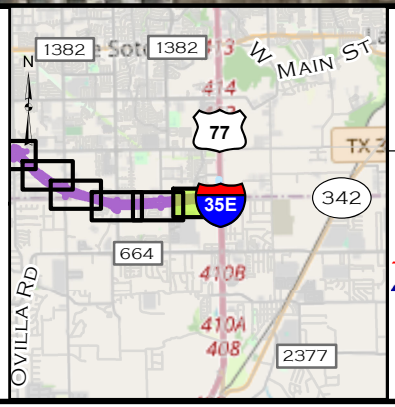
DATE:
March 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

Path: C:\Users\nhahn\Documents\EPRUSA\State_Data\Texas\Projects\HOU0136\Noise_MXDs_20220317\Fig4_noise_Alt3_sheet10.mxd | Date: 3/28/2022 | Time: 9:02:53 AM | User Name: nhahn



- Displaced Receiver within the ROW
- Impacted Receiver
- Measurement Point
- Alternative 3 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 3
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

1:8,977

FIGURE 4
SHEET 11 OF 11

DATE:
MARCH 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

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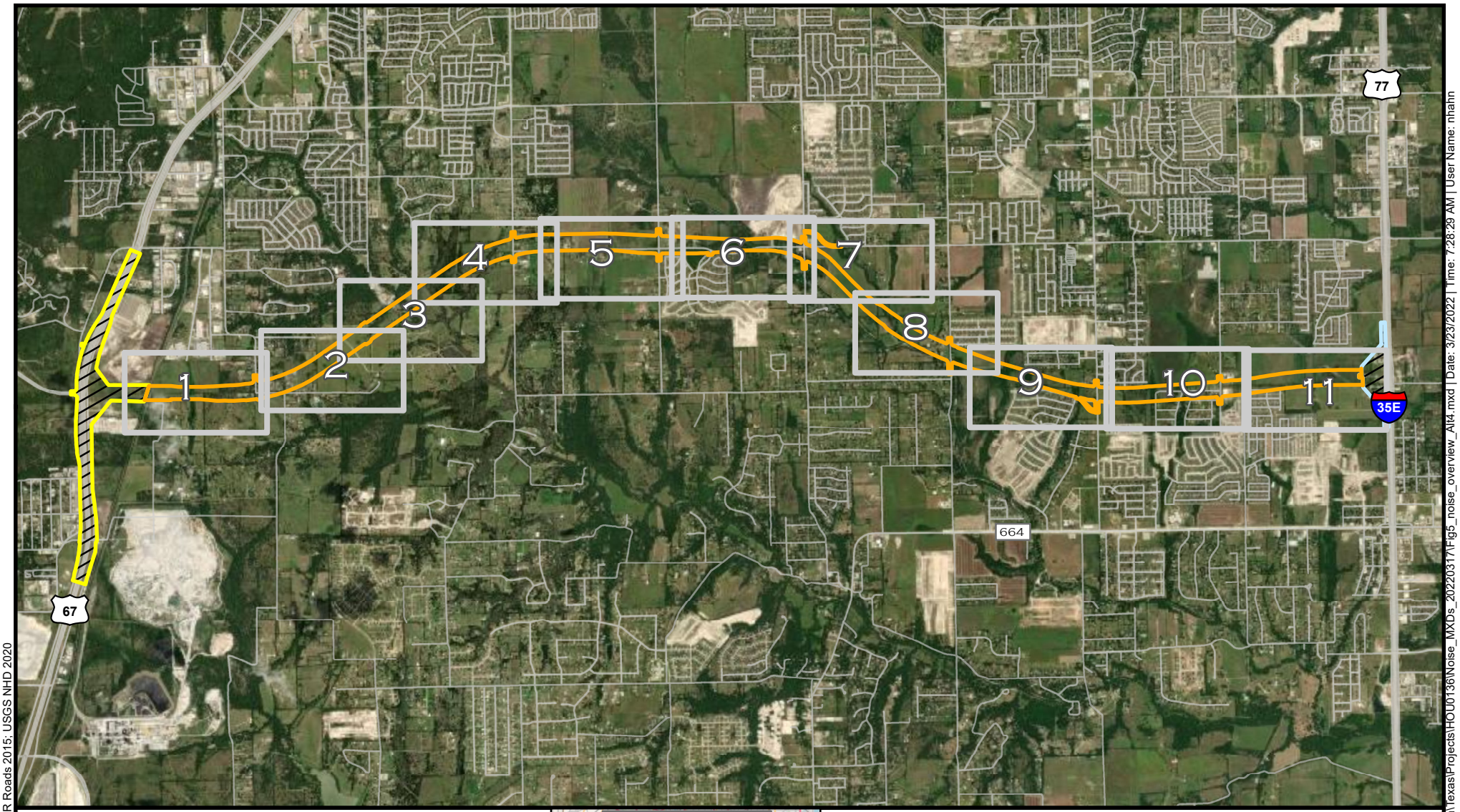


ALTERNATIVE 4 PROPOSED

US 67 PROJECT AREA (EVALUATED UNDER SEPARATE DOCUMENT)

IH 35E PROJECT AREA (EVALUATED UNDER SEPARATE DOCUMENT)

LOOP 9, SEGMENT A: US 67 TO IH 35E
CSJ: 2964-10-006
NOISE RECEIVER LOCATIONS OVERVIEW MAP - ALT 4
DALLAS AND ELLIS COUNTIES, TEXAS

Texas Department of Transportation

N

0 2,400 4,800 Feet

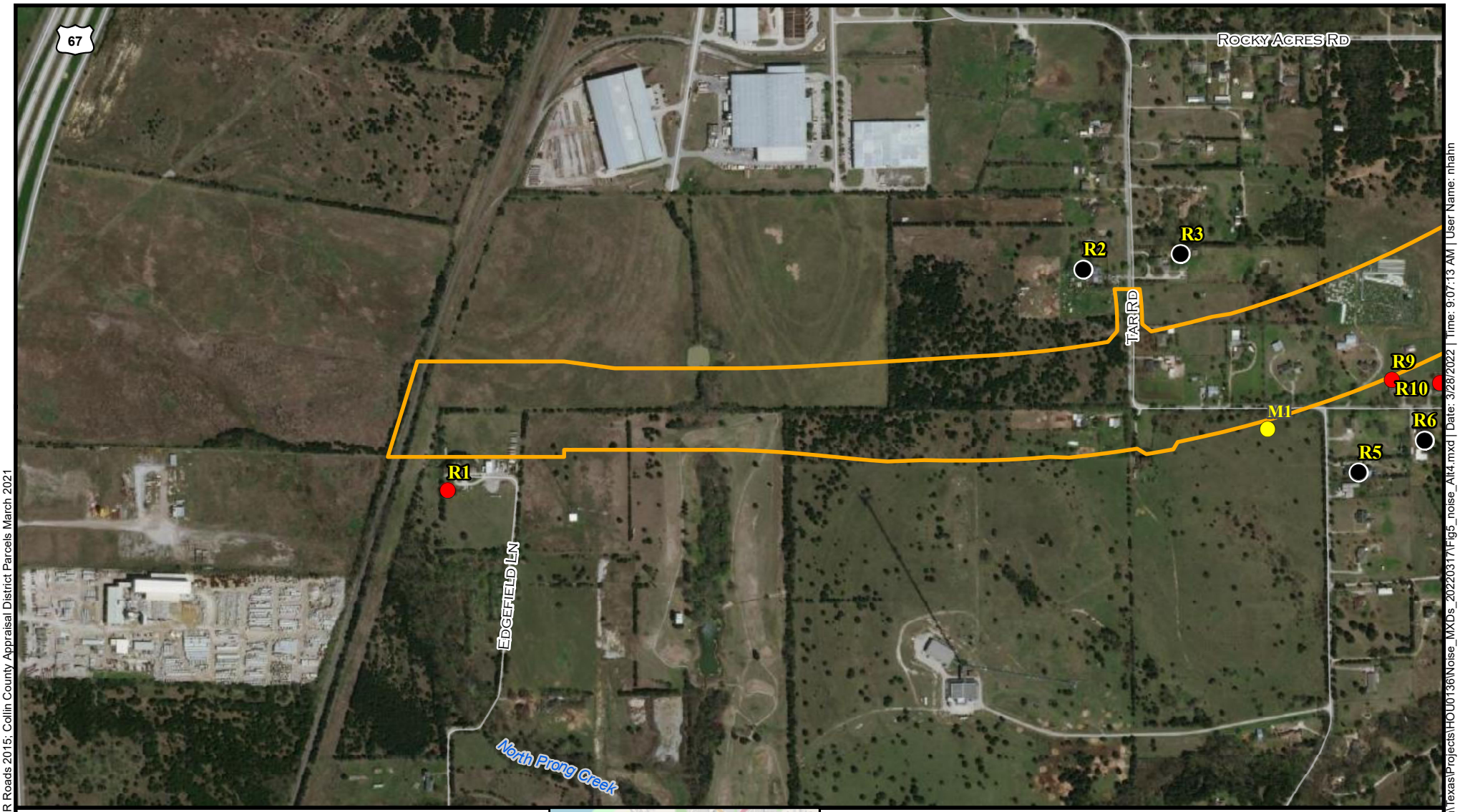
1:60,000

FIGURE 5

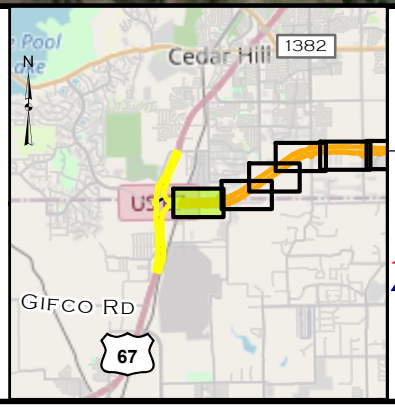
DATE:
MARCH 2022

Sources: ESRI Imagery 2021; Open Street Map; TIGER Roads 2015; USGS NHD 2020

Path: C:\Users\nhahn\Documents\EPRUSA\State_Data\Texas\Projects\HOU0136\Noise_MXDs_20220317\Fig5_noise_overview_Alt4.mxd | Date: 3/23/2022 | Time: 7:28:29 AM | User Name: nhahn



- Non-Impacted Receiver
- Impacted Receiver
- Measurement Point
- Alternative 4 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 4
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

1:8,977

FIGURE 5
SHEET 1 OF 11

DATE:
March 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

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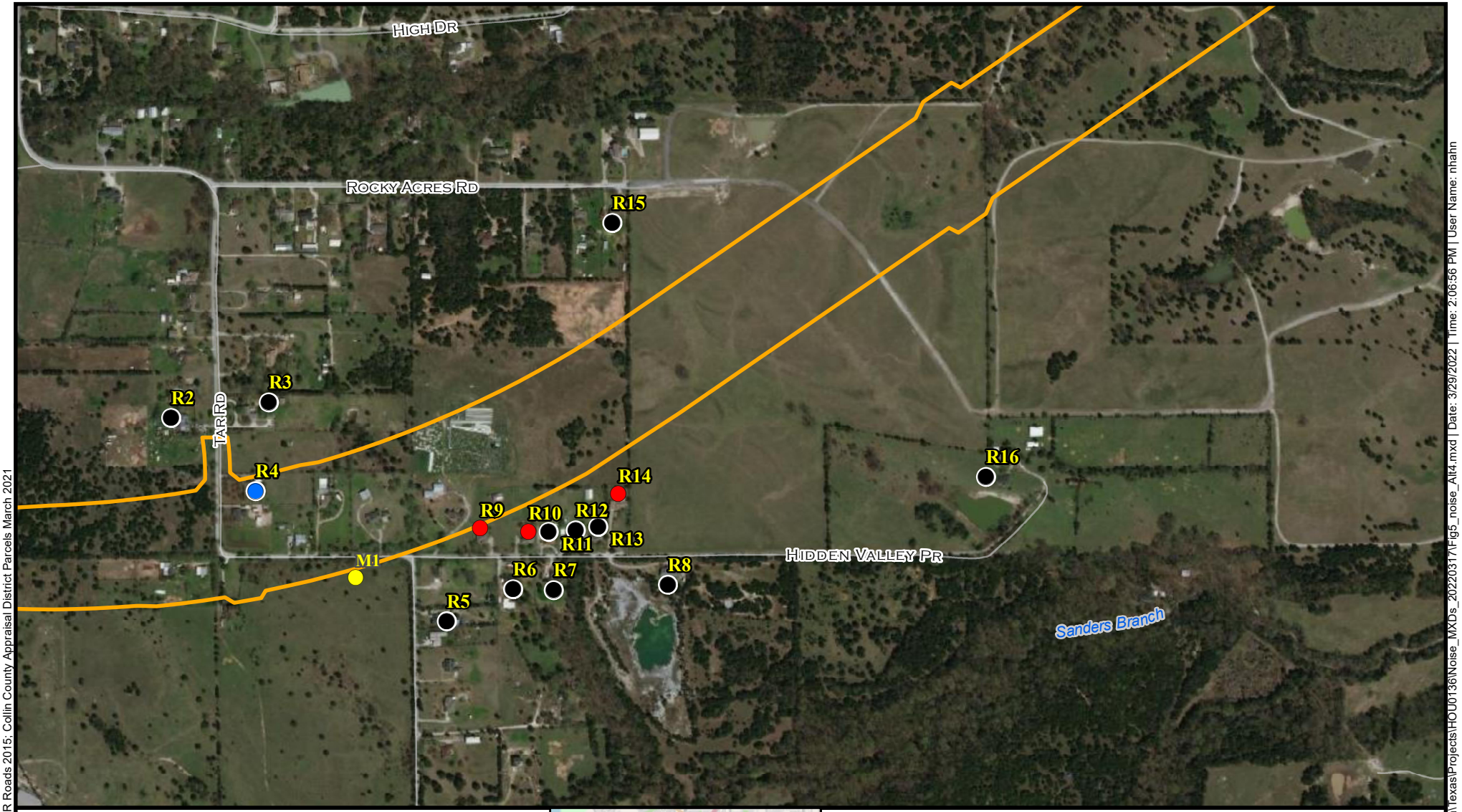
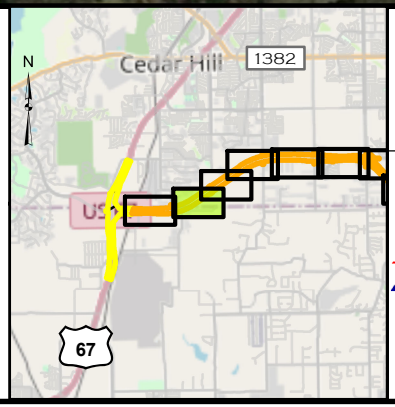


- Non-Impacted Receiver
- Displaced Receiver within the ROW
- Impacted Receiver
- Measurement Point
- Alternative 4 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 4
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

1:8,977

FIGURE 5
SHEET 2 OF 11

DATE:
March 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

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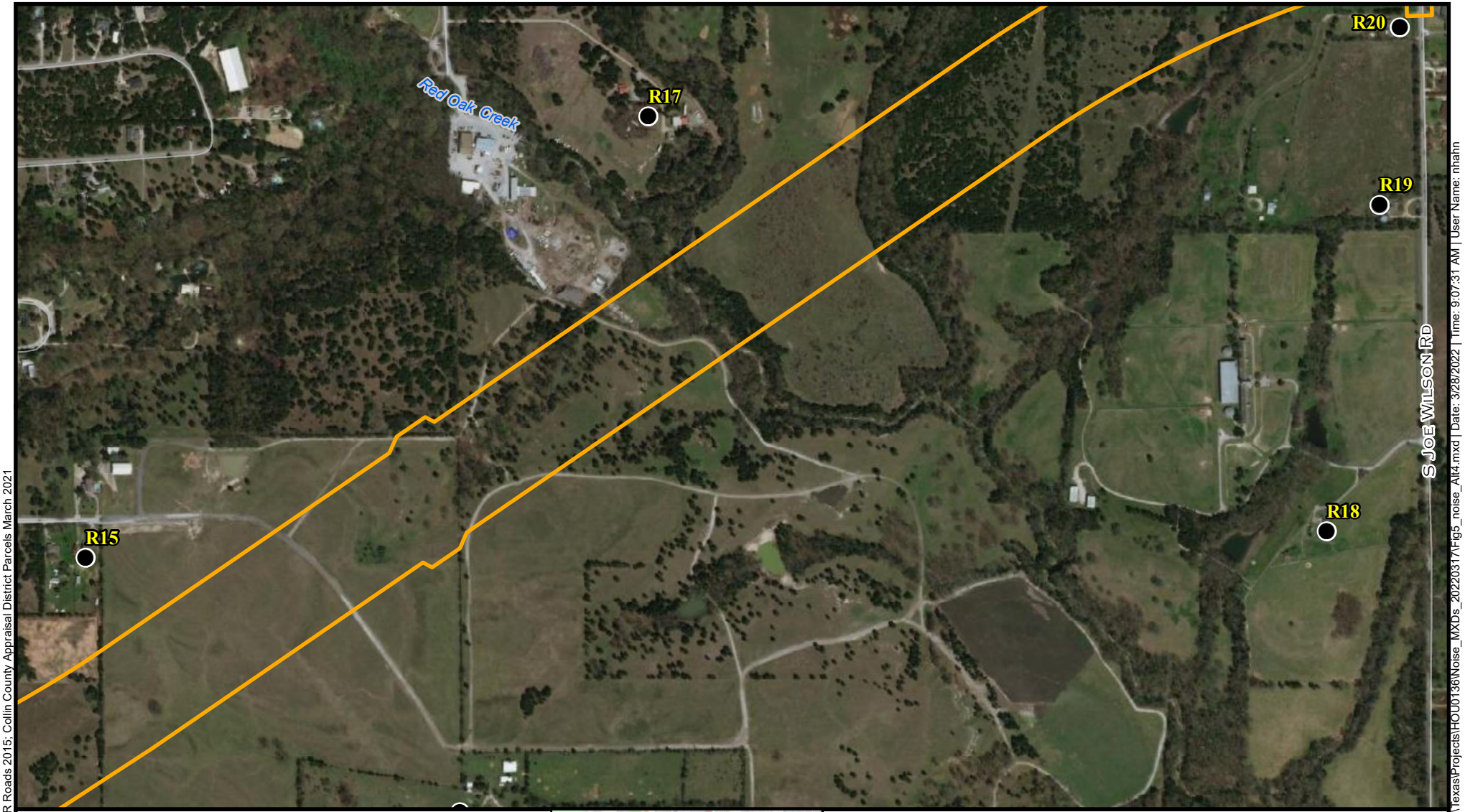
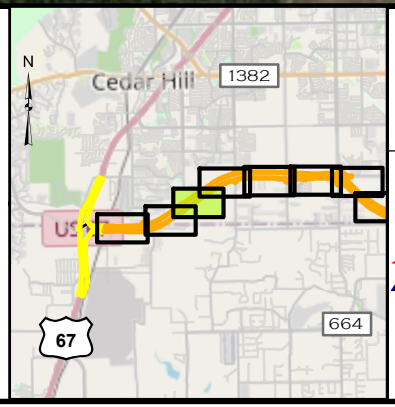


Non-Impacted Receiver

Alternative 4 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 4
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

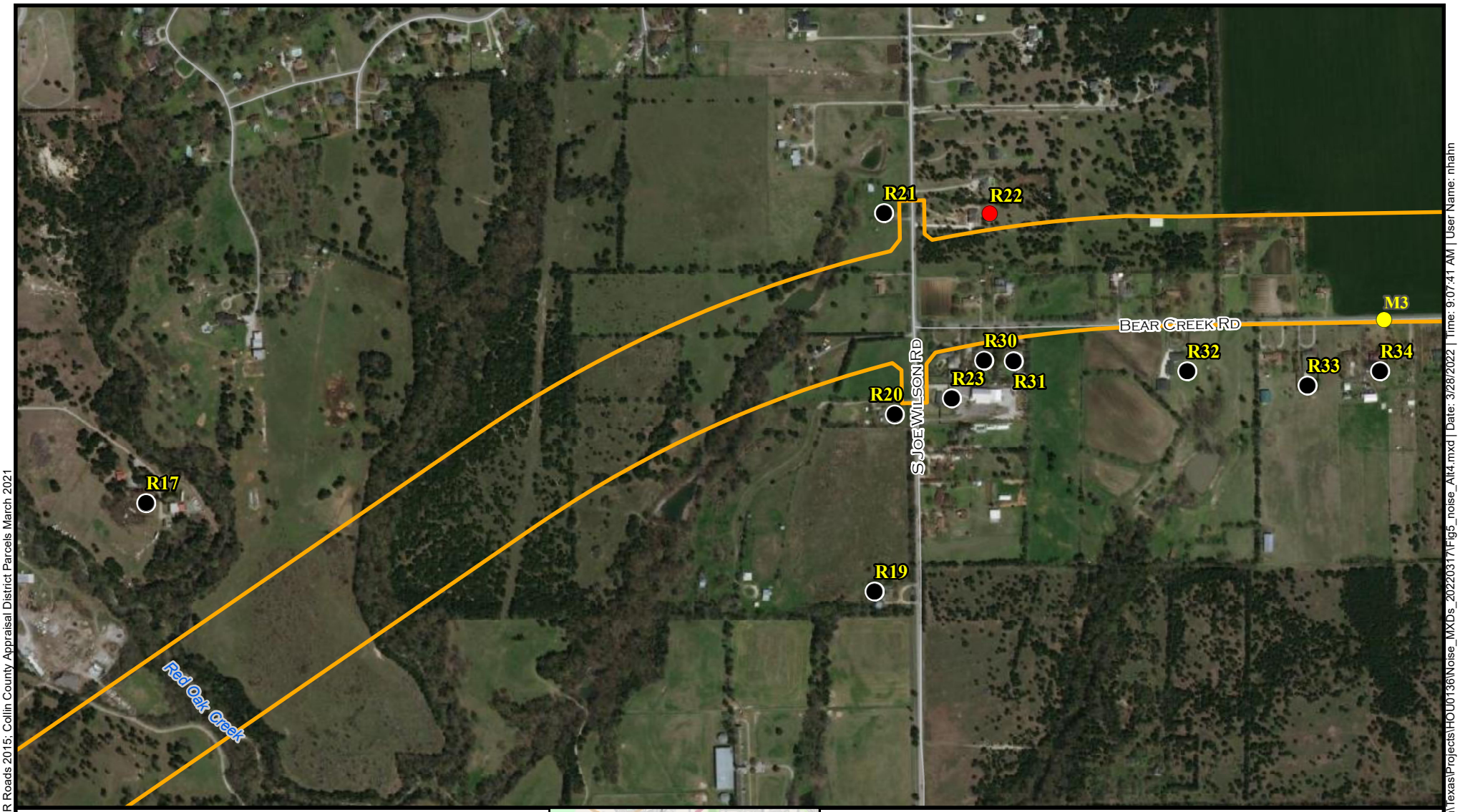
1:8,977

FIGURE 5
SHEET 3 OF 11

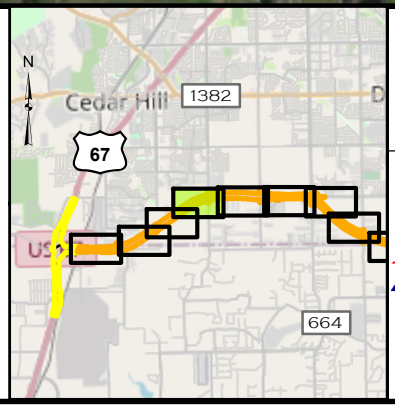
DATE:
MARCH 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

Path: C:\Users\nhahn\Documents\EPRUSA\State_Data\Texas\Projects\HOU0136\Noise_MXDs_20220317\Fig5_noise_Alt4.mxd | Date: 3/28/2022 | Time: 9:07:31 AM | User Name: nhahn



Non-Impacted Receiver
Impacted Receiver
Measurement Point
Alternative 4 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 4
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

1:8,977

FIGURE 5
SHEET 4 OF 11

DATE:
March 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

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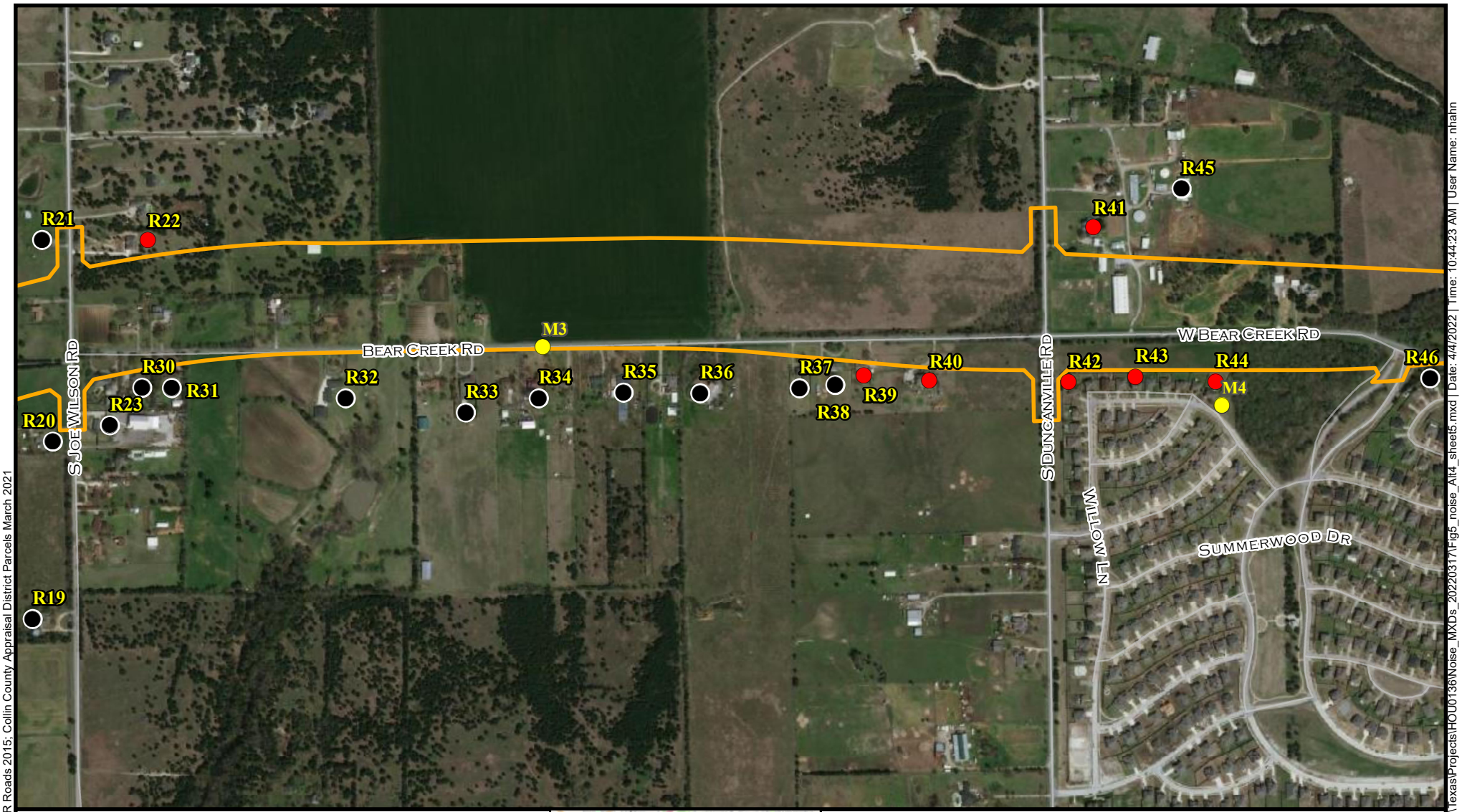
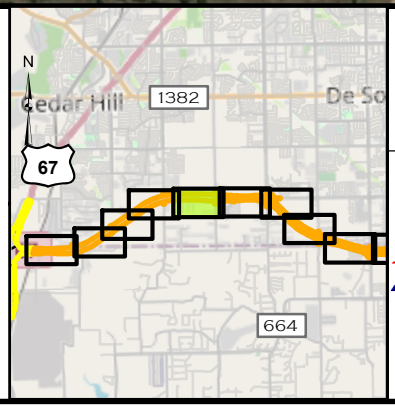


- Non-Impacted Receiver
- Impacted Receiver
- Measurement Point
- Alternative 4 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 4
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

1:8,977

FIGURE 5
SHEET 5 OF 11

DATE:
APRIL 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

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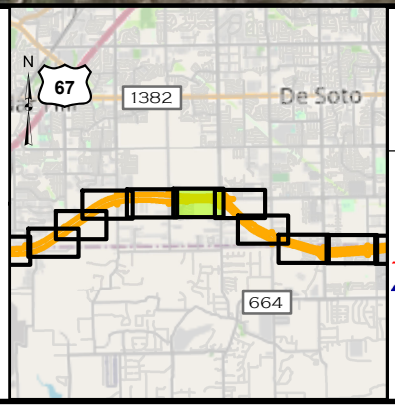
- Non-Impacted Receiver
- Impacted Receiver
- Measurement Point
- Alternative 4 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 4
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

1:8,977

FIGURE 5
SHEET 6 OF 11

DATE:
APRIL 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

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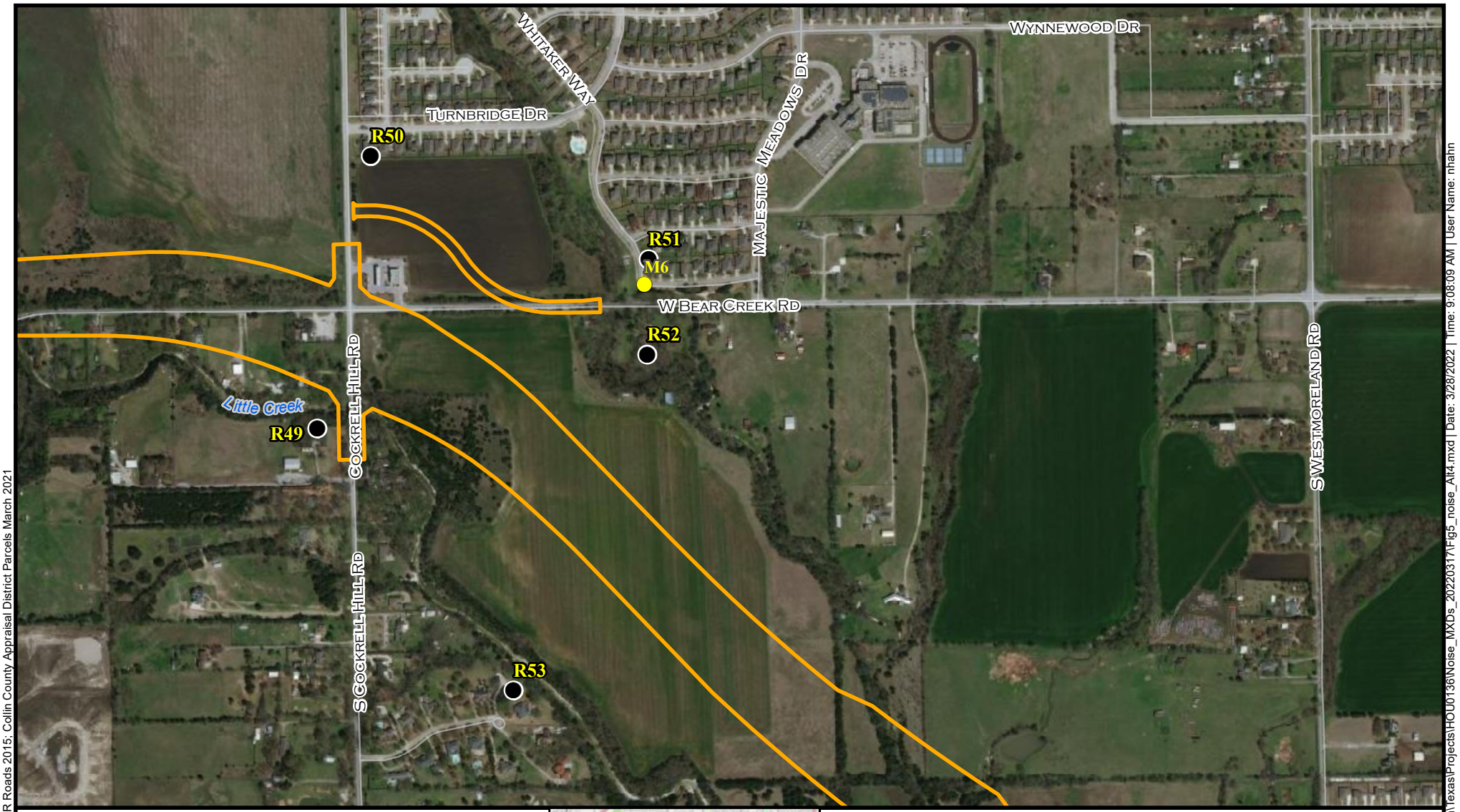
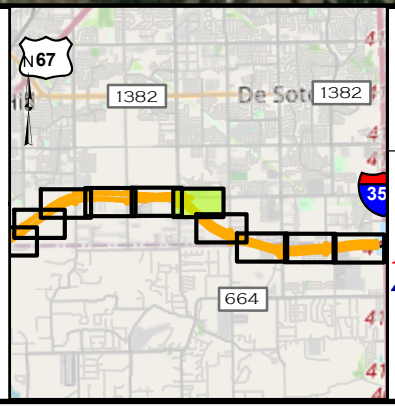


Non-Impacted Receiver

Measurement Point

Alternative 4 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 4
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

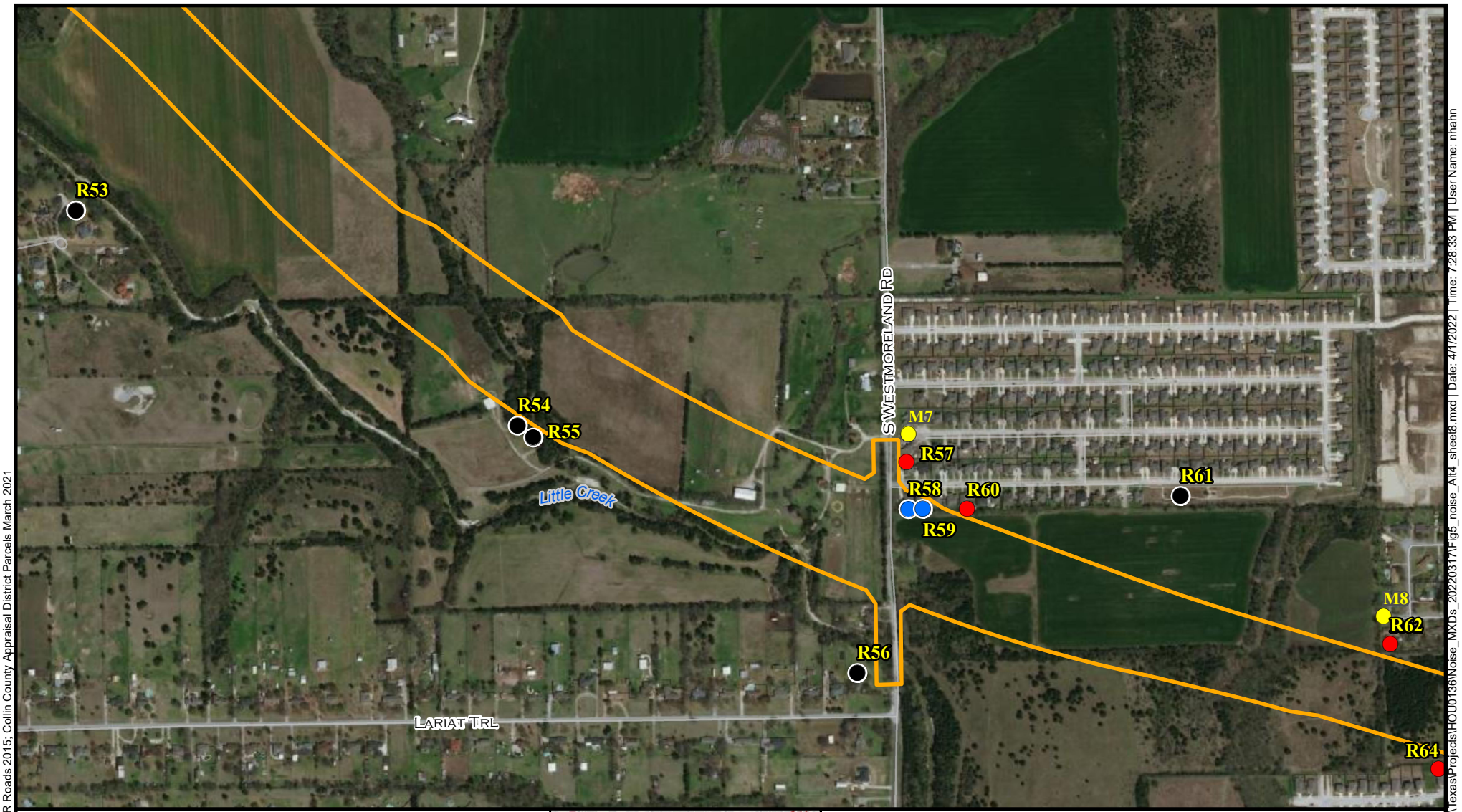
1:8,977

FIGURE 5
SHEET 7 OF 11

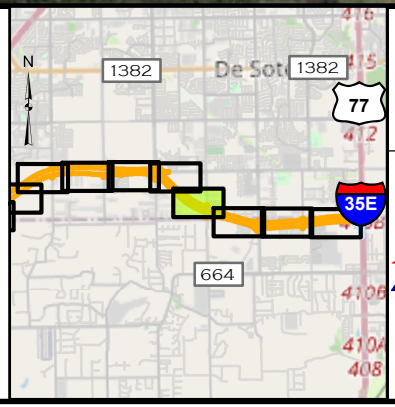
DATE:
MARCH 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

Path: C:\Users\nhahn\Documents\EPRUSA\State_Data\Texas\Projects\HOU0136\Noise_MXDs_20220317\Fig5_noise_Alt4.mxd | Date: 3/28/2022 | Time: 9:08:09 AM | User Name: nhahn



- Non-Impacted Receiver
- Displaced Receiver within the ROW
- Impacted Receiver
- Measurement Point
- Alternative 4 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 4
Dallas and Ellis Counties, Texas

Texas Department of Transportation

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0 380 760 Feet

1:8,977

FIGURE 5
SHEET 8 OF 11

DATE:
APRIL 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

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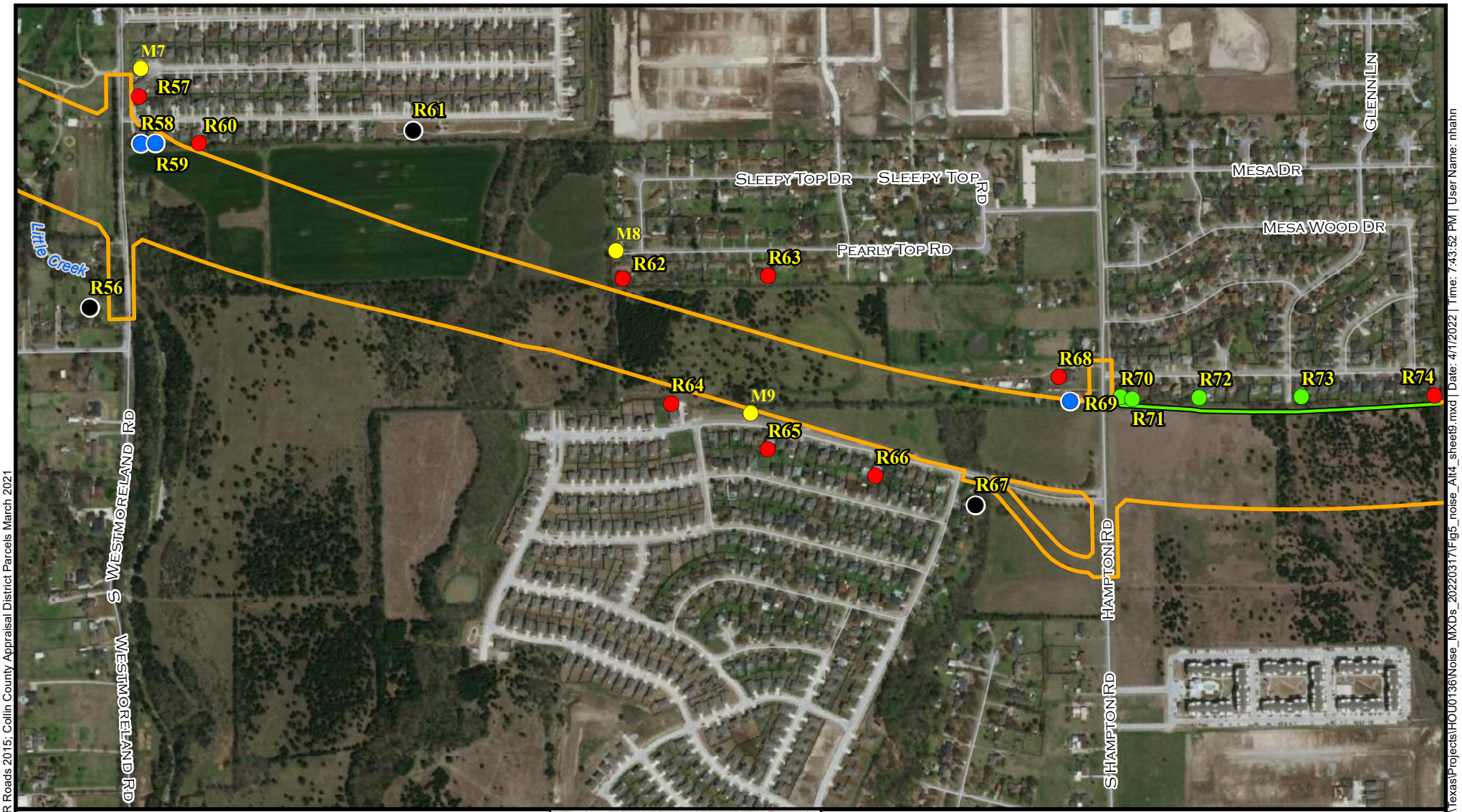
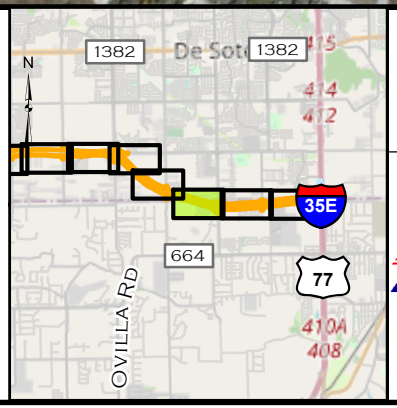


- Non-Impacted Receiver
- Displaced Receiver within the ROW
- Benefited Receiver
- Impacted Receiver
- Measurement Point
- Proposed Barrier
- Alternative 4 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 4
Dallas and Ellis Counties, Texas

Texas Department of Transportation

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0 380 760 Feet

1:8,977

FIGURE 5
SHEET 9 OF 11

DATE:
APRIL 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

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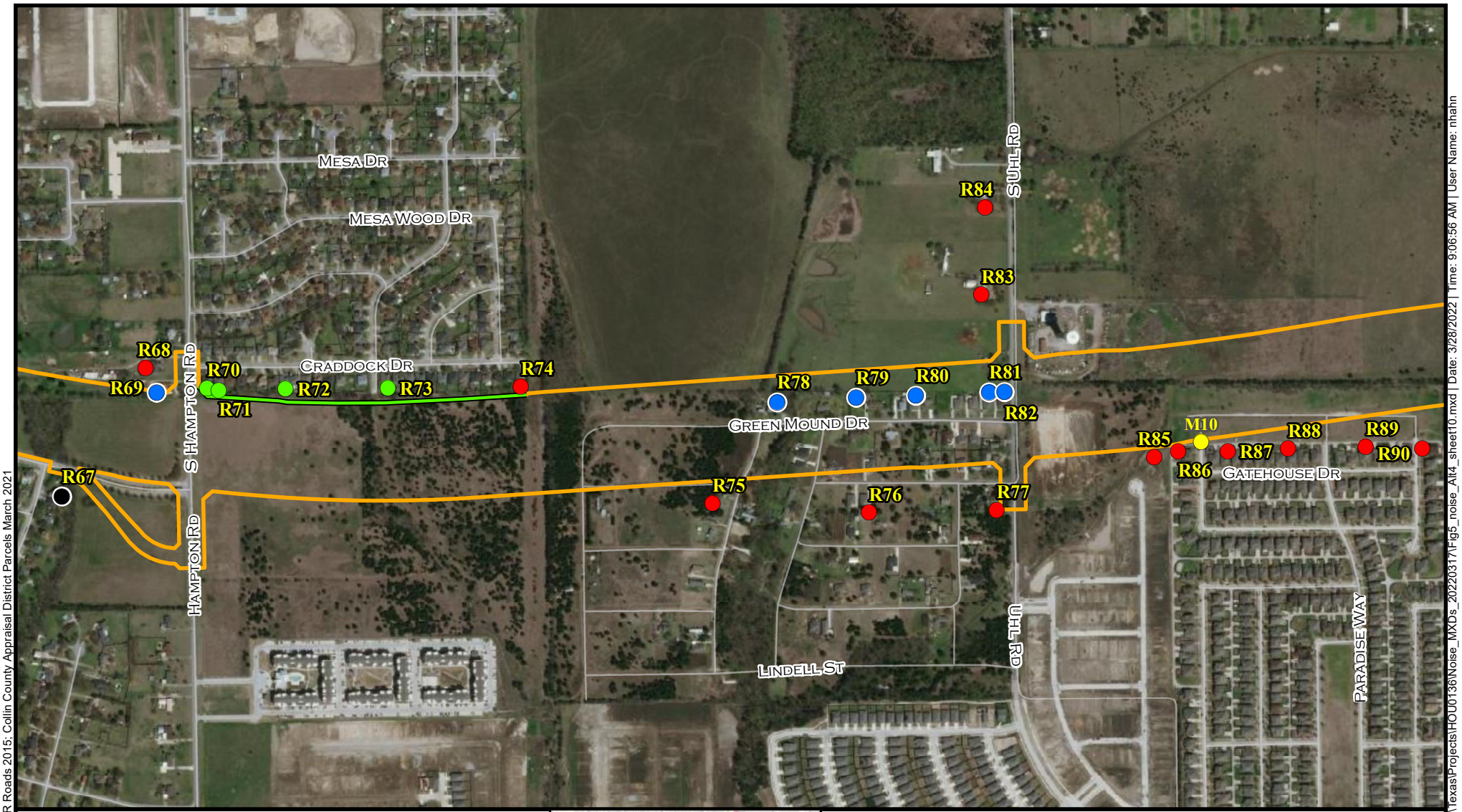
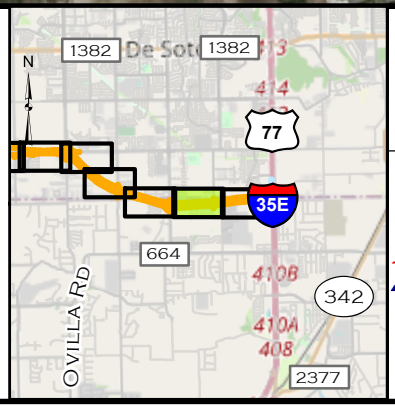


- Non-Impacted Receiver
- Displaced Receiver within the ROW
- Benefited Receiver
- Impacted Receiver
- Measurement Point
- Proposed Barrier
- Alternative 4 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 4
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

1:8,977

FIGURE 5
SHEET 10 OF 11

DATE:
March 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

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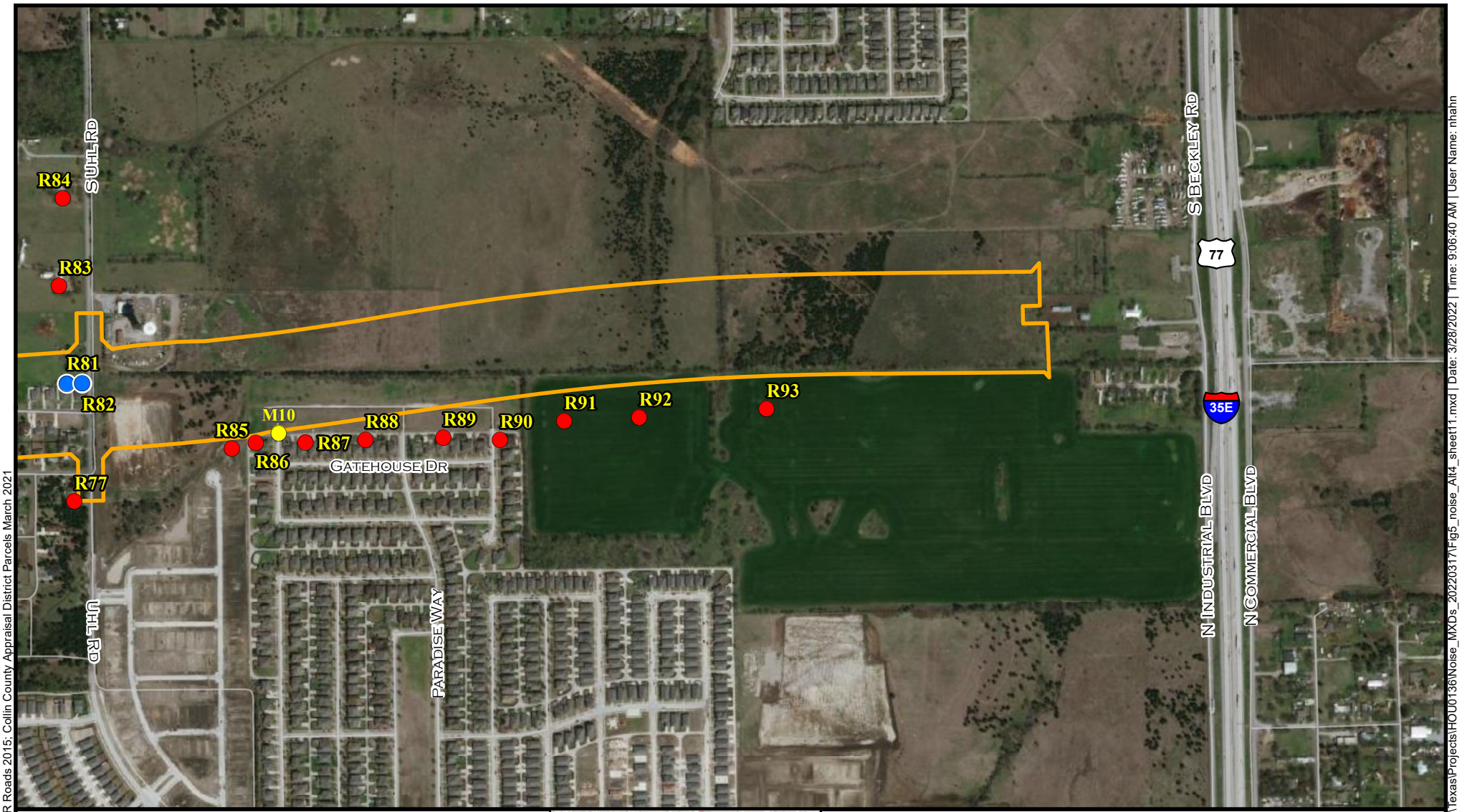
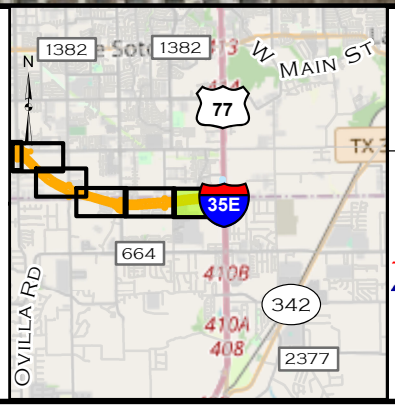


- Displaced Receiver within the ROW
- Impacted Receiver
- Measurement Point
- Alternative 4 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Alt 4
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

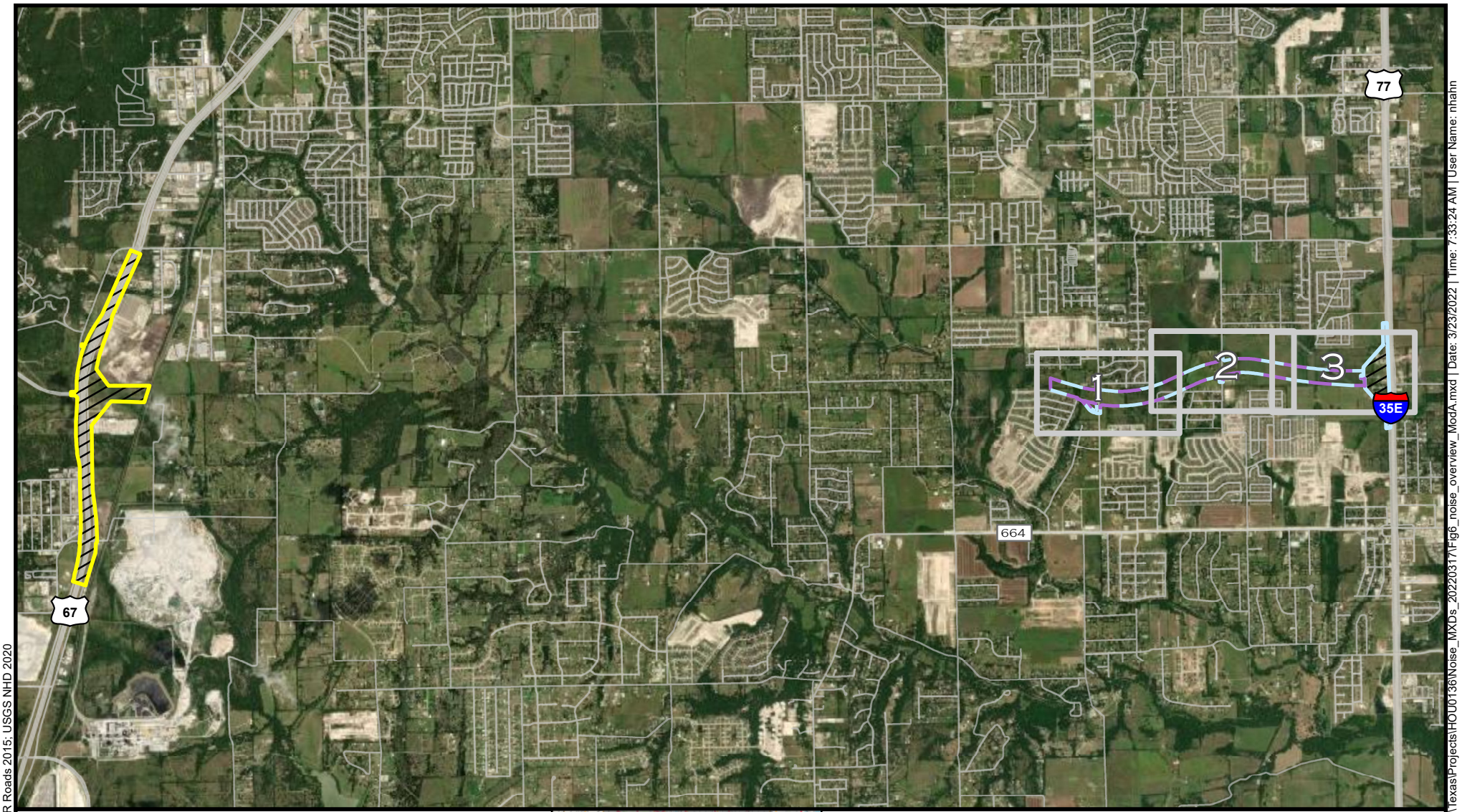
1:8,977

FIGURE 5
SHEET 11 OF 11

DATE:
MARCH 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

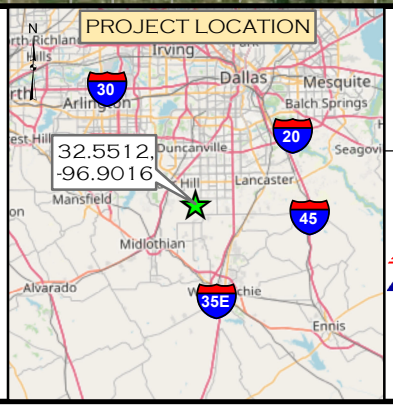
Path: C:\Users\nhahn\Documents\EPRUSA\State_Data\Texas\Projects\HOU0136\Noise_MXDs_20220317\Fig5_noise_Alt4_sheet11.mxd | Date: 3/28/2022 | Time: 9:06:40 AM | User Name: nhahn



Modification A

US 67 Project Area (Evaluated Under Separate Document)

IH 35E Project Area (Evaluated Under Separate Document)



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Overview Map - Mod A
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 2,400 4,800 Feet

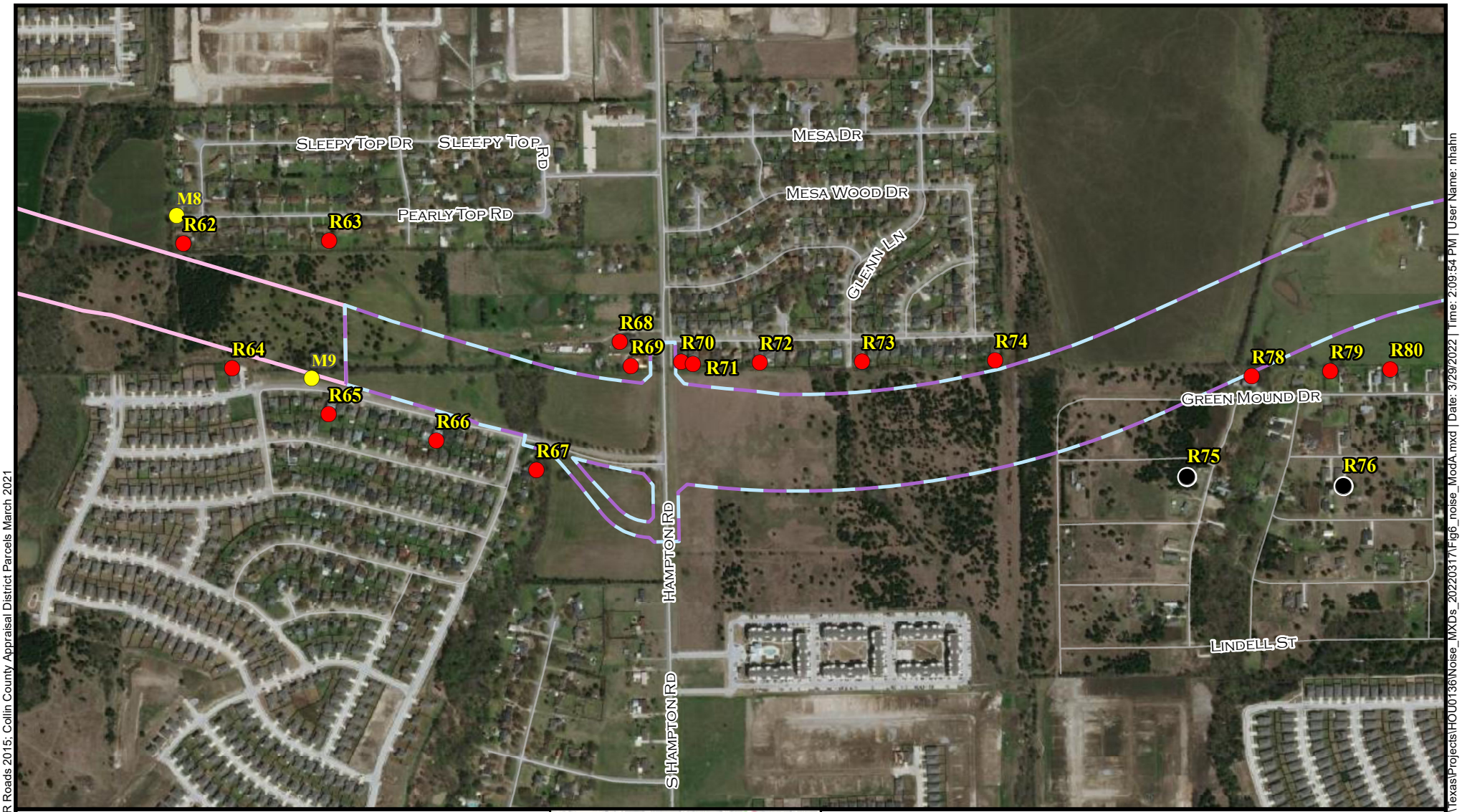
1:60,000

FIGURE 6

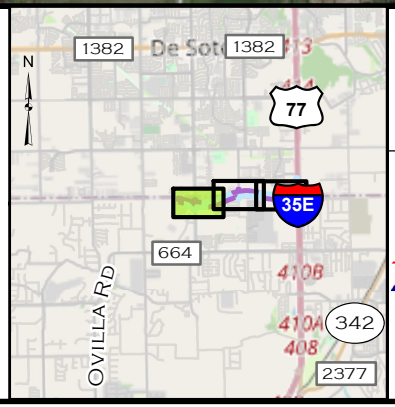
DATE:
March 2022

Sources: ESRI Imagery 2021; Open Street Map; TIGER Roads 2015; USGS NHD 2020

Path: C:\Users\nhahn\Documents\EPRUSA\State_Data\Texas\Projects\HOU0136\Noise_MXDs_20220317\Fig6_noise_overview_ModA.mxd | Date: 3/23/2022 | Time: 7:33:24 AM | User Name: nhahn



- Non-Impacted Receiver
- Impacted Receiver
- Measurement Point
- Modification A
- Alternative 1 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Mod A
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

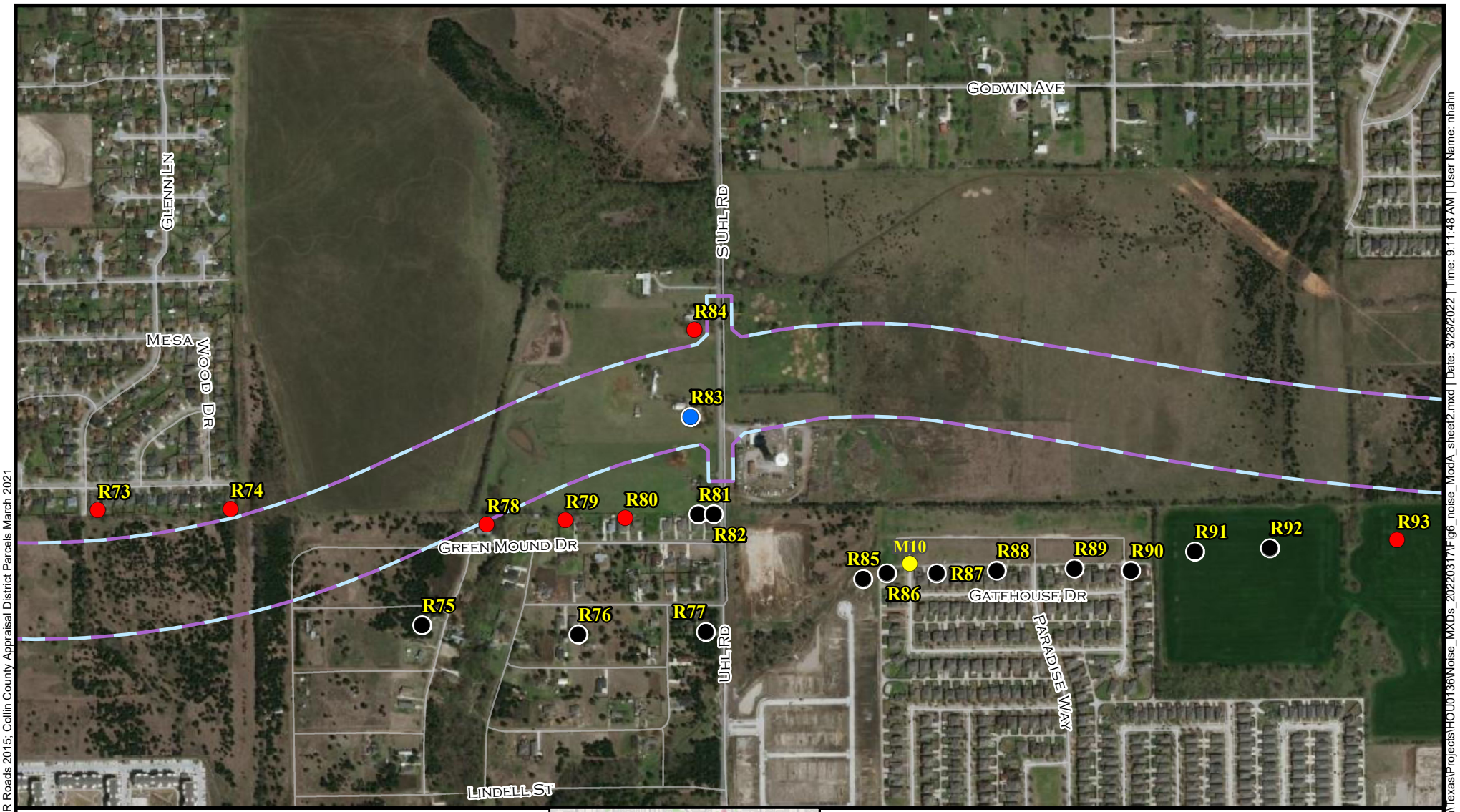
1:8,977

FIGURE 6
SHEET 1 OF 3

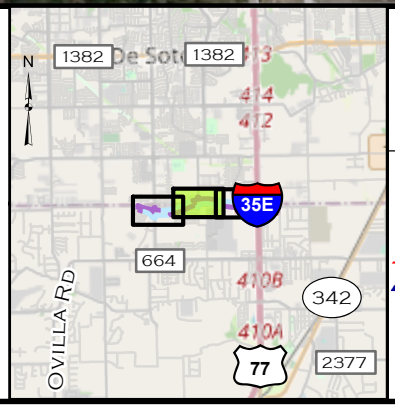
DATE:
March 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

Path: C:\Users\nhahn\Documents\EPRUSA\State_Data\Texas\Projects\HOU0136\Noise_MXDs_20220317\Fig6_noise_ModA.mxd | Date: 3/29/2022 | Time: 2:09:54 PM | User Name: nhahn



- Non-Impacted Receiver
- Displaced Receiver within the ROW
- Impacted Receiver
- Measurement Point
- Modification A



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Mod A
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

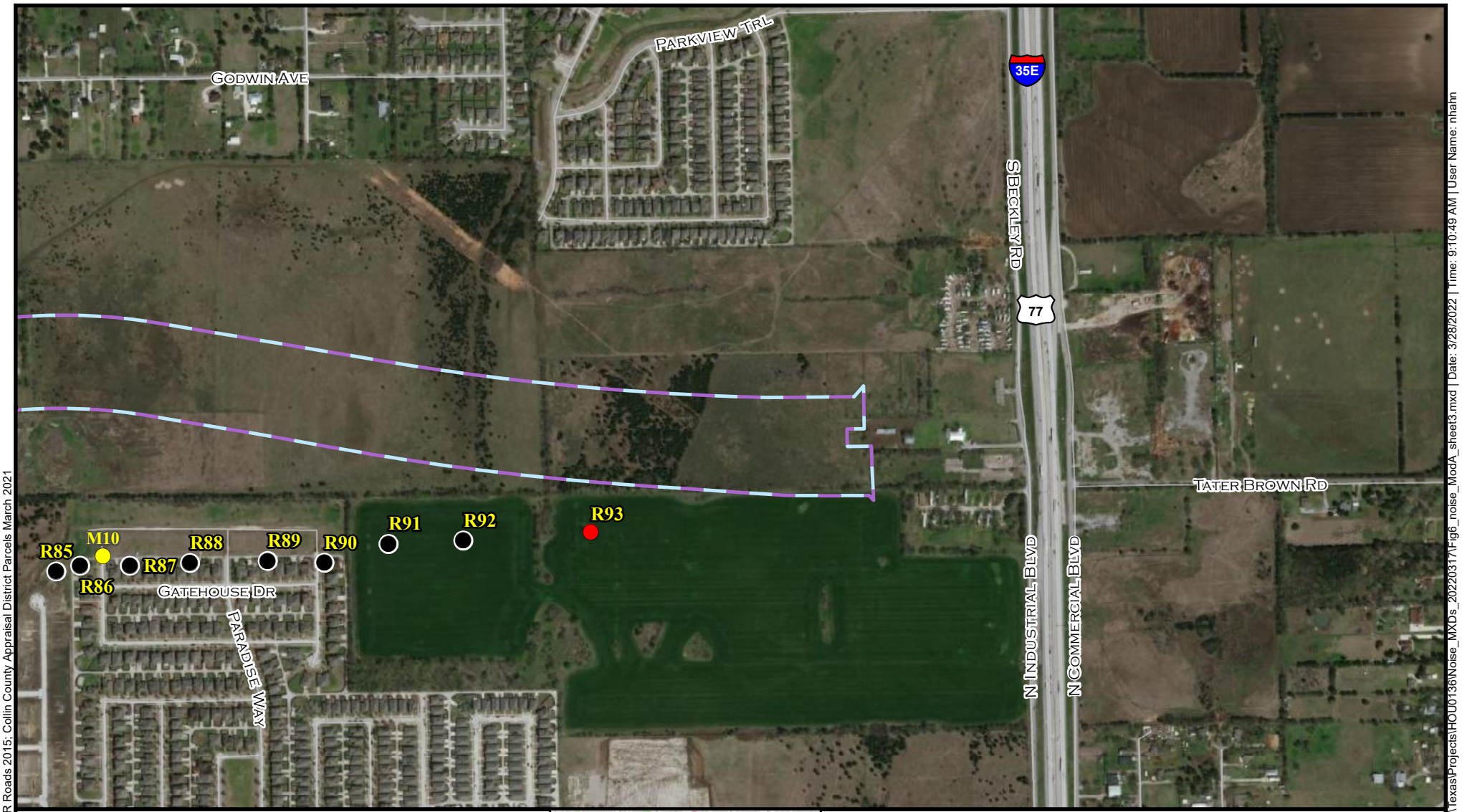
1:8,977

FIGURE 6
SHEET 2 OF 3

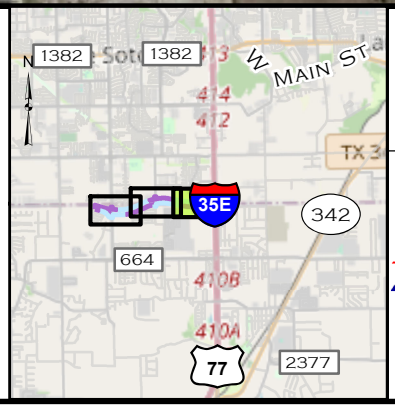
DATE:
MARCH 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

Path: C:\Users\nhahn\Documents\EPRUSA\State_Data\Texas\Projects\HOU0136\Noise_MXDs_20220317\Fig6_noise_ModA_sheet2.mxd | Date: 3/28/2022 | Time: 9:11:48 AM | User Name: nhahn



- Non-Impacted Receiver
- Impacted Receiver
- Measurement Point
- Modification A



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Mod A
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

1:8,977

FIGURE 6
SHEET 3 OF 3

DATE:
March 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

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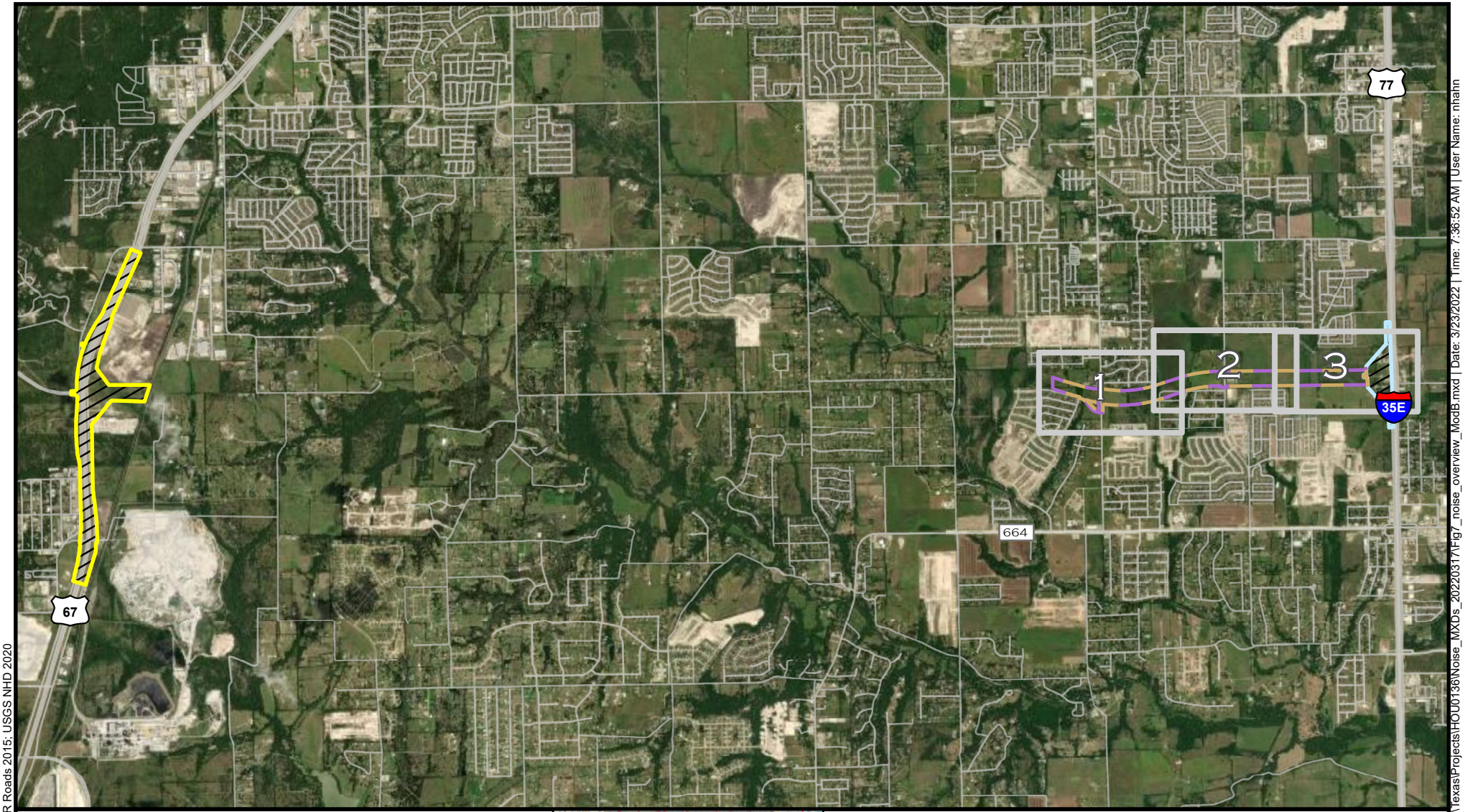
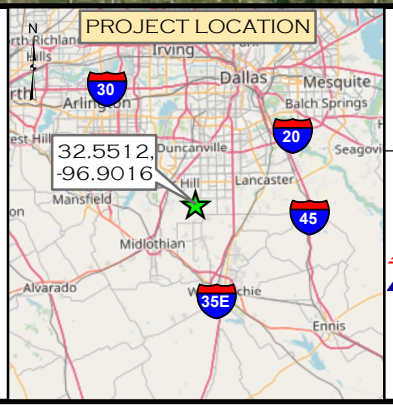


Modification B

US 67 Project Area (Evaluated Under Separate Document)

IH 35E Project Area (Evaluated Under Separate Document)



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Overview Map - Mod B
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 2,400 4,800 Feet

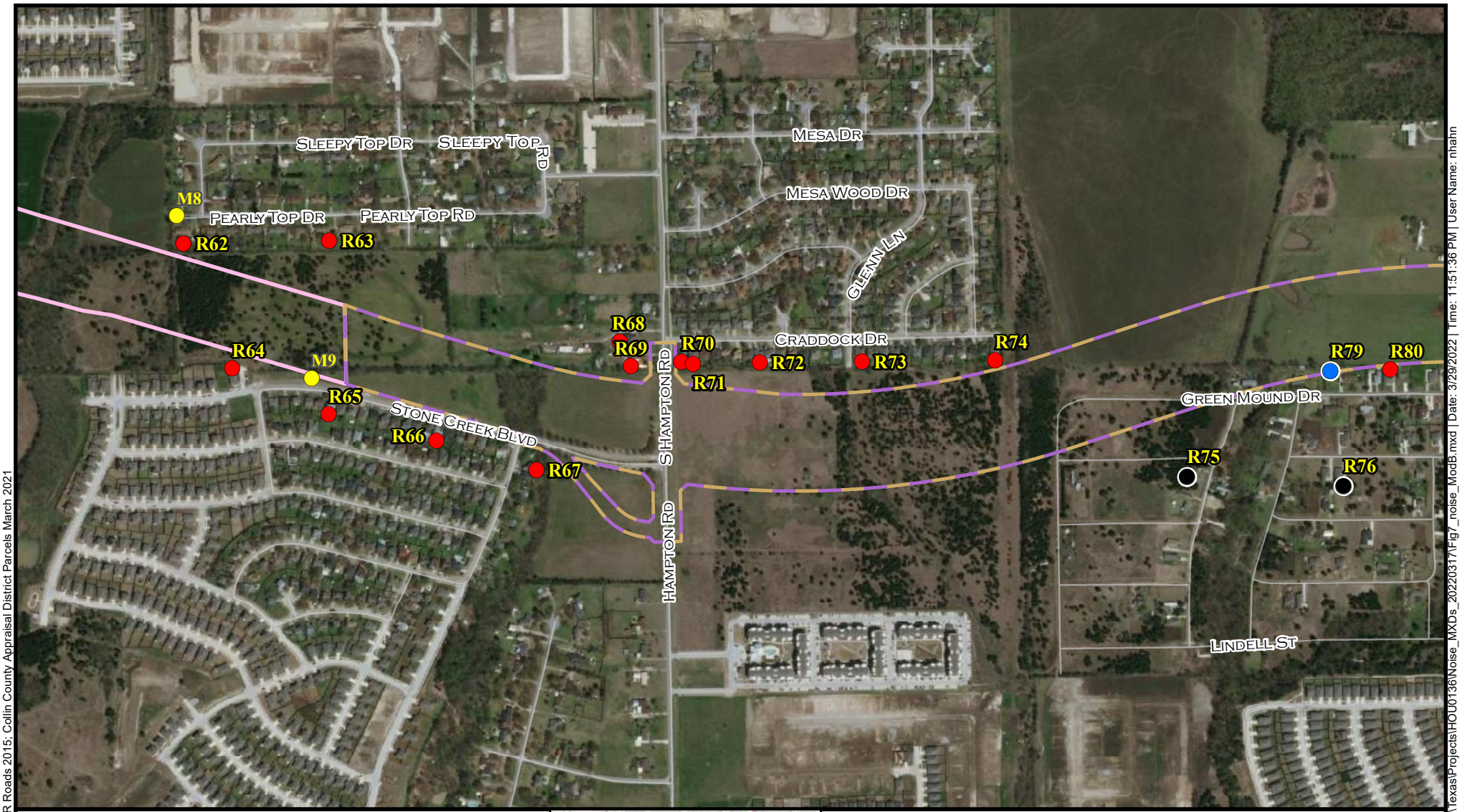
1:60,000

FIGURE 7

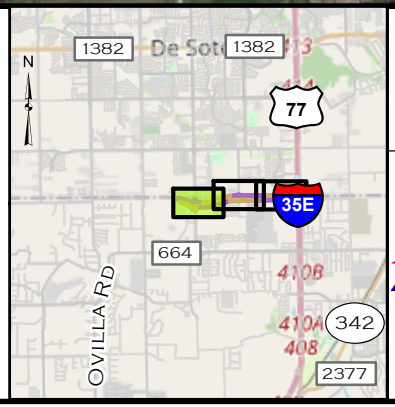
DATE:
March 2022

Sources: ESRI Imagery 2021; Open Street Map; TIGER Roads 2015; USGS NHD 2020

Path: C:\Users\nhahn\Documents\EPRUSA\State_Data\Texas\Projects\HOU0136\Noise_MXDs_20220317\Fig7_noise_overview_ModB.mxd | Date: 3/23/2022 | Time: 7:36:52 AM | User Name: nhahn



- Non-Impacted Receiver
- Displaced Receiver within the ROW
- Impacted Receiver
- Measurement Point
- Modification B
- Alternative 1 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Mod B
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

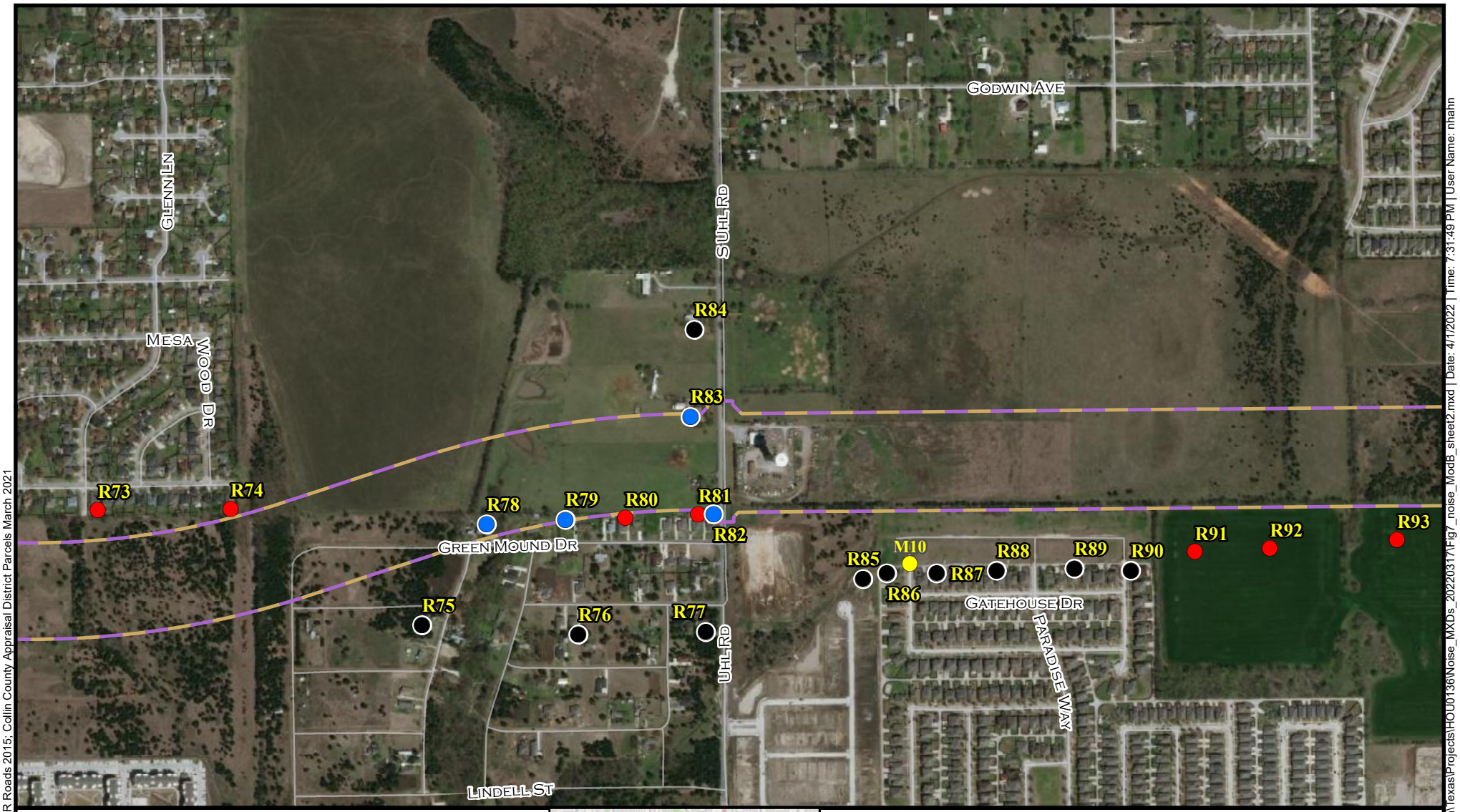
1:8,977

FIGURE 7
SHEET 1 OF 3

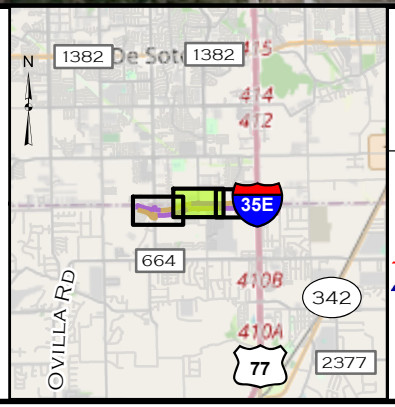
DATE:
March 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

Path: C:\Users\nhahn\Documents\EPRUSA\State_Data\Texas\Projects\HOU0136\Noise_MXDs_20220317\Fig7_noise_ModB.mxd | Date: 3/29/2022 | Time: 11:51:36 PM | User Name: nhahn



- Non-Impacted Receiver
- Displaced Receiver within the ROW
- Impacted Receiver
- Measurement Point
- Modification B



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Mod B
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

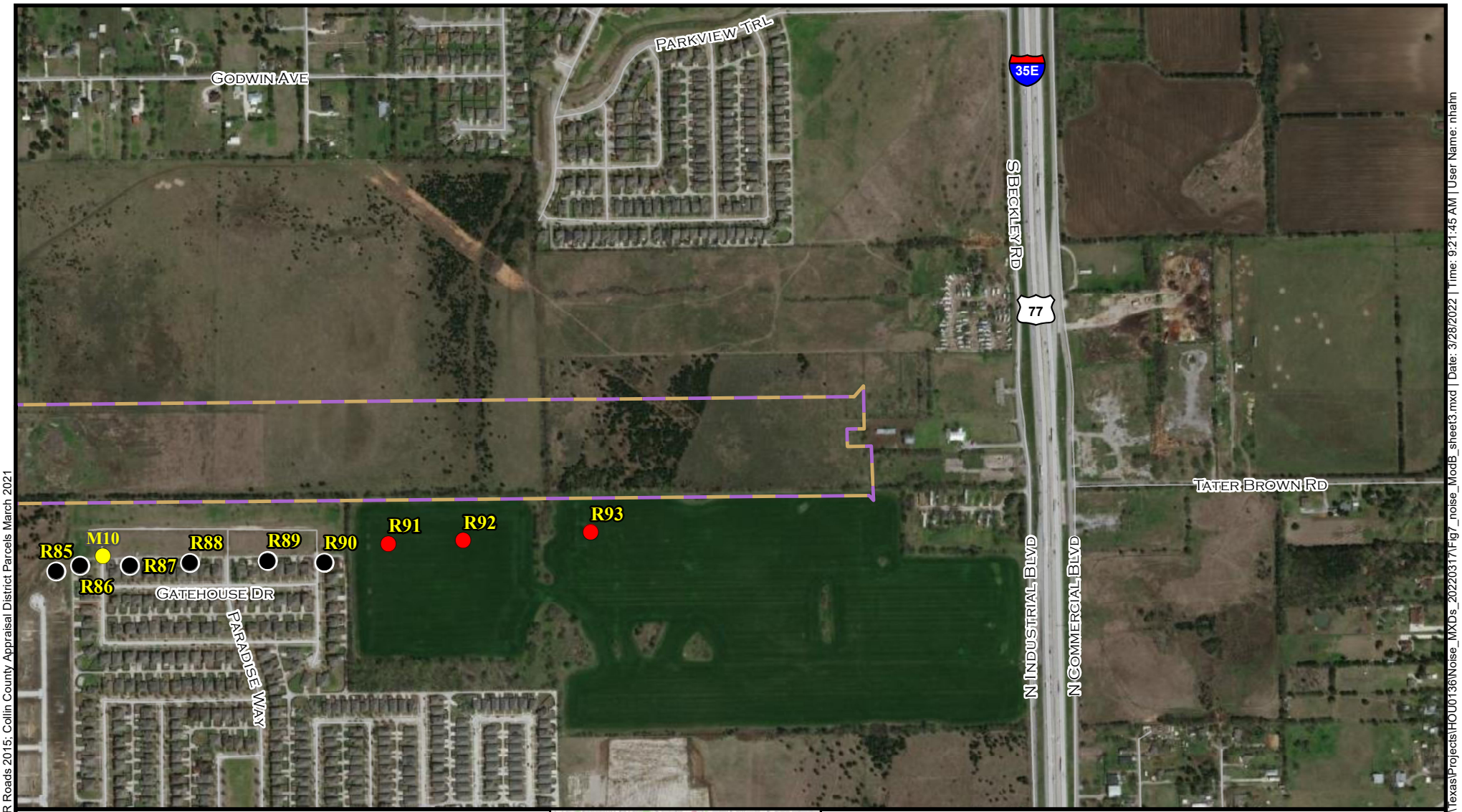
1:8,977

FIGURE 7
SHEET 2 OF 3

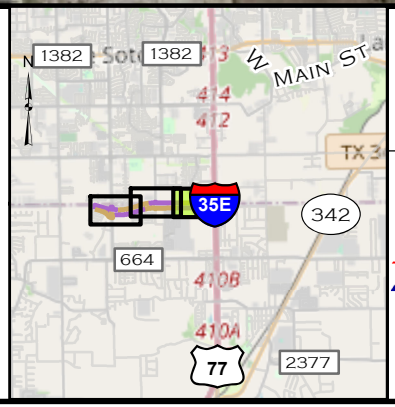
DATE:
APRIL 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

Path: C:\Users\nhahn\Documents\EPRUSA\State_Data\Texas\Projects\HOU0136\Noise_MXDs_20220317\Fig7_noise_ModB_sheet2.mxd | Date: 4/1/2022 | Time: 7:31:49 PM | User Name: nhahn



- Non-Impacted Receiver
- Impacted Receiver
- Measurement Point
- Modification B



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Mod B
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

1:8,977

FIGURE 7
SHEET 3 OF 3

DATE:
March 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

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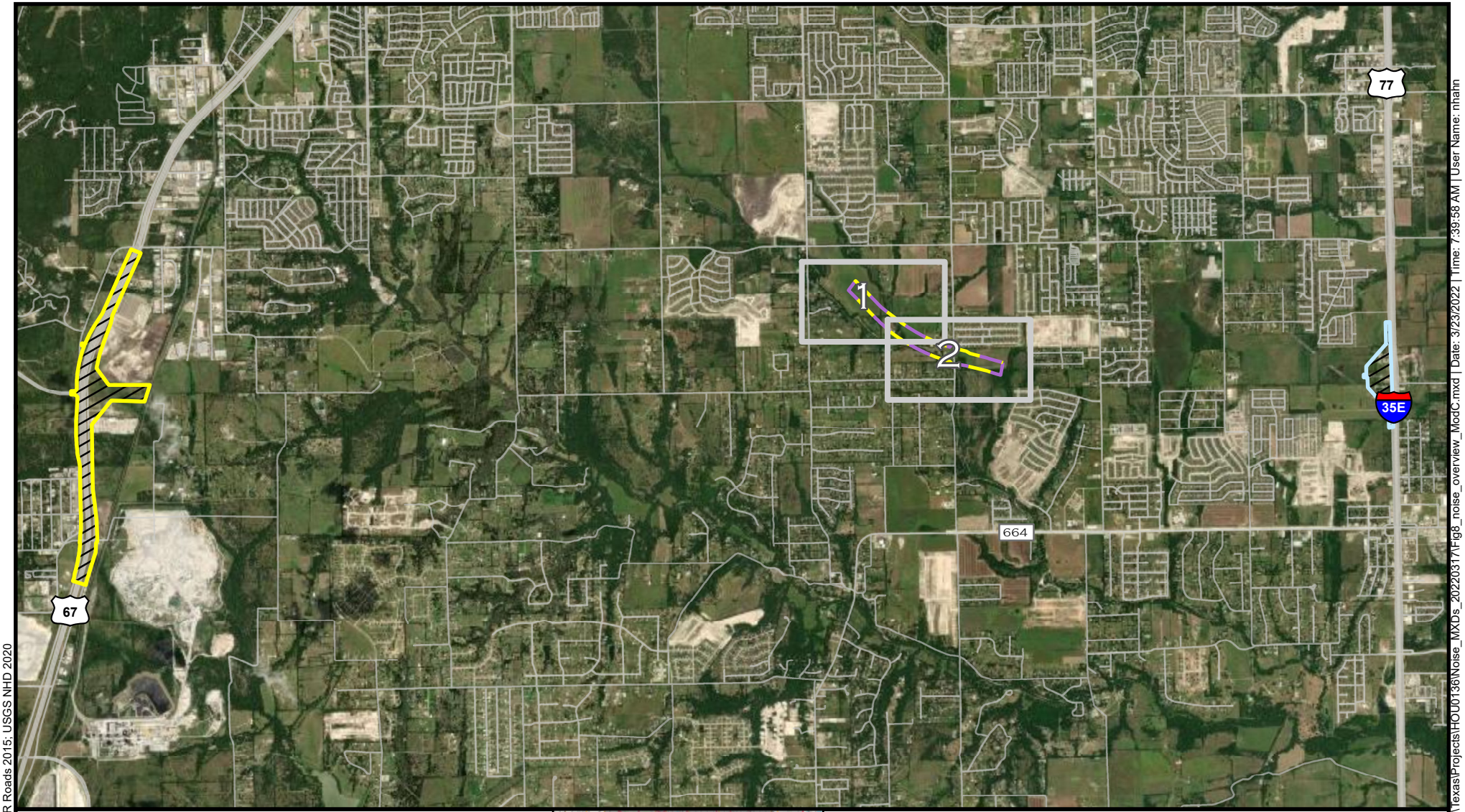
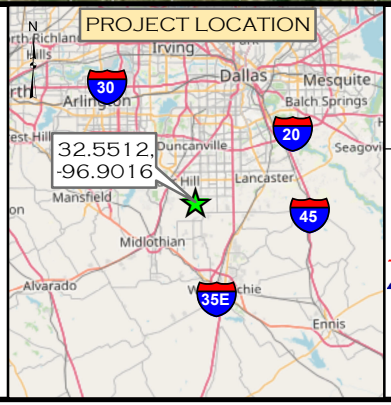


Modification C

US 67 Project Area (Evaluated Under Separate Document)

IH 35E Project Area (Evaluated Under Separate Document)



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Overview Map - Mod C
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 2,400 4,800 Feet

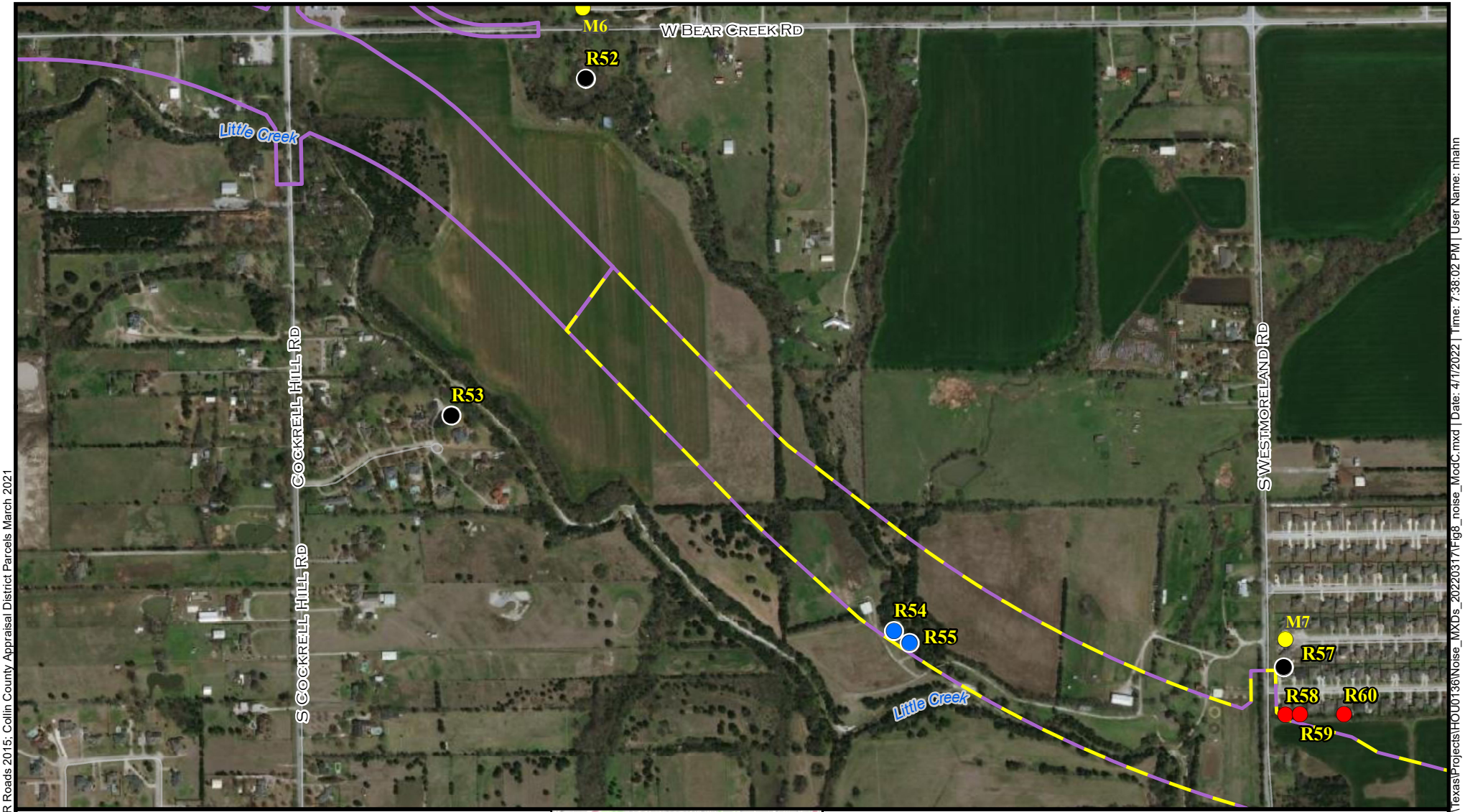
1:60,000

FIGURE 8

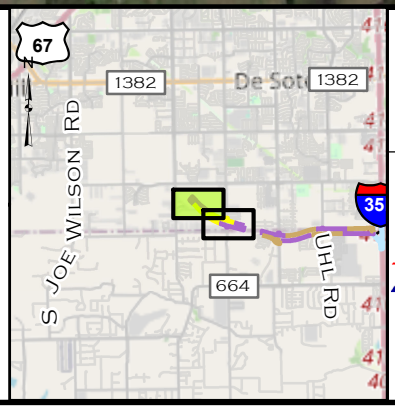
DATE:
March 2022

Sources: ESRI Imagery 2021; Open Street Map; TIGER Roads 2015; USGS NHD 2020

Path: C:\Users\nhahn\Documents\EPRUSA\State_Data\Texas\Projects\HOU0136\Noise_MXDs_20220317\Fig8_noise_overview_ModC.mxd | Date: 3/23/2022 | Time: 7:39:58 AM | User Name: nhahn



- Non-Impacted Receiver
- Displaced Receiver within the ROW
- Impacted Receiver
- Measurement Point
- Modification C
- Alternative 3 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Mod C
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

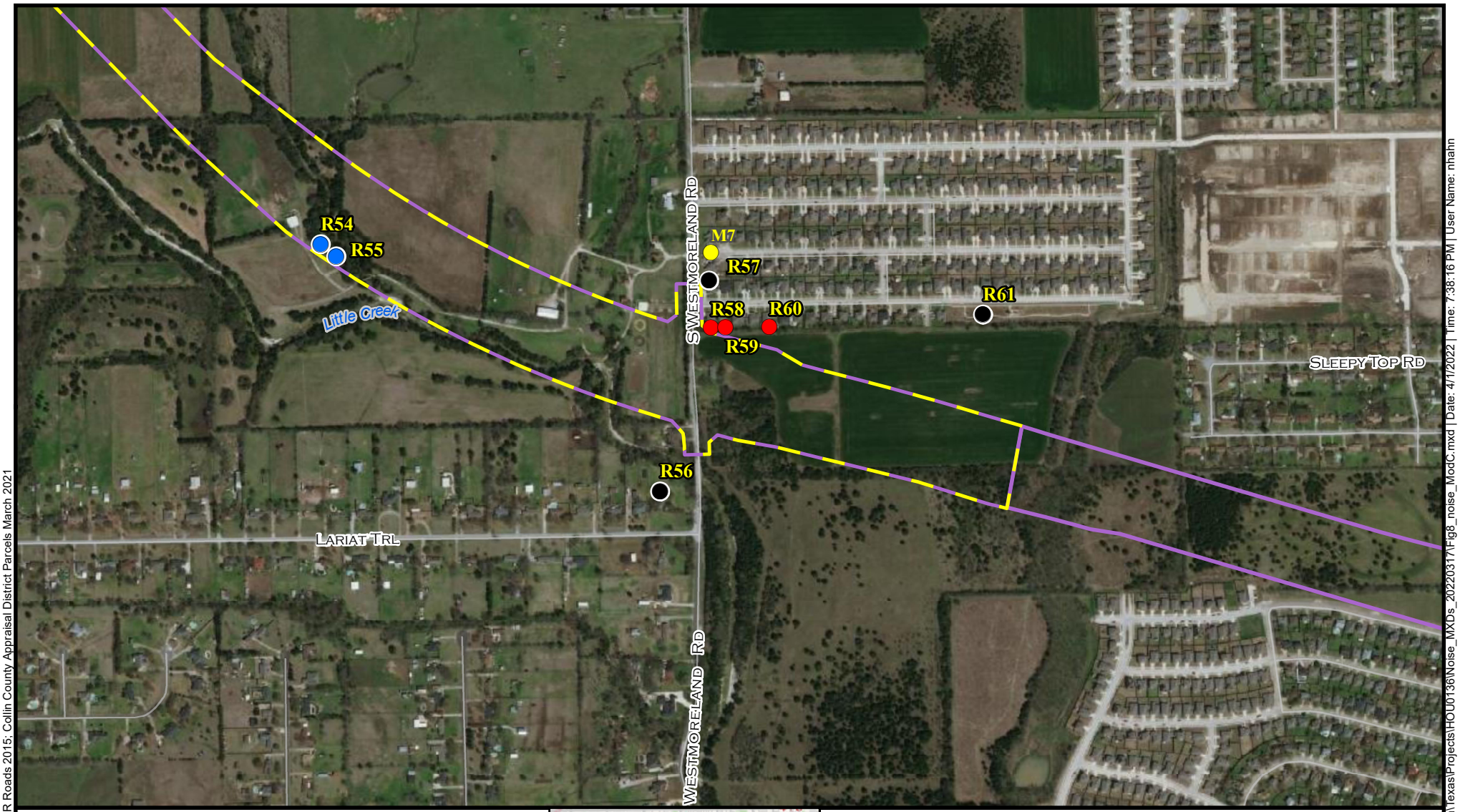
1:8,977

FIGURE 8
SHEET 1 OF 2

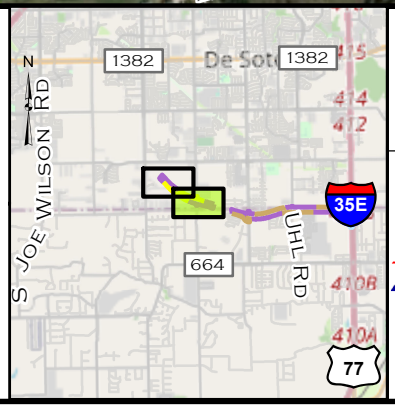
DATE:
APRIL 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

Path: C:\Users\nhahn\Documents\EPRUSA\State_Data\Texas\Projects\HOU0136\Noise_MXDs_20220317\Fig8_noise_ModC.mxd | Date: 4/1/2022 | Time: 7:38:02 PM | User Name: nhahn



- Non-Impacted Receiver
- Displaced Receiver within the ROW
- Impacted Receiver
- Measurement Point
- Modification C
- Alternative 3 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Mod C
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

1:8,977

FIGURE 8
SHEET 2 OF 2

DATE:
APRIL 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

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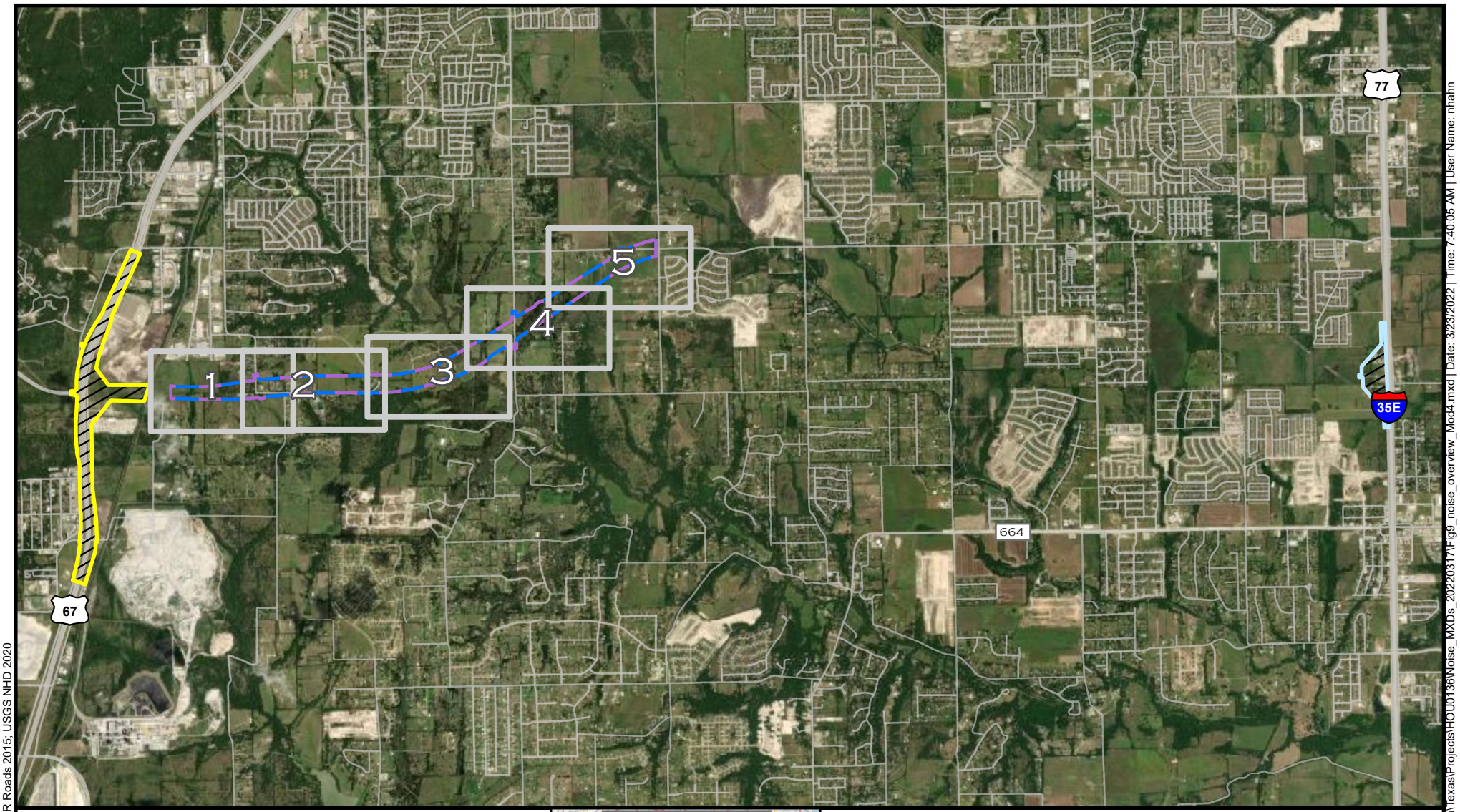


Modification D

US 67 Project Area (Evaluated Under Separate Document)

IH 35E Project Area (Evaluated Under Separate Document)

Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Overview Map - Mod D
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 2,400 4,800 Feet

1:60,000

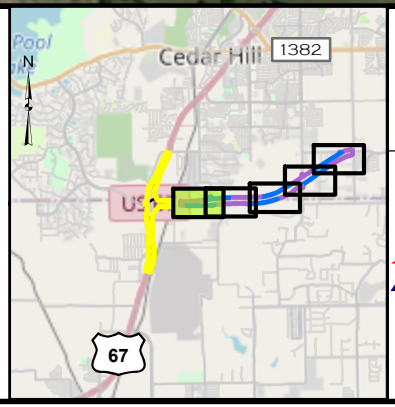
FIGURE 9

DATE:
March 2022

Sources: ESRI Imagery 2021; Open Street Map; TIGER Roads 2015; USGS NHD 2020

Path: C:\Users\nhahn\Documents\EPRUSA\State_Data\Texas\Projects\HOU0136\Noise_MXDs_20220317\Fig9_noise_overview_Mod4.mxd | Date: 3/23/2022 | Time: 7:40:05 AM | User Name: nhahn

- Non-Impacted Receiver
- Displaced Receiver within the ROW
- Impacted Receiver
- Measurement Point
- Modification D
- Alternative 1 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Mod D
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

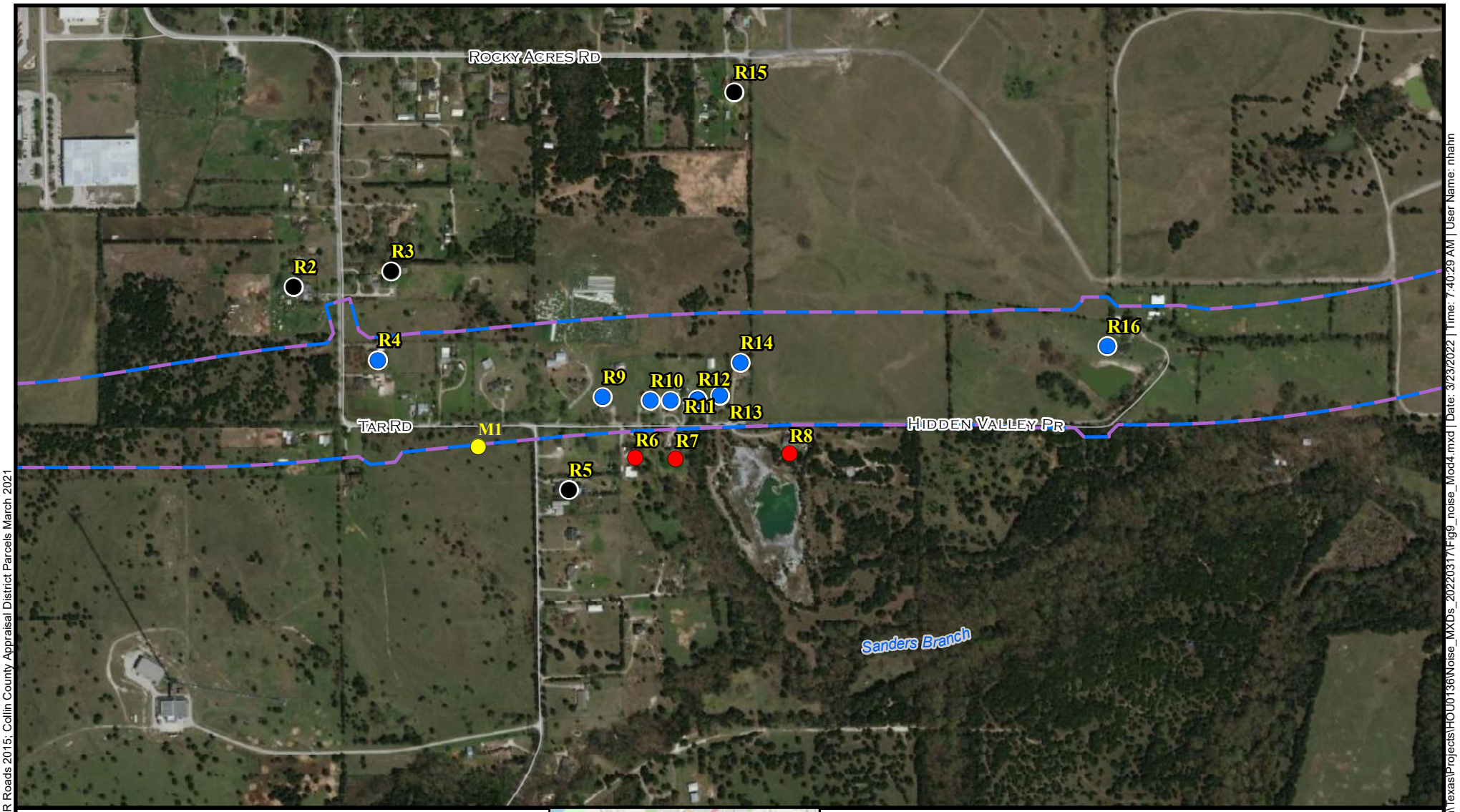
1:8,977

FIGURE 9
SHEET 1 OF 5

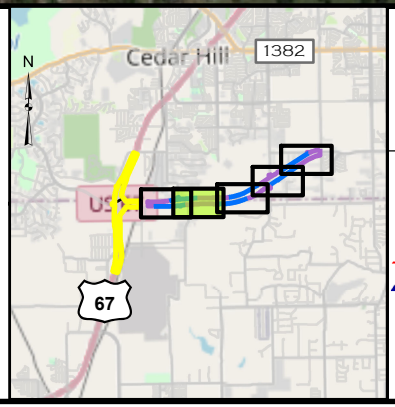
DATE:
March 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

Path: C:\Users\nhahn\Documents\EPRUSA\State_Data\Texas\Projects\HOU0136\Noise_MXDs_20220317\Fig9_noise_Mod4.mxd | Date: 3/23/2022 | Time: 7:40:19 AM | User Name: nhahn



- Non-Impacted Receiver
- Displaced Receiver within the ROW
- Impacted Receiver
- Measurement Point
- Modification D



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Mod D
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

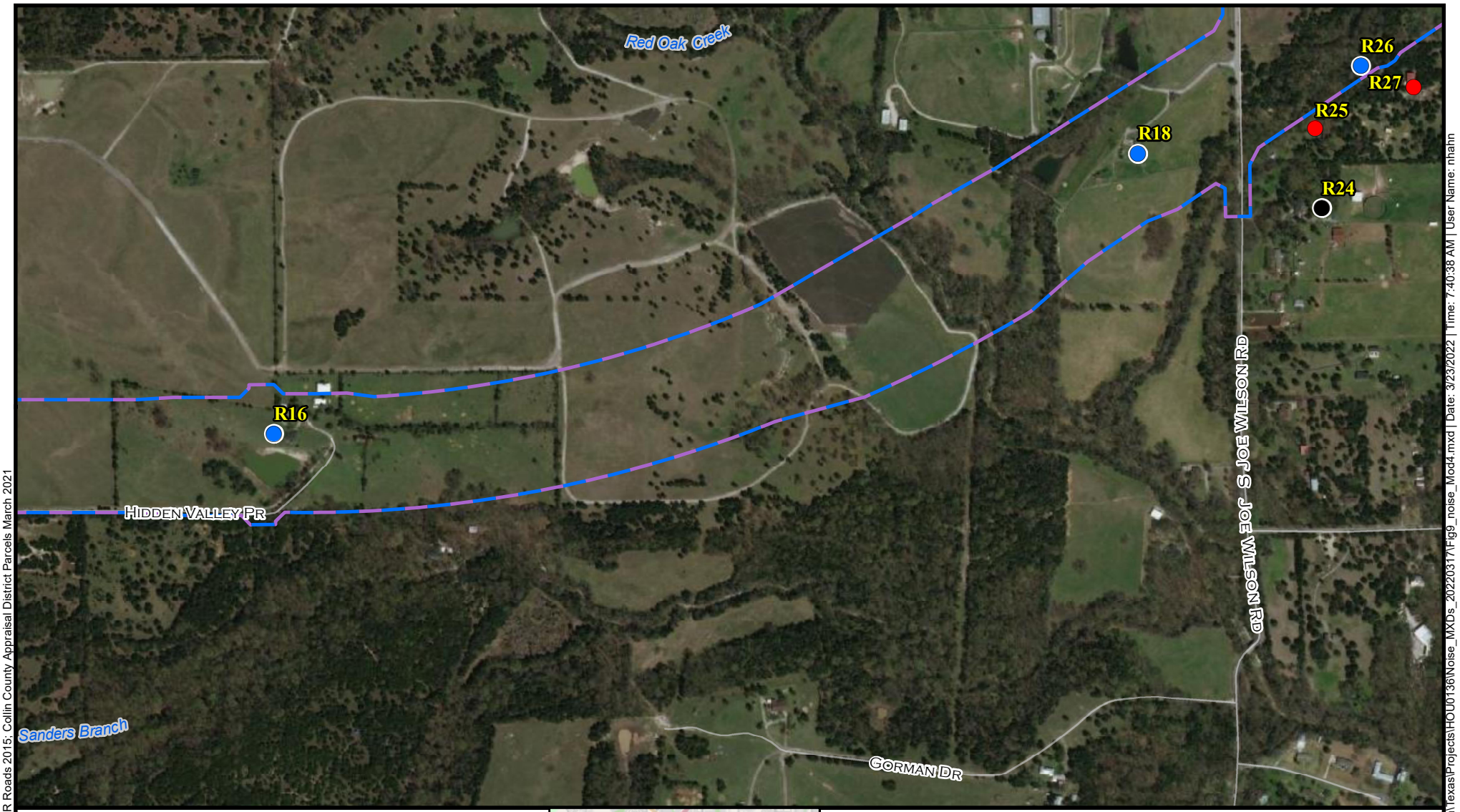
1:8,977

FIGURE 9
SHEET 2 OF 5

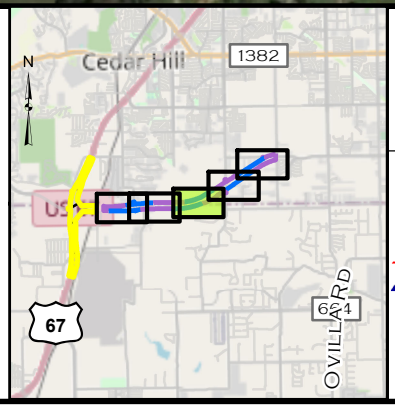
DATE:
March 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

Path: C:\Users\nhahn\Documents\EPRUSA\State_Data\Texas\Projects\HOU0136\Noise_MXDs_20220317\Fig9_noise_Mod4.mxd | Date: 3/23/2022 | Time: 7:40:29 AM | User Name: nhahn



- Non-Impacted Receiver
- Displaced Receiver within the ROW
- Impacted Receiver
- Modification D



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Mod D
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

1:8,977

FIGURE 9
SHEET 3 OF 5

DATE:
March 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

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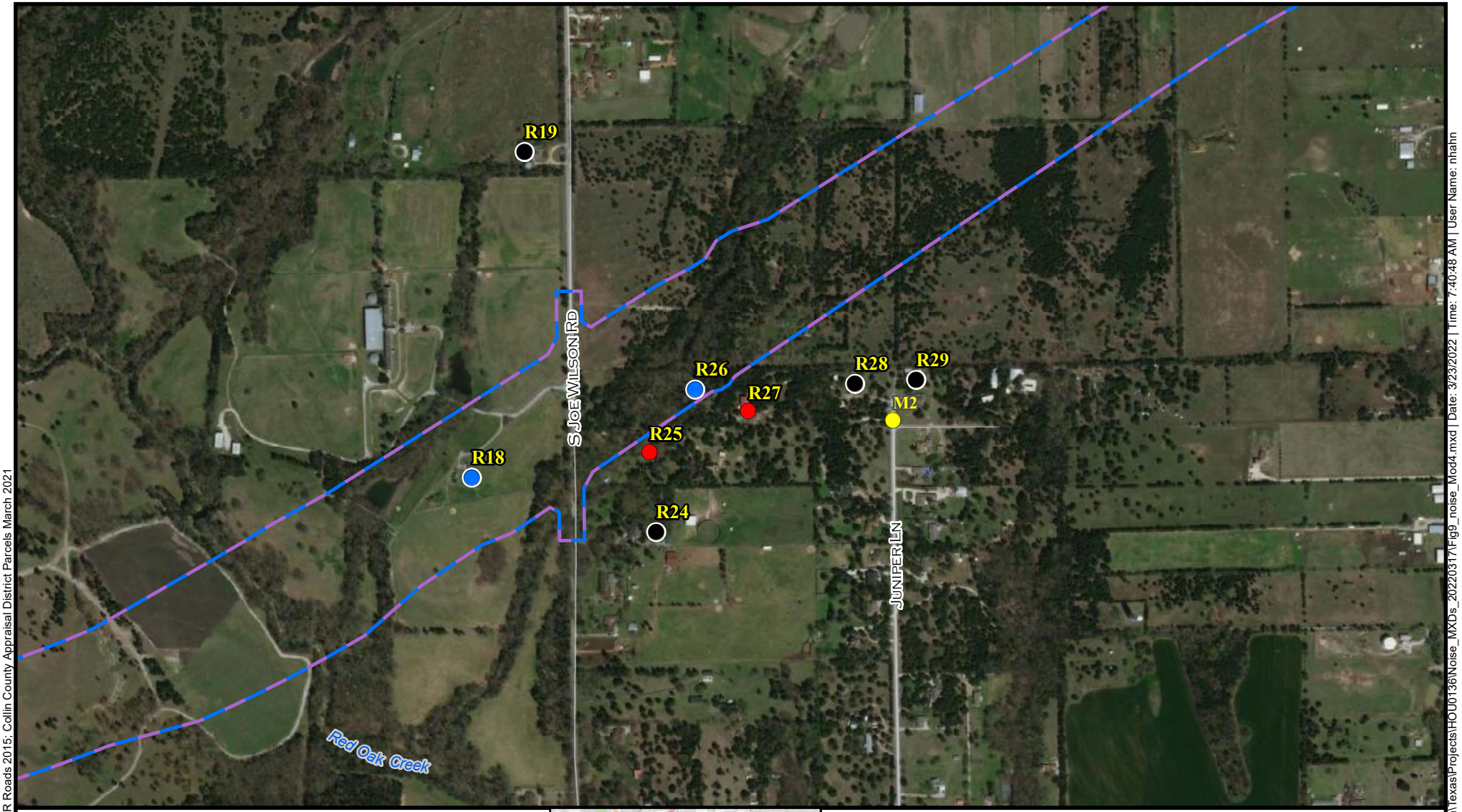
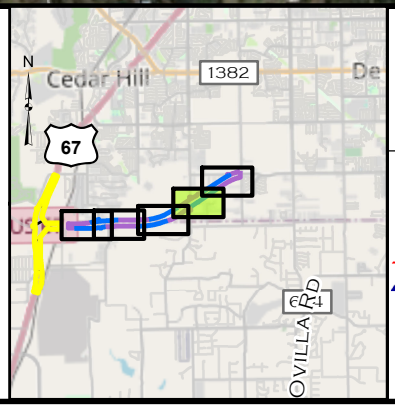


- Non-Impacted Receiver
- Displaced Receiver within the ROW
- Impacted Receiver
- Measurement Point
- Modification D



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Mod D
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

1:8,977

FIGURE 9
SHEET 4 OF 5

DATE:
MARCH 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

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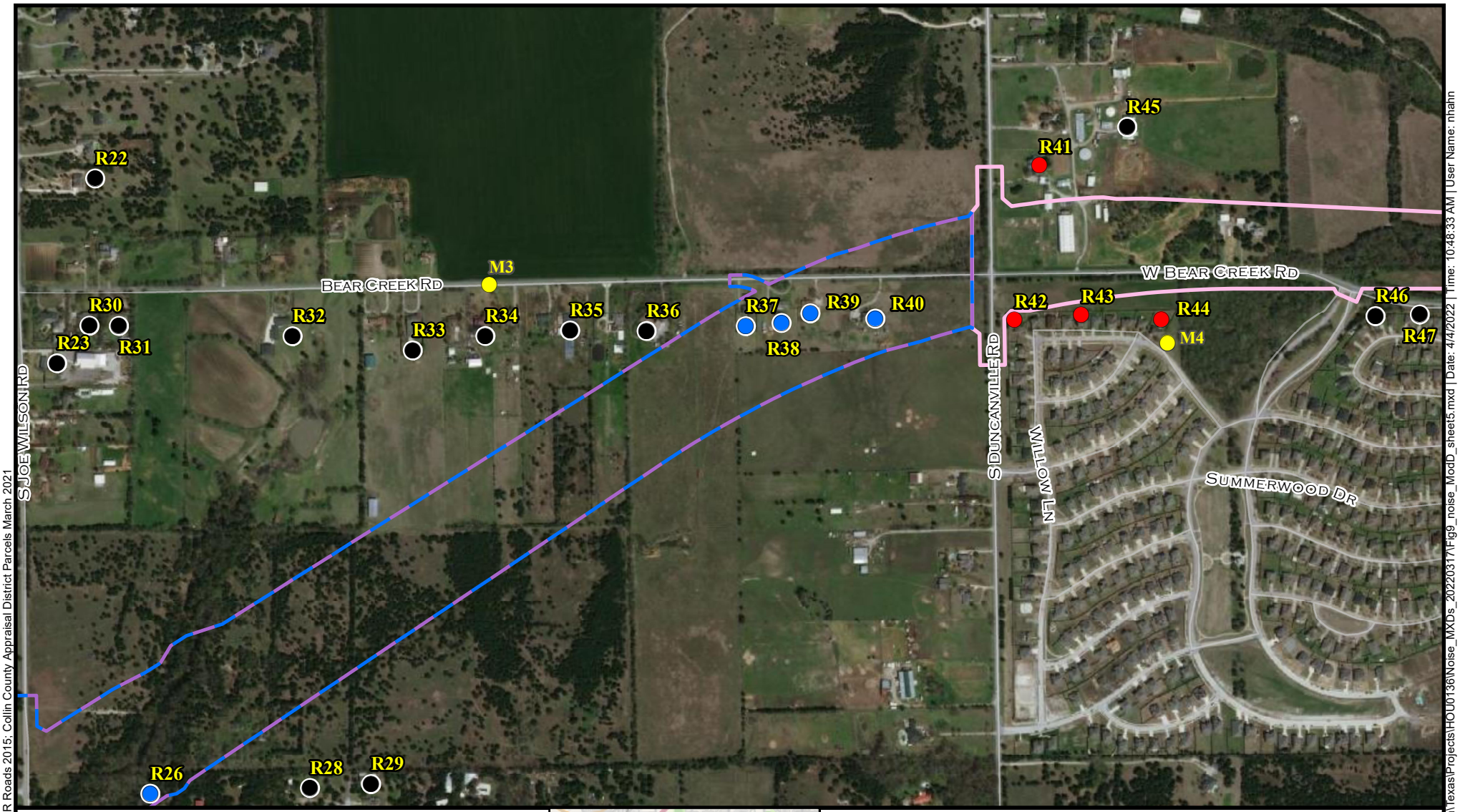
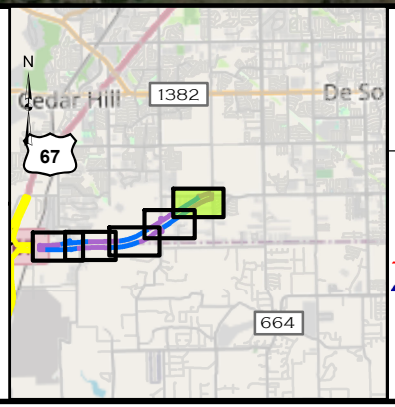


Non-Impacted Receiver
Displaced Receiver within the ROW
Impacted Receiver
Measurement Point
Modification D
Alternative 1 Proposed ROW



Loop 9, Segment A: US 67 to IH 35E
CSJ: 2964-10-006
Noise Receiver Locations Map - Mod D
Dallas and Ellis Counties, Texas

Texas Department of Transportation

N

0 380 760 Feet

1:8,977

FIGURE 9
SHEET 5 OF 5

DATE:
APRIL 2022

Sources: ESRI Imagery 2020; Open Street Map; TIGER Roads 2015; Collin County Appraisal District Parcels March 2021

Path: C:\Users\nhahn\Documents\EPRUSA\State_Data\Texas\Projects\HOU0136\Noise_MXDs_20220317\Fig9_noise_ModD_sheet5.mxd | Date: 4/4/2022 | Time: 10:48:33 AM | User Name: nhahn

Attachment B: Traffic data

TRAFFIC ANALYSIS FOR HIGHWAY DESIGN (OPTION C)

Dallas District **April 3, 2020**

Description of Location	Average Daily Traffic 2028	Average Daily Traffic 2048	Base Year Dir Dist %	Base Year K Factor	Base Year Percent Trucks ADT	Base Year Percent Trucks DHV	ATHWLD	Percent Tandem Axles in ATHWLD	Total Number of Equivalent 18k Single Axle Load Applications One Direction Expected for a 20 Year Period (2028 to 2048) Flexible Pavement	S N	Rigid Pavement	SLAB
SL 9, Segment A (Proposed) From US 67 To I-35E Dallas and Ellis Counties	17,040	39,430	56 - 44	11.3	4.4	2.9	11,300	30	2,802,000	3	3,269,000	8"

Data for Use in Air & Noise Analysis

Vehicle Class	Base Year % of ADT	Base Year % of DHV
Light Duty	95.6	97.1
Medium Duty	2.8	1.8
Heavy Duty	1.6	1.1

Description of Location	Average Daily Traffic 2028	Average Daily Traffic 2058	Base Year Dir Dist %	Base Year K Factor	Base Year Percent Trucks ADT	Base Year Percent Trucks DHV	ATHWLD	Percent Tandem Axles in ATHWLD	Total Number of Equivalent 18k Single Axle Load Applications One Direction Expected for a 30 Year Period (2028 to 2058) Flexible Pavement	S N	Rigid Pavement	SLAB
SL 9, Segment A (Proposed) From US 67 To I-35E Dallas and Ellis Counties	17,040	59,740	56 - 44	11.3	4.4	2.9	11,600	20	5,715,000	3	6,667,000	8"

TECHNICAL MEMORANDUM (DRAFT)

Task Report # 6, Technical Assistance in the Environmental Process
TxDOT Project: Re-review QA/QC of Traffic Forecast Methodology for Loop 9, Segment A: US 67 to IH 35E Dallas and Ellis Counties, Texas.

Project CSJ: 2964-10-006 and 0261-01-041

DATE: November 8, 2019

TO: Mathew Atkinson, Project Manager, TxDOT Dallas District

COPY TO: Dan Perge, Advance Project Development, TxDOT Dallas District

FROM: Sushant Sharma, Associate Research Scientist and John Overman, Research Scientist, Texas A&M Transportation Institute

FOR MORE INFORMATION:
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Phone: 817-462-0508, 817-462-0516
Email: s-sharma@tti.tamu.edu, JOVERM-C@txdot.gov

Executive Summary

The goal of this activity was to re-review traffic projection projected volumes for Loop 9, Segment A: US 67 to IH 35E

Conclusion

Based on this re-review, the traffic projection methodology and projected volumes are complete, no more information or data is needed.

TABLE OF CONTENTS

Introduction

The re-review of the traffic forecast methodology for Loop 9, Segment A: US 67 to IH 35E is being performed based on the responses to the findings of the earlier traffic forecast methodology report and new changes to the line schematics.

Estimated Growth Rates in Traffic Methodology Report

TTI Comment:

There were no specific growth rate values provided in the methodology report, TTI **cannot** comment on the growth rate, however, the steps provided in the methodology for calculating the growth rate are reasonable and appropriate.

Consultant response:

For this project, all growth rates were calculated based upon the intersection approach volumes provided in the NCTCOG Traffic Demand Model (TDM). The volumes were provided to M-B in GIS and TransCAD format, and were given for the years 2028, 2037, and 2045.

The methodology used to calculate the growth rates is as follows:

- Calculate the difference in arterial approach volumes to each Loop 9 interchange between the years 2028 and 2037, and between the years 2037 to 2045. This is done for both the northbound and southbound arterial approach volumes for each interchange.

- Calculate the rate of annual growth for each of those two periods by the formula: Growth Rate = ((Year 2 volume / Year 1 volume) ^ (1 / number of years)) – 1

- Take the average NCTCOG growth rate for the years 2028-2045 to smooth the data projections to the year 2048 and 2058.

Example: S. Westmoreland Road, southbound approach

NCTCOG 2028 approach volume = 176 vph
NCTCOG 2037 approach volume = 225 vph
Number of years = 2037 – 2028 = 9
Growth Rate = ((225 / 176) ^ (1/9)) – 1 = 2.8%

NCTCOG 2037 approach volume = 225 vph
NCTCOG 2048 approach volume = 289 vph
Number of years = 2045 – 2037 = 8
Growth Rate = ((289 / 225) ^ (1/8)) – 1 = 3.2%
Average growth rate 2028-2045 = 3.0%

This calculation was done for all interchanges at Loop 9, and the average growth rate was used to calculate the growth from 2045 (the last data given by the NCTCOG TDM) to 2048 (opening year +20) and 2058 (pavement design year).

The rates calculated are generally between 2% and 5% as described by TTI. However, some are outside of that range, based on NCTCOG TDM data. The TDM data was deemed more accurate than a "rule of thumb" range for growth rates, since it is based upon land use, projected growth, etc.

Two items add complexity to the above process:

A. To calculate AADT, the design hour volumes used in the above processes were divided by the K-factor for the project, taken as K = 0.1. Therefore, AADT is assumed to equal ten times the design hour volumes.

B. The NCTCOG model shows a northern leg, but no southern leg, at Clark Road;however, the Loop 9 schematic shows this southern leg to be constructed. To calculate the volumes expected to use south Clark Road, the following steps were taken:

   i. Assume that the south leg of Clark Road would carry traffic volumes proportional to the NCTCOG TDM volumes on the two adjacent arterials, Tar Road (to the west) and Joe Wilson Road (to the east.)

   ii. Calculate the relative percentage of traffic using north Clark Road vs. the northern legs of Tar Road and Joe Wilson Road.

   iii. Apply the same percentages to south Clark Road, and reduce the volumes on south Tar Road and Joe Wilson Road by the same amount.

To describe this another way, we assumed that south Clark Road would "steal" some traffic from both Tar Road and Joe Wilson Road, in volumes directly proportional to the volumes on the north leg of the three arterials. Since this process involved assumptions about the volumes using Clark Road, it was not possible to directly calculate a growth rate for Clark Road. The relative growth rates for Clark Road traffic are a combination of the growth rates for both Tar Road and Joe Wilson Road.

TTI Re-review Response:

TTI concurs with the consultant response and explanation on methodology and projections.

Traffic Volumes

TTI comment:

Traffic projections were reviewed for accuracy to verify that turning and through movements add correctly. The traffic projections at some locations did not add up correctly (see Appendix A), however, an explanation is provided for this discrepancy.
TTI analyst assumes that the consultant has checked with NCTCOG to verify the model network and assumptions regarding the presence of major traffic generators or other nearby facilities.

Consultant Response:

The discrepancies are due to the NCTCOG model assumption that several generators and/or surface streets would add or subtract traffic from the Loop 9 frontage roads. These generators and streets were not shown on the schematic for Loop 9.

To better explain the sudden difference in frontage road volumes, new links have been added to the traffic projection stick diagram to show the addition or subtraction of traffic from generators adjacent to the Loop 9 frontage roads. The arithmetic is now accurate.

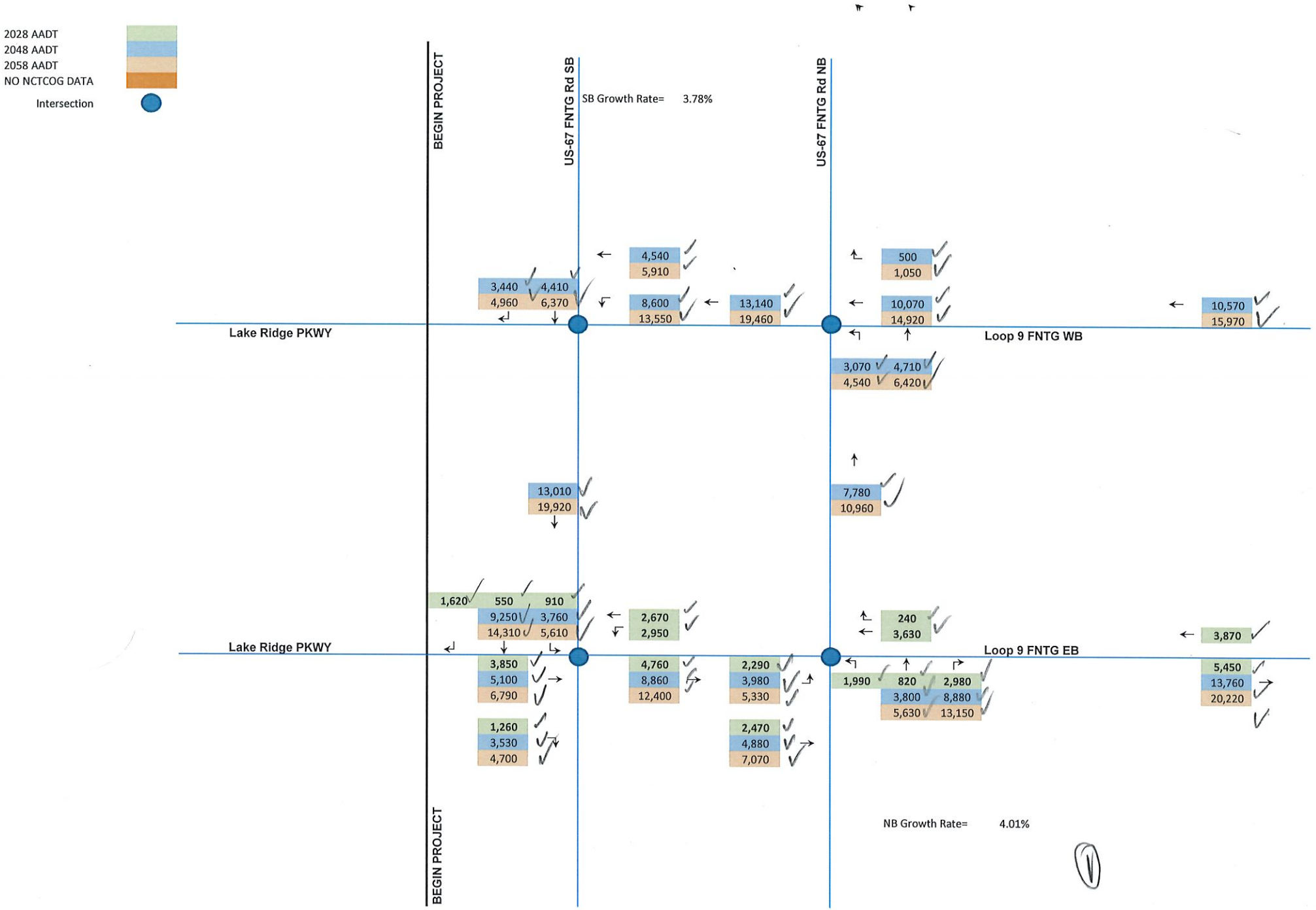
TTI Re-review Response:

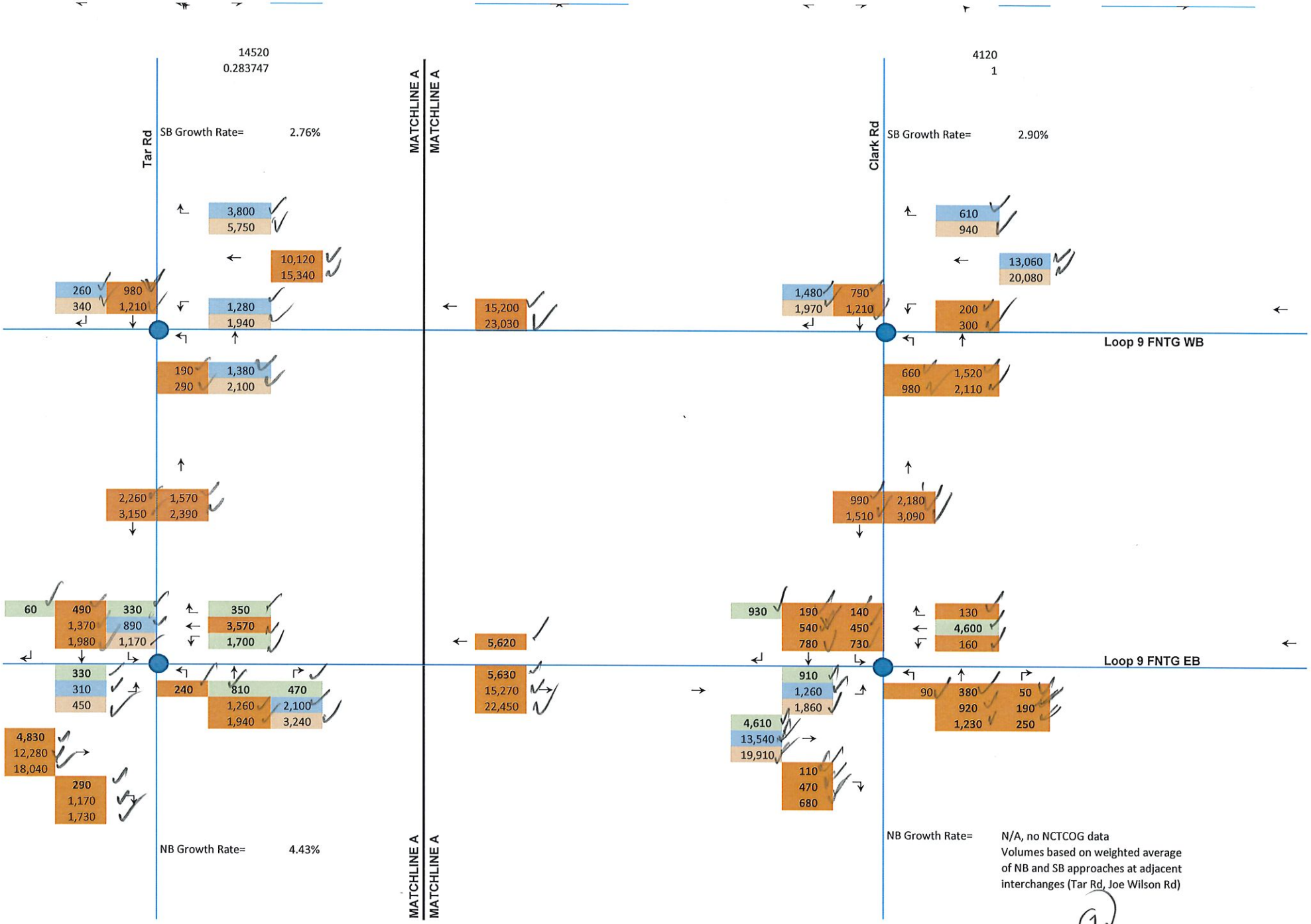
Traffic projections on line schematic for the years 2028, 2048, and 2058 were reviewed for accuracy to verify that turning and through movements add correctly (shown in Appendix A).

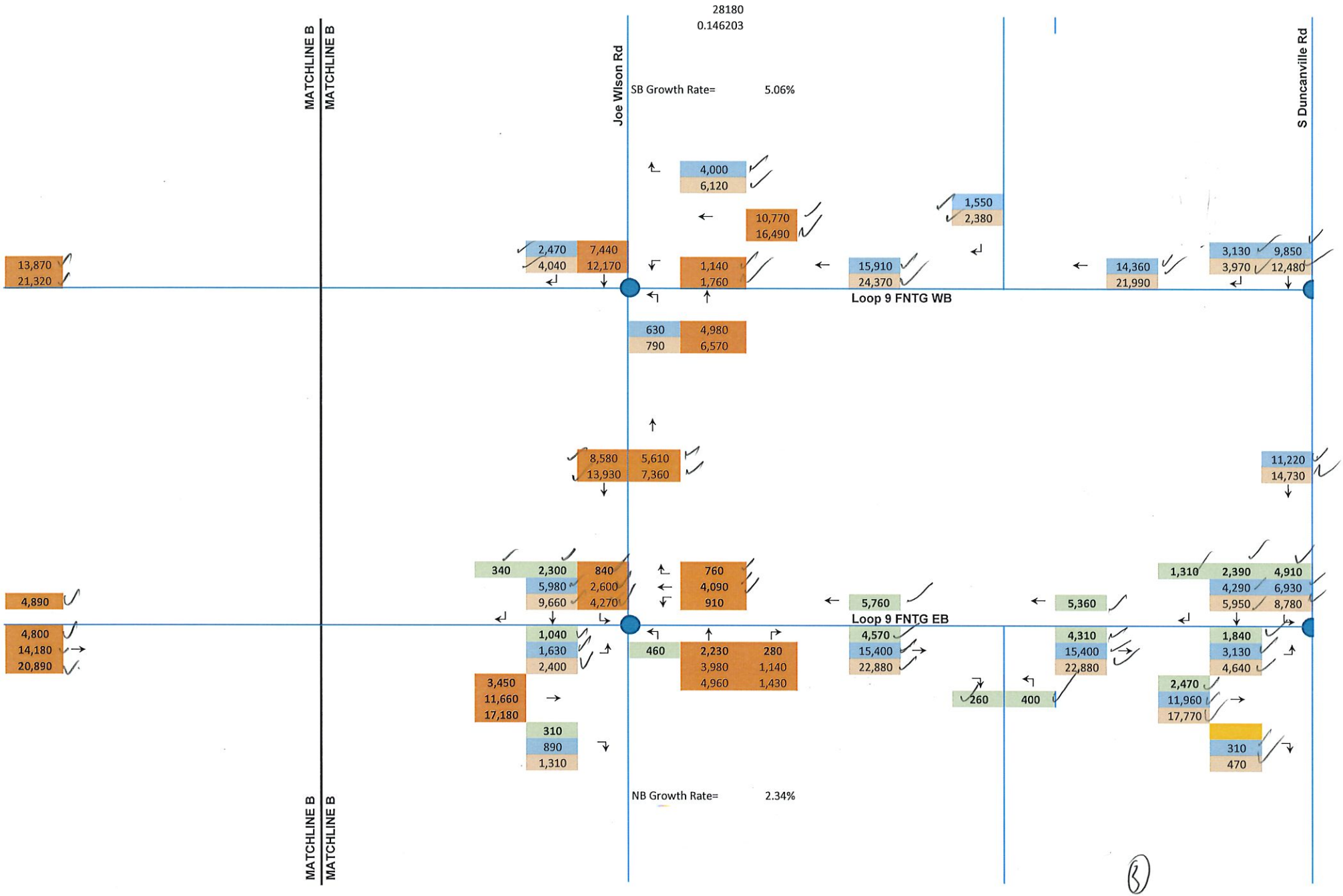
Conclusions

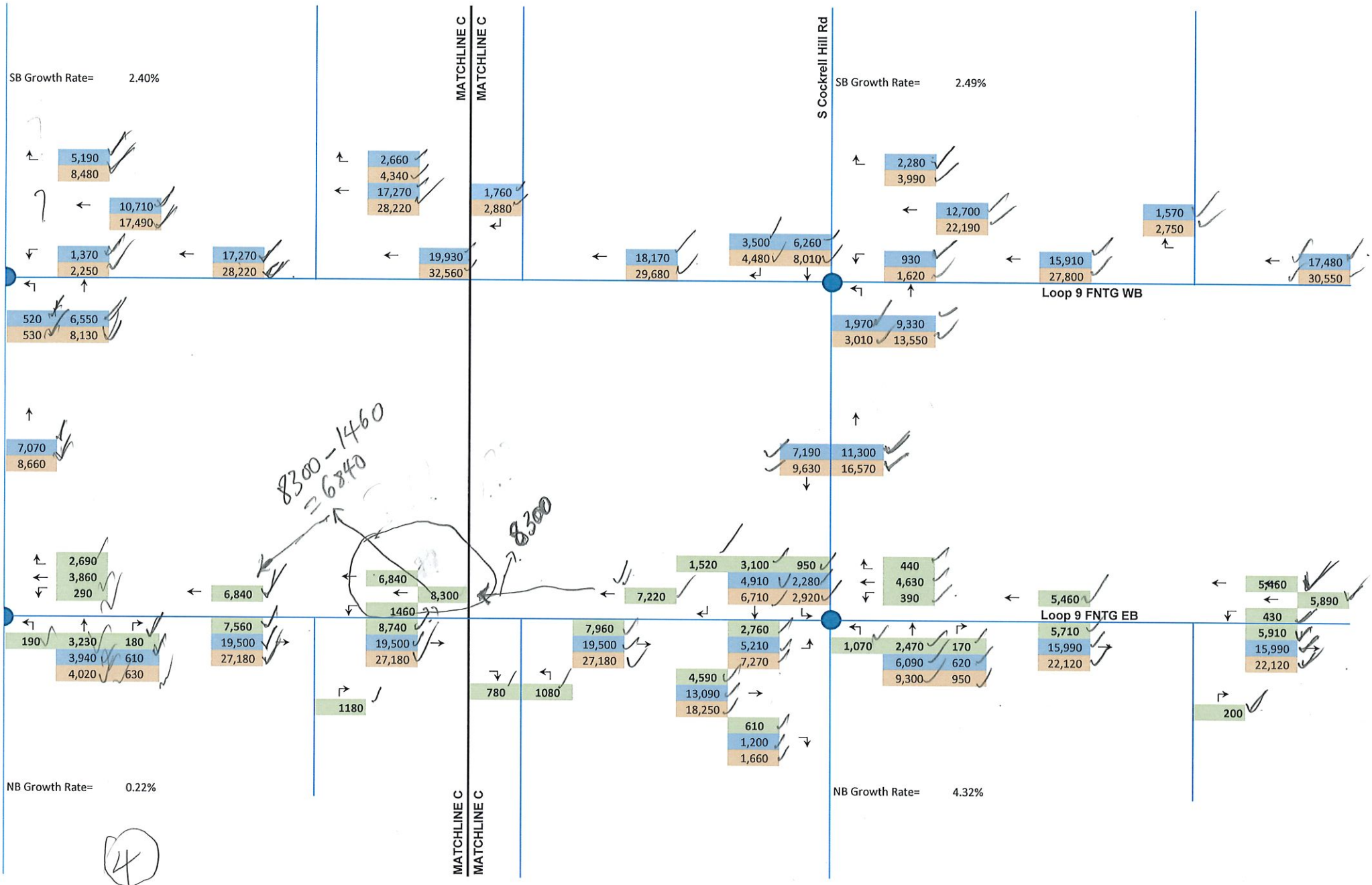
The goal of this activity was to re-review traffic projection methodology and projected volumes. for Loop 9, Segment A: US 67 to IH 35E

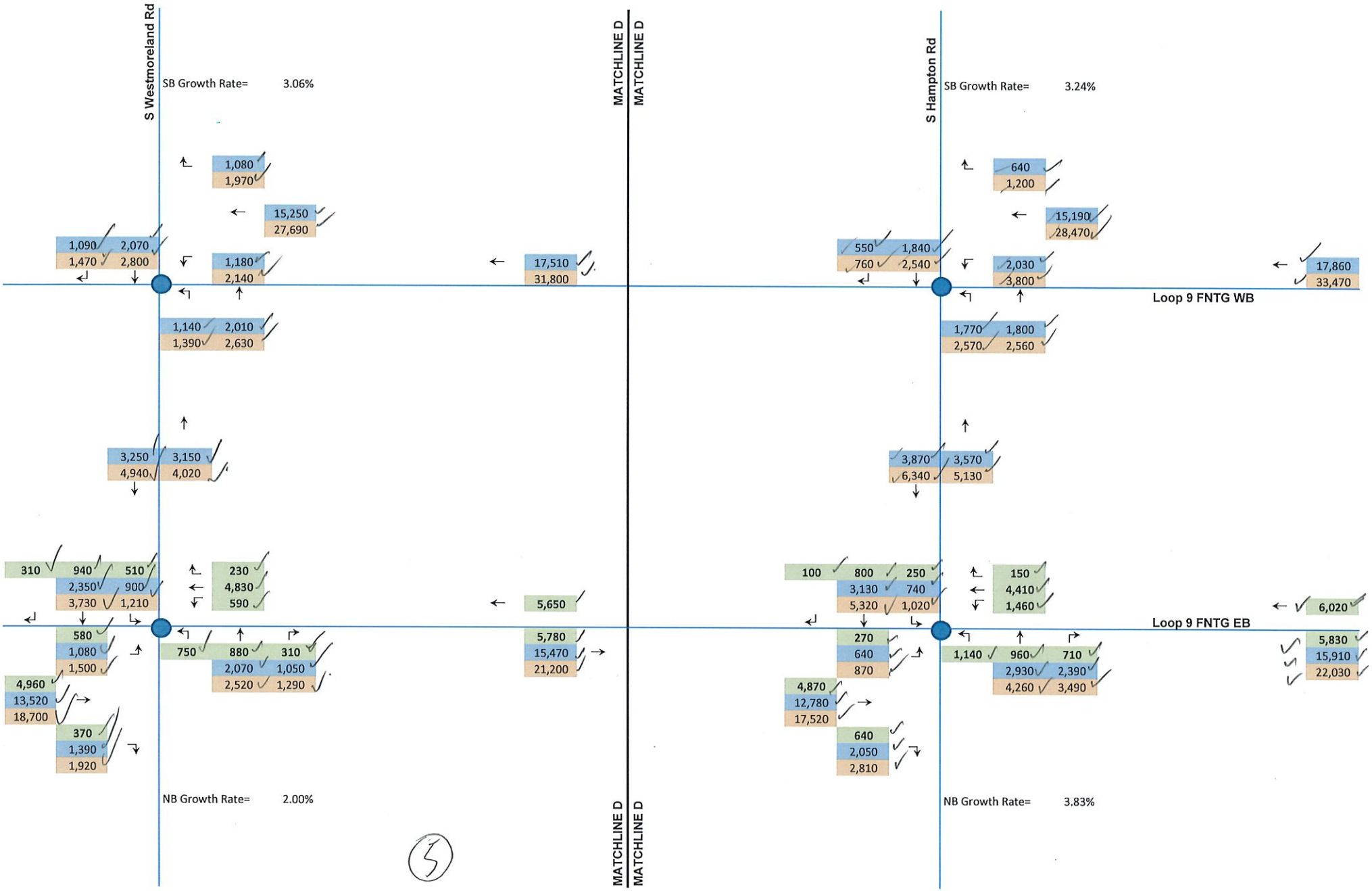
Based on this re-review, the traffic projection methodology and projected volumes are complete. no more information or data is needed.

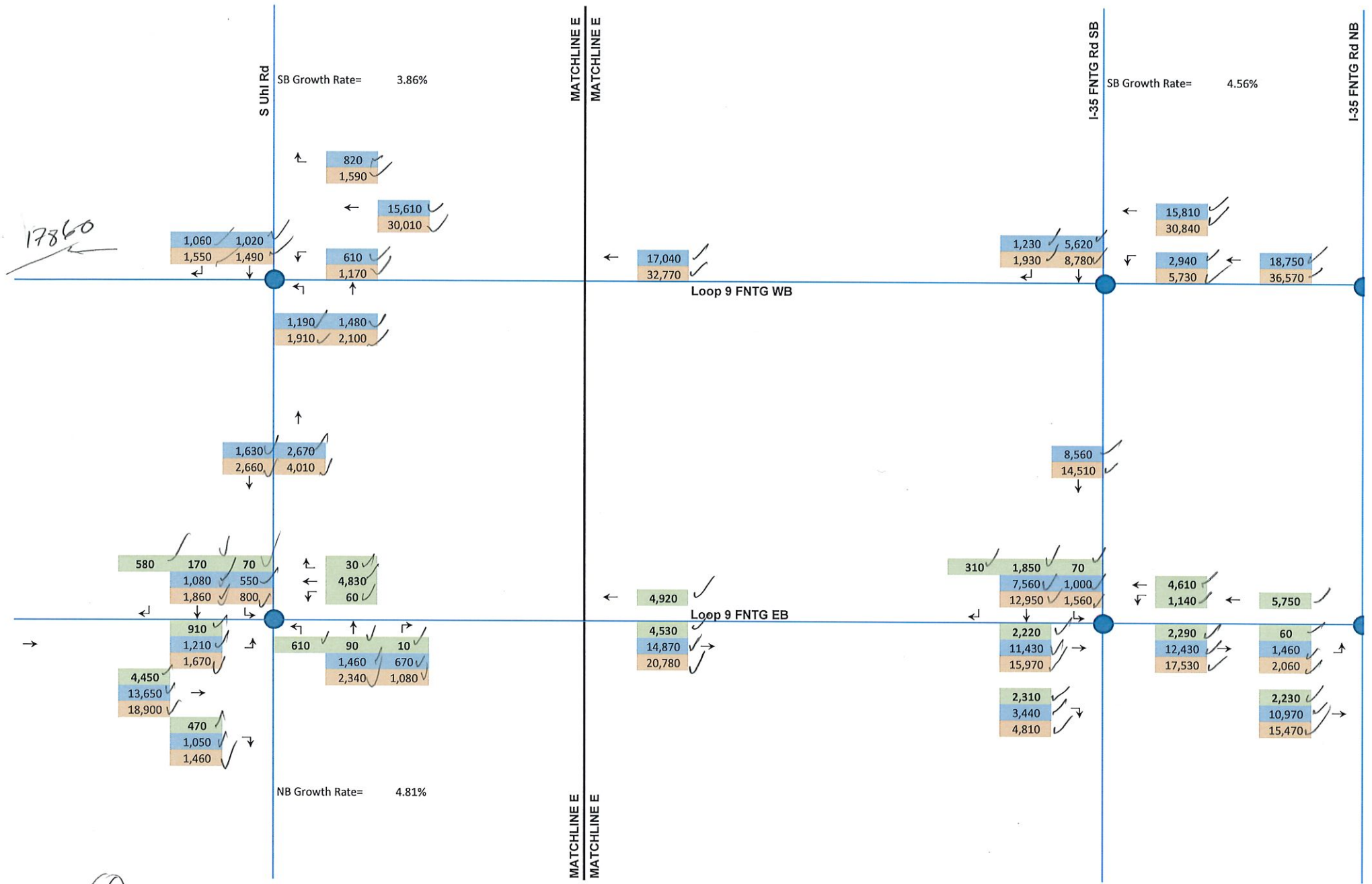

2028 AADT
2048 AADT
2058 AADT
NO NCTCOG DATA
Intersection
BEGIN PROJECT
US-67 FNTG Rd SB
SB Growth Rate= 3.78%
US-67 FNTG Rd NB
Lake Ridge PKWY
Loop 9 FNTG WB
Lake Ridge PKWY
Loop 9 FNTG EB
BEGIN PROJECT
NB Growth Rate= 4.01%
4,540
5,910
3,440
4,410
4,960
6,370
8,600
13,550
13,140
19,460
500
1,050
10,070
14,920
10,570
15,970
3,070
4,710
4,540
6,420
13,010
19,920
7,780
10,960
1,620
550
910
9,250
3,760
14,310
5,610
2,670
2,950
240
3,630
3,870
3,850
5,100
6,790
4,760
8,860
12,400
2,290
3,980
5,330
1,990
820
2,980
3,800
8,880
5,630
13,150
5,450
13,760
20,220
1,260
3,530
4,700
2,470
4,880
7,070


14520
0.283747
Tar Rd
SB Growth Rate= 2.76%
MATCHLINE A
MATCHLINE A
3,800
5,750
10,120
15,340
260
340
980
1,210
1,280
1,940
15,200
23,030
190
290
1,380
2,100
2,260
3,150
1,570
2,390
60
490
1,370
1,980
330
890
1,170
350
3,570
1,700
5,620
330
310
450
240
810
1,260
1,940
470
2,100
3,240
5,630
15,270
22,450
4,830
12,280
18,040
290
1,170
1,730
NB Growth Rate= 4.43%
MATCHLINE A
MATCHLINE A
4120
1
Clark Rd
SB Growth Rate= 2.90%
610
940
13,060
20,080
1,480
1,970
790
1,210
200
300
Loop 9 FNTG WB
660
980
1,520
2,110
990
1,510
2,180
3,090
930
190
540
780
140
450
730
130
4,600
160
Loop 9 FNTG EB
910
1,260
1,860
90
380
920
1,230
50
190
250
4,610
13,540
19,910
110
470
680
NB Growth Rate= N/A, no NCTCOG data
Volumes based on weighted average
of NB and SB approaches at adjacent
interchanges (Tar Rd, Joe Wilson Rd)
2

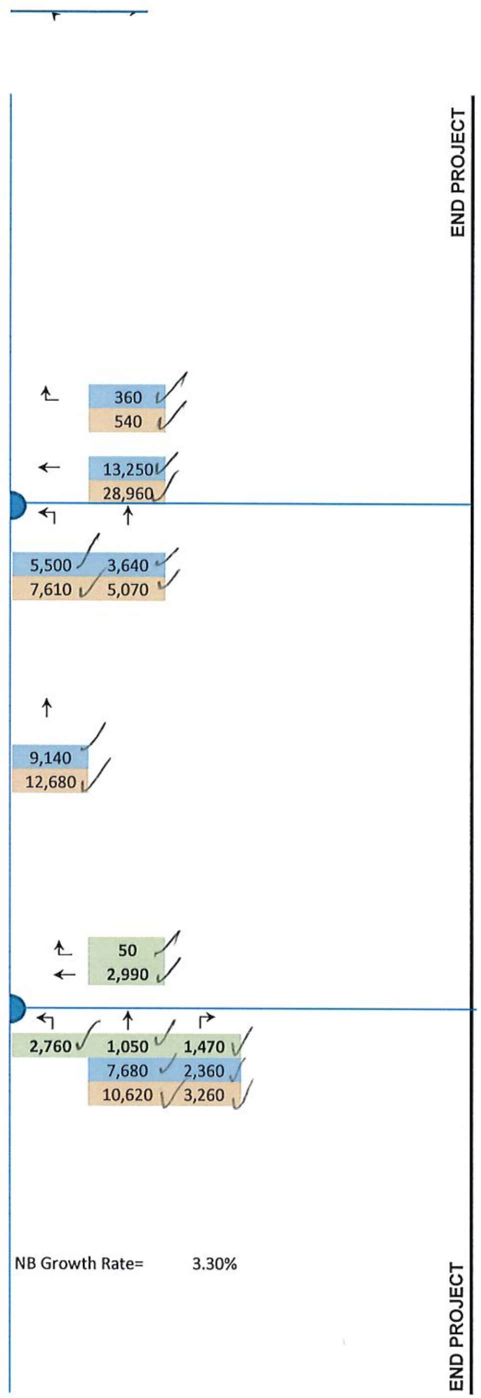

28180
0.146203
MATCHLINE B
MATCHLINE B
Joe Wlson Rd
S Duncanville Rd
SB Growth Rate= 5.06%
Loop 9 FNTG WB
Loop 9 FNTG EB
NB Growth Rate= 2.34%
MATCHLINE B
MATCHLINE B
13,870
21,320
2,470
4,040
7,440
12,170
4,000
6,120
10,770
16,490
1,140
1,760
15,910
24,370
1,550
2,380
14,360
21,990
3,130
3,970
9,850
12,480
630
790
4,980
6,570
8,580
13,930
5,610
7,360
11,220
14,730
4,890
4,800
14,180
20,890
340
5,980
9,660
2,300
2,600
4,270
840
760
4,090
910
5,760
4,570
15,400
22,880
5,360
4,310
15,400
22,880
1,310
4,290
5,950
2,390
6,930
8,780
4,910
1,040
1,630
2,400
460
2,230
3,980
4,960
280
1,140
1,430
3,450
11,660
17,180
260
400
1,840
3,130
4,640
2,470
11,960
17,770
310
890
1,310
310
470


SB Growth Rate= 2.40%
MATCHLINE C
MATCHLINE C
S Cockrell Hill Rd
SB Growth Rate= 2.49%
Loop 9 FNTG WB
Loop 9 FNTG EB
NB Growth Rate= 0.22%
NB Growth Rate= 4.32%
MATCHLINE C
MATCHLINE C
8300 - 1460 = 6840
8300


S Westmoreland Rd
SB Growth Rate= 3.06%
1,080
1,970
15,250
27,690
1,090
2,070
1,470
2,800
1,180
2,140
17,510
31,800
1,140
2,010
1,390
2,630
3,250
3,150
4,940
4,020
310
940
510
2,350
900
3,730
1,210
230
4,830
590
5,650
580
1,080
1,500
750
880
310
2,070
1,050
2,520
1,290
5,780
15,470
21,200
4,960
13,520
18,700
370
1,390
1,920
NB Growth Rate= 2.00%
MATCHLINE D
MATCHLINE D
MATCHLINE D
MATCHLINE D
S Hampton Rd
SB Growth Rate= 3.24%
640
1,200
15,190
28,470
550
1,840
760
2,540
2,030
3,800
17,860
33,470
Loop 9 FNTG WB
1,770
1,800
2,570
2,560
3,870
3,570
6,340
5,130
100
800
250
3,130
740
5,320
1,020
150
4,410
1,460
6,020
Loop 9 FNTG EB
270
640
870
1,140
960
710
2,930
2,390
4,260
3,490
5,830
15,910
22,030
4,870
12,780
17,520
640
2,050
2,810
NB Growth Rate= 3.83%


S Uhl Rd
SB Growth Rate= 3.86%
MATCHLINE E
MATCHLINE E
I-35 FNTG Rd SB
SB Growth Rate= 4.56%
I-35 FNTG Rd NB
17860
820
1,590
15,610
30,010
1,060
1,020
1,550
1,490
610
1,170
17,040
32,770
Loop 9 FNTG WB
15,810
30,840
1,230
5,620
1,930
8,780
2,940
5,730
18,750
36,570
1,190
1,480
1,910
2,100
1,630
2,670
2,660
4,010
8,560
14,510
580
170
70
1,080
550
1,860
800
30
4,830
60
4,920
4,530
14,870
20,780
Loop 9 FNTG EB
310
1,850
70
7,560
1,000
12,950
1,560
4,610
1,140
5,750
910
1,210
1,670
610
90
10
1,460
670
2,340
1,080
2,220
11,430
15,970
2,290
12,430
17,530
60
1,460
2,060
4,450
13,650
18,900
2,310
3,440
4,810
2,230
10,970
15,470
470
1,050
1,460
NB Growth Rate= 4.81%
MATCHLINE E
MATCHLINE E

6



END PROJECT
360
540
13,250
28,960
5,500
7,610
3,640
5,070
9,140
12,680
50
2,990
2,760
1,050
7,680
10,620
1,470
2,360
3,260
NB Growth Rate= 3.30%
END PROJECT

Attachment C: Field measurements data sheets

NOISE SURVEY SHEET

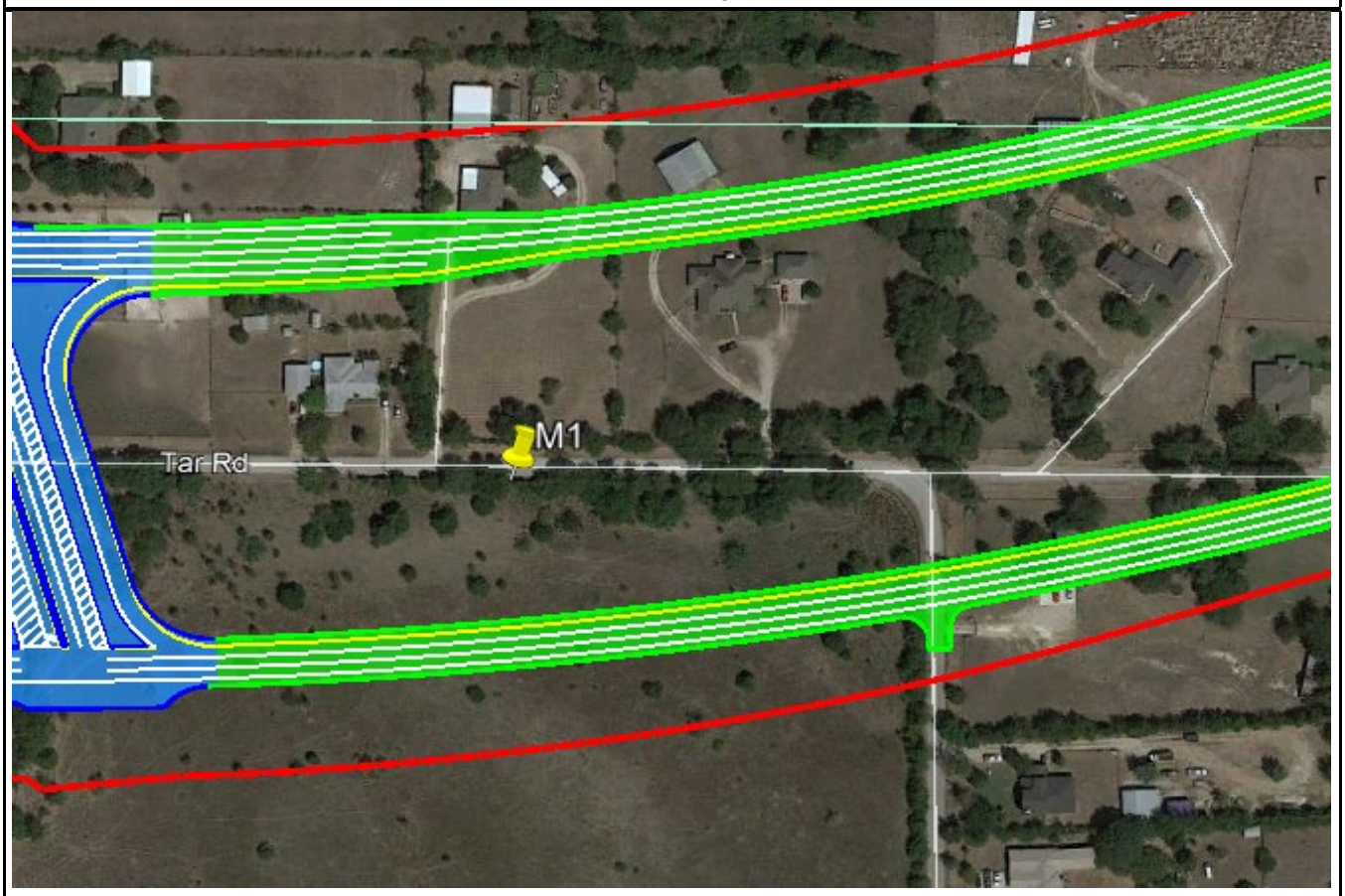
EQUIPMENT:	METER	SoundPro SE _DL2	CALIBRATOR	QC-10			
CALIBRATION:	START	114.0 dB	END	114.0 dB			
RESPONSE:	FAST	X	SLOW		A-WEIGHTING	X	BATTERY CHECK X

WEATHER DATA: **Partly Cloudy** **89 ° F** **Windspeed: <10 MPH**

TRAFFIC DATA		
ROAD	Tar Road	
AUTOS	**7**	
MED TRKS	**0**	
HVY TRKS	**0**	
DURATION	**15 minutes**	

DATE: **5/22/2020**
SITE #: M1
START: 17:50
END: 18:05
LEQ: 48.0 dB
SPEED: 30

SITE SKETCH



BACKGROUND NOISE:
MAJOR SOURCES: Traffic, Birds, Neighborhood Activity
UNUSUAL EVENTS:
OTHER NOTES:

NOISE SURVEY SHEET

EQUIPMENT:	METER	SoundPro SE _DL2	CALIBRATOR	QC-10			
CALIBRATION:	START	114.0 dB	END	114.0 dB			
RESPONSE:	FAST	X	SLOW		A-WEIGHTING	X	BATTERY CHECK X

WEATHER DATA: **Partly Cloudy** **89 ° F** **Windspeed: <10 MPH**

TRAFFIC DATA		
ROAD	Jupiter Lane	
AUTOS	**0**	
MED TRKS	**0**	
HVY TRKS	**0**	
DURATION	**15 minutes**	

DATE:	**5/22/2020**
SITE #:	M2
START:	17:20
END:	17:35
LEQ:	47.4 dB
SPEED:	30

SITE SKETCH

BACKGROUND NOISE:

MAJOR SOURCES: Neighborhood activity

UNUSUAL EVENTS: Weed Eater, Taking in Garbage Cans

OTHER NOTES:

NOISE SURVEY SHEET

EQUIPMENT:	METER	SoundPro SE _DL2		CALIBRATOR	QC-10		
CALIBRATION:	START	114.0 dB		END	114.0 dB		
RESPONSE:	FAST	X	SLOW	A-WEIGHTING	X	BATTERY CHECK	X

WEATHER DATA: **Partly Cloudy** **89 ° F** **Windspeed: <10 MPH**

TRAFFIC DATA		
ROAD	Bear Creek Road	
AUTOS	**66**	
MED TRKS	**3**	
HVY TRKS		
DURATION	**15 minutes**	

DATE:	**5/22/2020**
SITE #:	M3
START:	16:50
END:	17:05
LEQ:	53.6 dB
SPEED:	45

BACKGROUND NOISE:

MAJOR SOURCES: Traffic

UNUSUAL EVENTS:

OTHER NOTES:

NOISE SURVEY SHEET

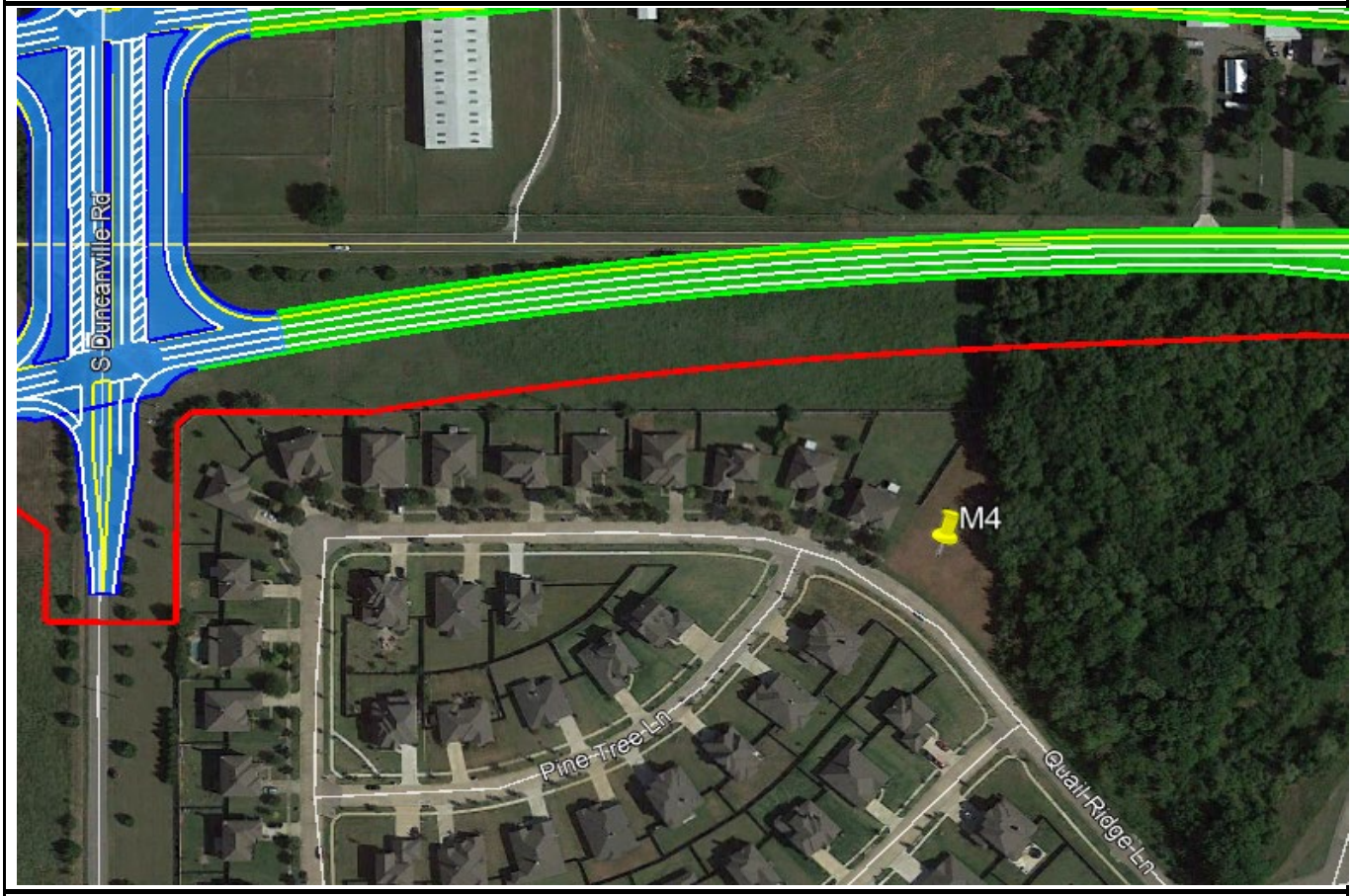
EQUIPMENT:	METER	SoundPro SE _DL2		CALIBRATOR	QC-10		
CALIBRATION:	START	114.0 dB		END	114.0 dB		
RESPONSE:	FAST	X	SLOW		A-WEIGHTING	X	BATTERY CHECK	X

WEATHER DATA: **Partly Cloudy** **89 ° F** **Windspeed: <10 MPH**

TRAFFIC DATA		
ROAD	Quali Ridge Lane	
AUTOS	**0**	
MED TRKS	**0**	
HVY TRKS	**0**	
DURATION	**15 minutes**	

DATE:	**5/22/2020**
SITE #:	M4
START:	16:30
END:	16:45
LEQ:	47.9 dB
SPEED:	30

SITE SKETCH



BACKGROUND NOISE:

MAJOR SOURCES: Neighborhood activities, birds

UNUSUAL EVENTS:

OTHER NOTES:

NOISE SURVEY SHEET

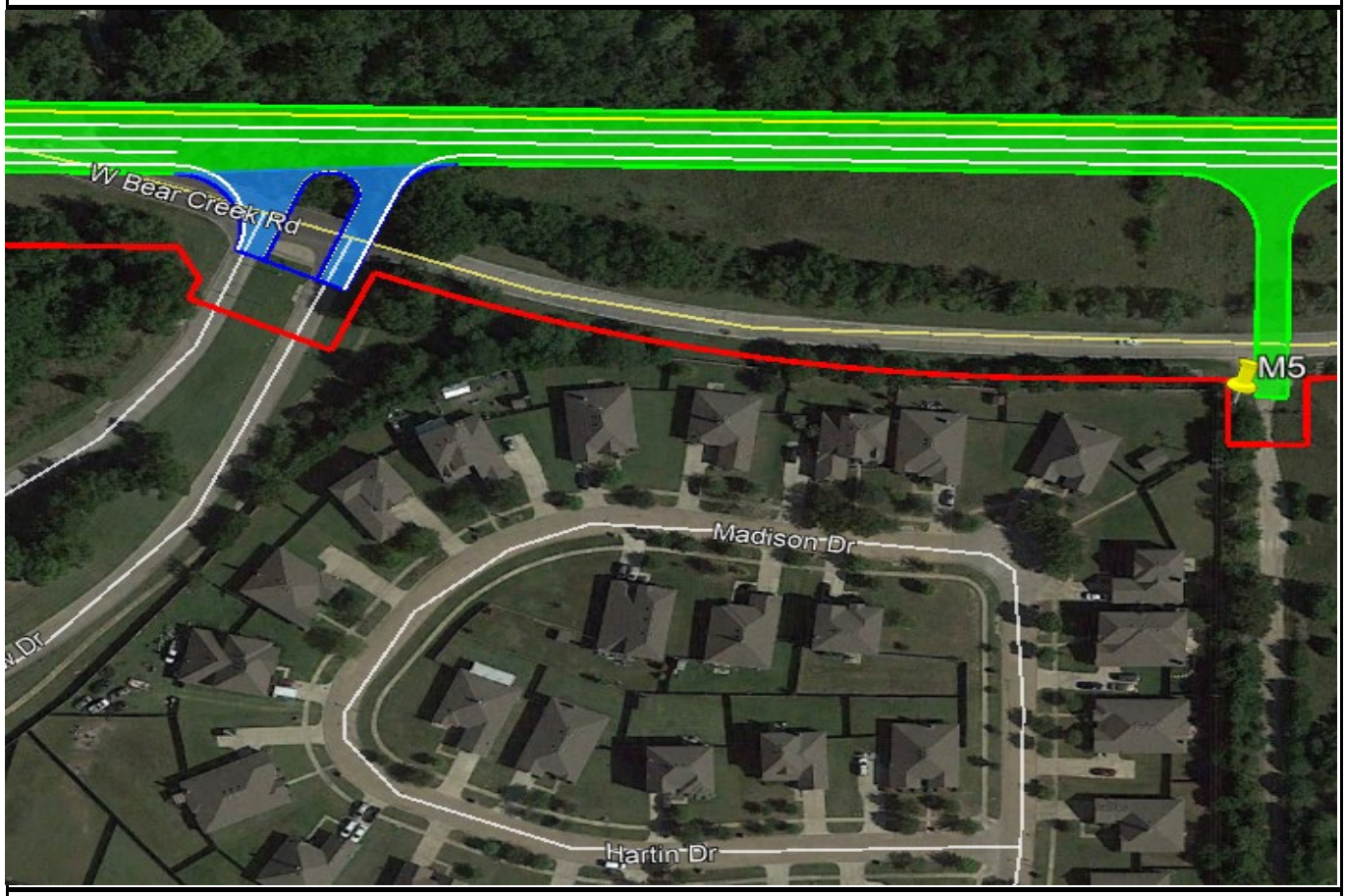
EQUIPMENT:	METER	SoundPro SE _DL2		CALIBRATOR	QC-10		
CALIBRATION:	START	114.0 dB		END	114.0 dB		
RESPONSE:	FAST	X	SLOW		A-WEIGHTING	X	BATTERY CHECK X

WEATHER DATA: **Partly Cloudy** **89 ° F** **Windspeed: <10 MPH**

TRAFFIC DATA		
ROAD	W. Bear Creek Road	
AUTOS	**90**	
MED TRKS	**6**	
HVY TRKS	**0**	
DURATION	**15 minutes**	

DATE: **5/22/2020**
SITE #: M5
START: 15:50
END: 16:05
LEQ: 58.3 dB
SPEED: 45

SITE SKETCH



BACKGROUND NOISE:
MAJOR SOURCES: Traffic
UNUSUAL EVENTS:
OTHER NOTES:

NOISE SURVEY SHEET

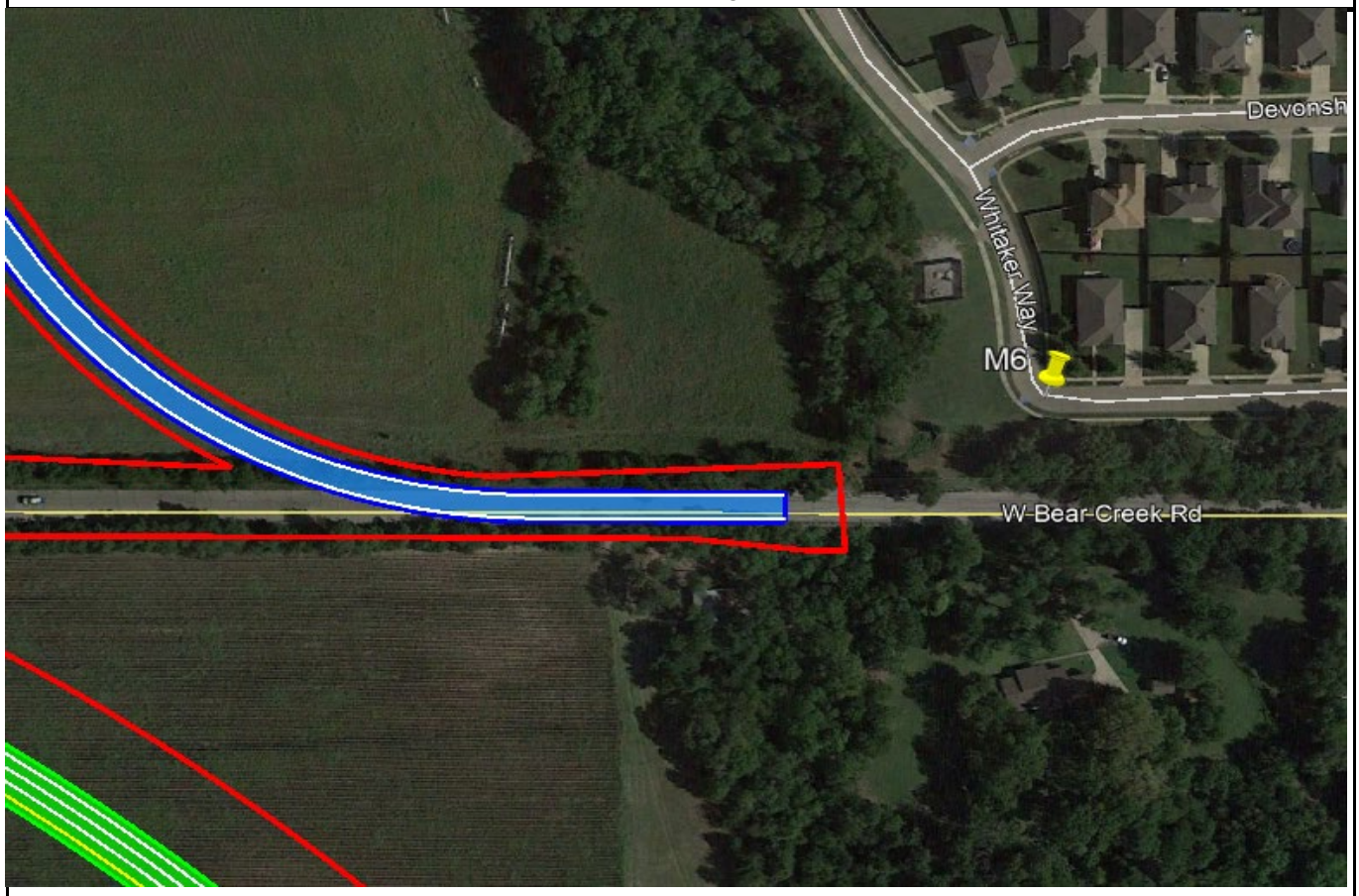
EQUIPMENT:	METER	SoundPro SE _DL2		CALIBRATOR	QC-10		
CALIBRATION:	START	114.0 dB		END	114.0 dB		
RESPONSE:	FAST	X	SLOW		A-WEIGHTING	X	BATTERY CHECK X

WEATHER DATA: **Cloudy** **80 ° F** **Windspeed: <10 MPH**

TRAFFIC DATA		
ROAD	W Bear Creek	Whitaker
AUTOS	**71**	**0**
MED TRKS	**2**	**0**
HVY TRKS	**0**	**0**
DURATION	**15 minutes**	**15 minutes**

DATE:	**5/22/2020**
SITE #:	M6
START:	13:00
END:	13:15
LEQ:	53.8 dB
SPEED:	45

SITE SKETCH



BACKGROUND NOISE:

MAJOR SOURCES: Traffic, Neighborhood Activities

UNUSUAL EVENTS: Motorcycle

OTHER NOTES:

NOISE SURVEY SHEET

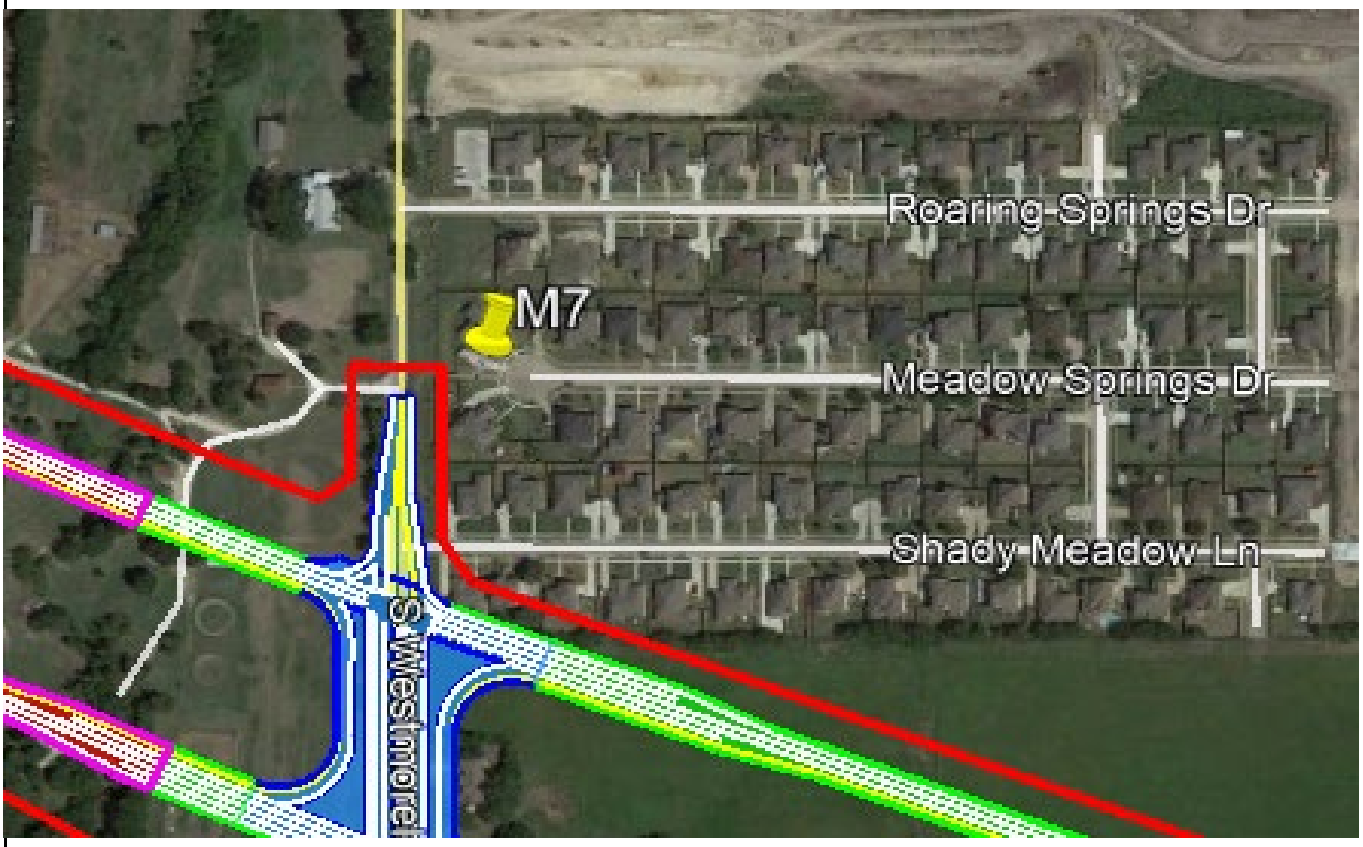
EQUIPMENT:	METER	SoundPro SE _DL2		CALIBRATOR	QC-10		
CALIBRATION:	START	114.0 dB		END	114.0 dB		
RESPONSE:	FAST	X	SLOW		A-WEIGHTING	X	BATTERY CHECK	X

WEATHER DATA: **Cloudy** **80 ° F** **Windspeed: <10 MPH**

TRAFFIC DATA		
ROAD	**Meadow Springs**	
AUTOS	**0**	
MED TRKS	**0**	
HVY TRKS	**0**	
DURATION	**15 minutes**	

DATE:	**5/22/2020**
SITE #:	M7
START:	12:35
END:	12:50
LEQ:	45.3 dB
SPEED:	30 MPH

SITE SKETCH



BACKGROUND NOISE:

MAJOR SOURCES: Neighborhood Activities

UNUSUAL EVENTS: Remodeling activities (Saw)

OTHER NOTES:

NOISE SURVEY SHEET

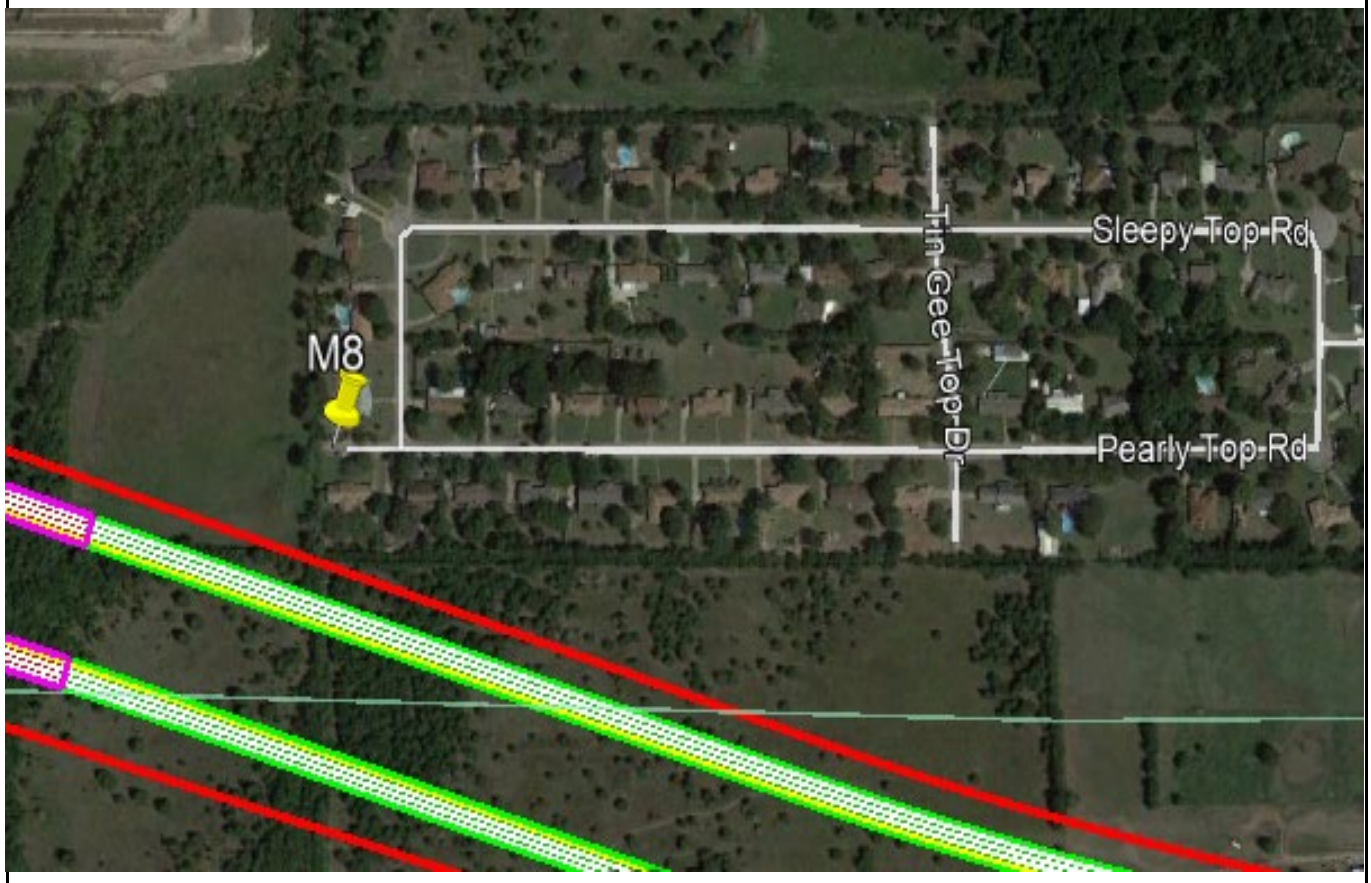
EQUIPMENT:	METER	SoundPro SE _DL2		CALIBRATOR	QC-10		
CALIBRATION:	START	114.0 dB		END	114.0 dB		
RESPONSE:	FAST	X	SLOW		A-WEIGHTING	X	BATTERY CHECK	X

WEATHER DATA: **Cloudy** **80 ° F** **Windspeed: <10 MPH**

TRAFFIC DATA		
ROAD	**Pearly Top Rd**	
AUTOS	**1**	
MED TRKS	**0**	
HVY TRKS	**0**	
DURATION	**15 minutes**	

DATE: **5/22/2020**
SITE #: M8
START: 11:20
END: 11:35
LEQ: 44.1 dB
SPEED: 30 MPH

SITE SKETCH



BACKGROUND NOISE:
MAJOR SOURCES: Neighborhood Activities
UNUSUAL EVENTS:
OTHER NOTES:

NOISE SURVEY SHEET

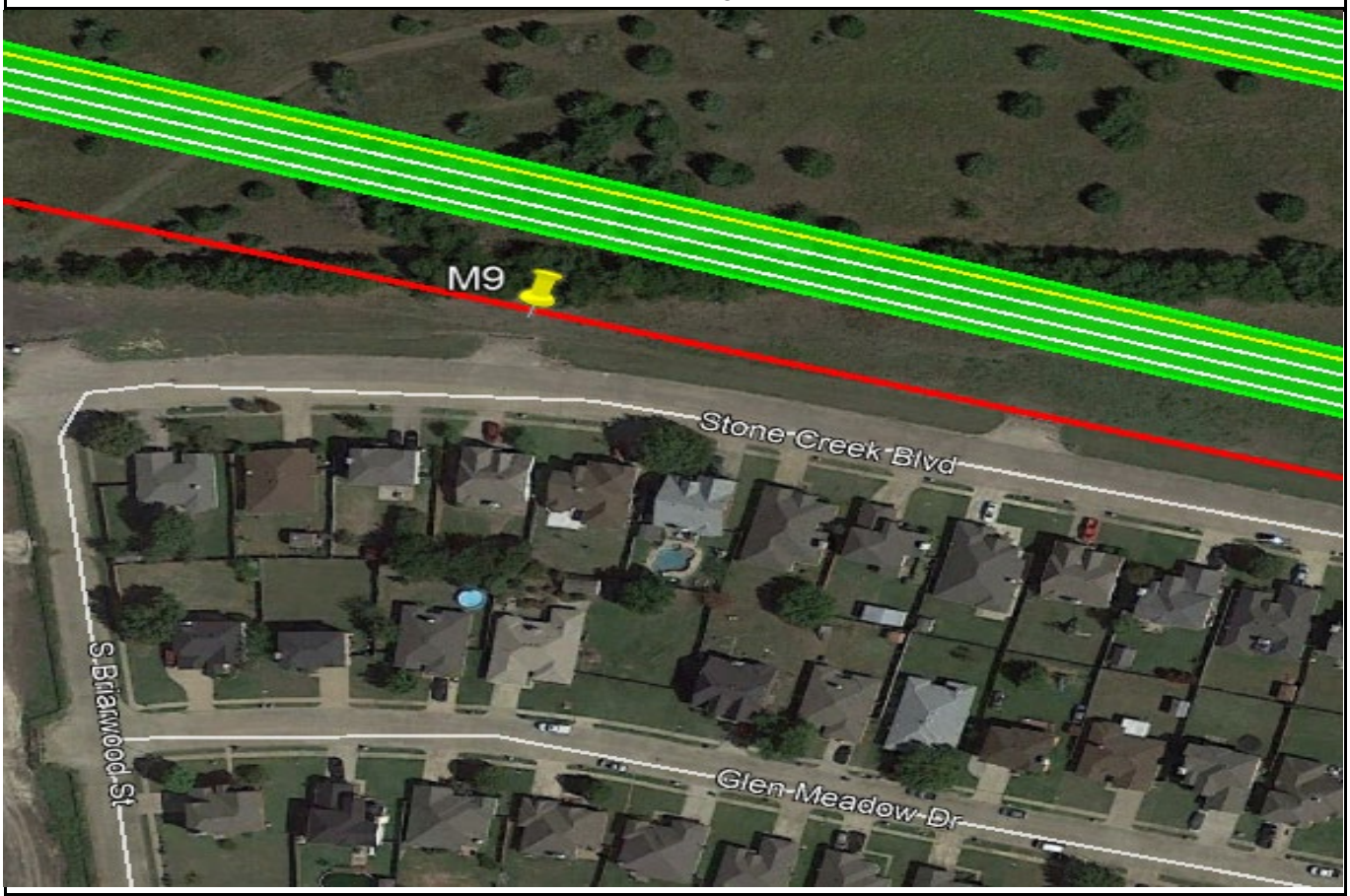
EQUIPMENT:	METER	SoundPro SE _DL2		CALIBRATOR	QC-10		
CALIBRATION:	START	114.0 dB		END	114.0 dB		
RESPONSE:	FAST	X	SLOW		A-WEIGHTING	X	BATTERY CHECK X

WEATHER DATA: **Cloudy** **78 ° F** **Windspeed : <10 mph**

TRAFFIC DATA		
ROAD	Stone Creek Blvd	
AUTOS	**3**	
MED TRKS	**0**	
HVY TRKS	**0**	
DURATION	**15 minutes**	

DATE: **5/20/2020**
SITE #: M9
START: 17:40
END: 17:55
LEQ: **48.8** dB
SPEED: 30 MPH

SITE SKETCH



BACKGROUND NOISE:
MAJOR SOURCES: Traffic, Neighborhood Activities
UNUSUAL EVENTS:
OTHER NOTES:

NOISE SURVEY SHEET

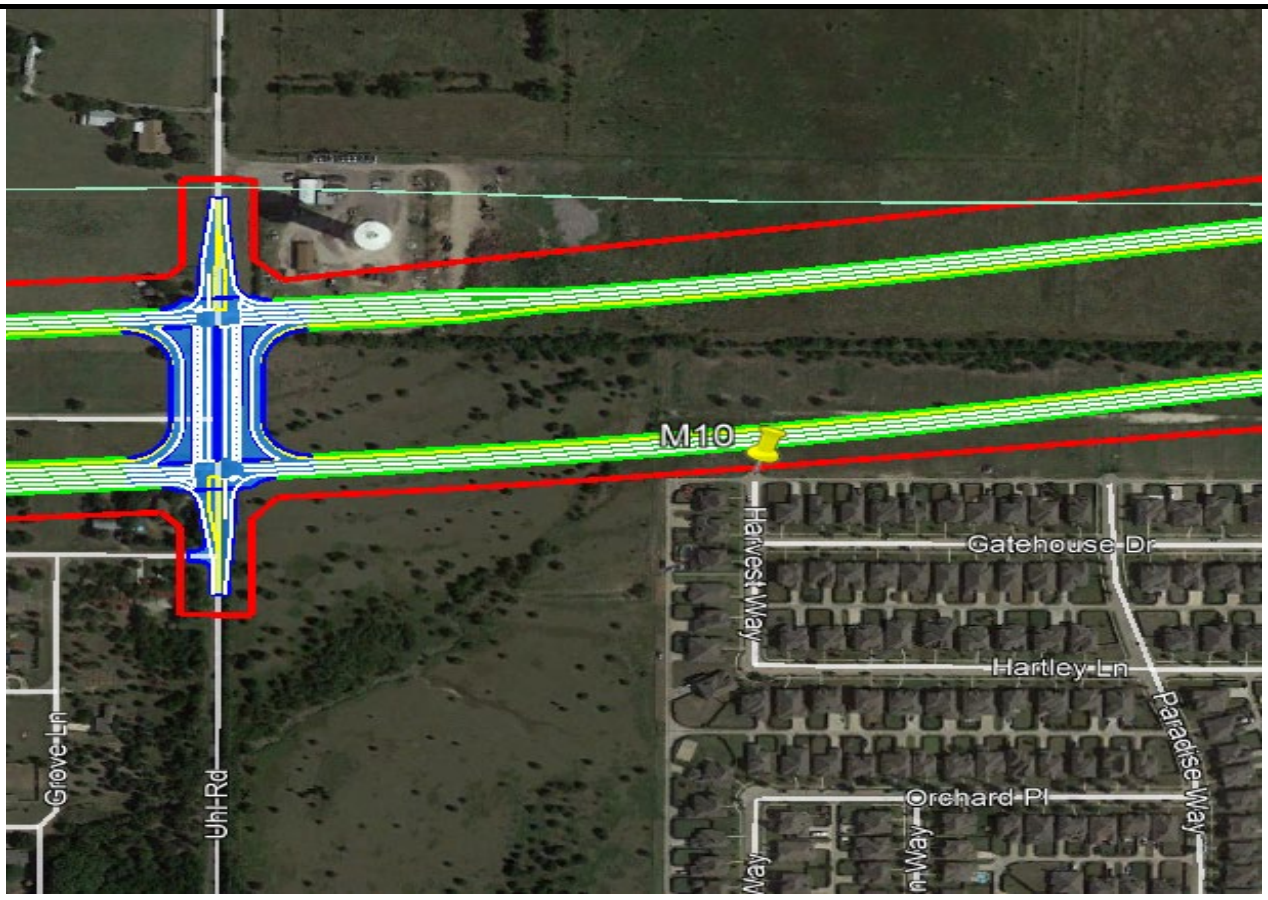
EQUIPMENT:	METER	SoundPro SE _DL2	CALIBRATOR	QC-10			
CALIBRATION:	START	114.0 dB	END	114.0 dB			
RESPONSE:	FAST	X	SLOW		A-WEIGHTING	X	BATTERY CHECK X

WEATHER DATA: **Cloudy** **78 ° F** **Windspeed : <10 mph**

TRAFFIC DATA		
ROAD	Harvest Way	
AUTOS	**0**	
MED TRKS	**0**	
HVY TRKS	**0**	
DURATION	**15 minutes**	

DATE: **5/20/2020**
SITE #: M10
START: 15:35
END: 15:50
LEQ: **46.4** dB
SPEED: 30 MPH

SITE SKETCH



BACKGROUND NOISE:
MAJOR SOURCES: Neighborhood activities
UNUSUAL EVENTS:
OTHER NOTES: