



Draft Environmental Assessment Farm-to-Market 2275

From FM 3272 to State Highway 300

Tyler District
CSJ(s): 2158-01-019 and 2158-01-020
Gregg County, Texas
December 2018

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 16, 2014, and executed by FHWA and TxDOT.

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List of Acronyms

Included below is a list of acronyms used throughout this document and their definitions.

ADT	Average Daily Traffic
AASHTO	American Association of State Highway and Transportation Officials
ACS	American Community Survey
APE	Area of Potential Effect
BE	Biological Evaluation
BG	Block Group
BMP	Best Management Practice
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CGP	Construction General Permit
CFR	Code of Federal Regulations
CMP	Congestion Management Process
CO	Carbon Monoxide
CSJ	Control-section-job number
CT	Census Tract
CWA	Clean Water Act
DHHS	United States Department of Health and Human Services
DOT	Department of Transportation
EA	Environmental Assessment
ECOS	Environmental Communication Operating System
EFH	Essential Fish Habitat
EJ	Environmental Justice
EMST	Ecological Mapping Systems of Texas
EO	Executive Order
EPA	Environmental Protection Agency
EPIC	Environmental Permits, Issues, and Commitments
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FM	Farm-to-Market
FPPA	Farmland Protection Policy Act
FWCA	Fish and Wildlife Coordination Act
GIS	Geographic Information System
GPS	Global Positioning System
GWCC	Ground Water Contamination Case
HEI	Health Effects Institute
HIPL	High Plains Ecoregion
IH	Interstate Highway
IRIS	Integrated Risk Information System
ISA	Initial Site Assessment

LEP	Limited English Proficiency
LOS	Level of Service
LPST	Leaking Petroleum Storage Tank
LWCF	Land and Water Conservation Fund
MOU	Memorandum of Understanding
MPO	Metropolitan Planning Organization
MSAT	Mobile Source Air Toxics
MTP	Metropolitan Transportation Plan
NAAQS	National Ambient Air Quality Standards
NATA	National Air Toxic Assessment
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NHL	National Historic Landmark
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NOT	Notice of Termination
NOV	Notice of Violation
NRCS	National Resource Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetland Inventory
NWP	Nationwide Permit
OTHM	Official Texas Historical Marker
PCR	Project Coordination Request
PJD	Preliminary Jurisdictional Determination
PRPC	Panhandle Regional Planning Commission
PST	Petroleum Storage Tank
RCRA	Resource Conservation and Recovery Act
ROW	Right-of-Way
RTHL	Recorded Texas Historic Landmark
SAL	State Antiquities Landmark
SGCN	Species of Greatest Conservation Need
SH	State Highway
SHPO	State Historic Preservation Officer
SW3P	Stormwater Pollution Prevention Plan
TARL	Texas Archeological Research Laboratory
TCAP	Texas Conservation Action Plan
TCEQ	Texas Commission on Environmental Quality
TERP	Texas Emissions Reduction Plan
THC	Texas Historical Commission
TIP	Transportation Improvement Plan
TPDES	Texas Pollutant Discharge Elimination System
TPWD	Texas Parks and Wildlife Department
TxDOT	Texas Department of Transportation
TxDOT ENV	Texas Department of Transportation Environmental Affairs
TxDOT TP&P	Texas Department of Transportation Planning and Programming Department

TXNDD	Texas Natural Diversity Database
TWDB	Texas Water Development Board
URARPAPA	Uniform Relocation Assistance and Real Property Acquisitions Policy Act
US	United States Highway
USC	United States Code
USACE	United States Army Corps of Engineers
USDOT	United States Department of Transportation
USCB	United States Census Bureau
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VPD	Vehicles Per Day
VMT	Vehicle-Miles Traveled

1 1.0 INTRODUCTION

2 The Texas Department of Transportation (TxDOT) proposes improvements to Farm-to-Market 2275
3 (FM 2275) (George Richey Road) from FM 3272 to State Highway 300 (SH 300) in the cities of White
4 Oak and Longview in Gregg County, Texas. The total project distance is approximately four miles and
5 is depicted in **Appendix A-1: Project Location Map**. A description of the existing and proposed facility is
6 provided below. This Environmental Assessment (EA) has been prepared for TxDOT environmental
7 review and to study the potential environmental consequences of the proposed project as well as to
8 determine whether such consequences warrant preparation of an Environmental Impact Statement
9 (EIS). The EA will be made available for public review and following the public hearing comment period,
10 TxDOT will consider any comments submitted.

11
12 FM 2275 was built by the Texas Highway Department (now Texas Department of Transportation
13 (TxDOT)) in the mid-1950s. While routine maintenance has been conducted, no major changes to the
14 roadway have occurred. In recent years, TxDOT studied and began constructing the eastern extension
15 of FM 2275 from SH 300 to US 259, approximately four miles, named the George Richey Road
16 Extension, shown on **Appendix A-4: Regional Transportation Network**.

17
18 The George Richey Road Extension project includes constructing a new four-lane highway with a
19 continuous center left-turn lane and 6-foot shoulders with curb and gutter. The improvements also
20 accommodate bicycles, the shoulders and sidewalks will be constructed on the south side of the
21 roadway. Construction will include two phases as follows:

- 22
- 23 • Phase I - US 259 to McCann Road
- 24 • Phase II - McCann Road to SH 300 (Gilmer Road)
- 25

26 This new roadway will provide an important and safe connection for vehicles, pedestrians and cyclists
27 in the City of Longview. As noted in the Longview Metropolitan Planning Organization's (MPO)
28 Metropolitan Transportation Plan 2040 (MTP 2040) there are currently no bike friendly facilities along
29 major roads within the City of Longview to support safe and viable commuting on bicycles. FM 2275
30 was identified as a high priority roadway for the installation of bicycle lanes by the Longview Bicycle
31 Club.

32 2.0 PROJECT DESCRIPTION

33 2.1 Existing Facility

34 The existing FM 2275 is a two lane (one lane in each direction), undivided minor arterial roadway
35 located within the city limits of White Oak and Longview in Gregg County, Texas. Photographs of the
36 existing roadway are included in **Appendix B: Project Photographs**. The existing roadway has 12-foot
37 lanes with no shoulders within a right-of-way (ROW) width that varies but the typical width is
38 approximately 80 feet as depicted in **Appendix D: Typical Sections (Existing)**.

40 2.2 Proposed Project

41 The proposed project would consist of suburban and urban sections as discussed below and shown in
42 **Appendix D: Typical Sections (Proposed)**.

- 1 • **Suburban Section - FM 3272 (North White Oak Road) to FM 1845 (Pine Tree Road)**
2 ○ The proposed roadway would consist of four 12-foot lanes (two lanes in each direction),
3 with a 16-foot center two-way left-turn lane; a 10-foot shared use path for pedestrians and
4 cyclists along the westbound travel lane; 20-foot clear zone from each edge of travel lane;
5 and a closed drainage system (curb and gutter) all within a 130-foot minimum proposed
6 ROW.
7 ○ Reconstruction of the FM 1845 intersection with improvements to include sidewalks,
8 Americans with Disabilities Act (ADA) compliant ramps, and accommodations for bicycle
9 users.
- 10
- 11 • **Urban Section - FM 1845 (Pine Tree Road) to Fenton Road**
12 ○ The proposed roadway would consist of four 12-foot lanes (two lanes in each direction), a
13 16-foot center two-way left-turn lane; a 10-foot shared use path for pedestrians and
14 cyclists along the westbound travel lane; a 5-foot sidewalk for pedestrians along the
15 eastbound travel lane; 20-foot clear zone from each edge of travel lane; and a closed
16 drainage system (curb and gutter) all within a 130-foot minimum proposed ROW.
17
- 18 • **Urban Section – Fenton Road to Lansford Road**
19 ○ The proposed roadway would consist of four 12-foot lanes (two lanes in each direction), a
20 16-foot center two-way left-turn lane and a 6-foot bike lane in each direction; a 10-foot
21 shared use path for pedestrians and cyclists along the westbound travel lane; a 5-foot
22 sidewalk for pedestrians along the eastbound travel lane; 20-foot clear zone from each
23 edge of travel lane; and a closed drainage system (curb and gutter) all within a 145-foot
24 minimum proposed ROW.
25
- 26 • **Urban Section – Lansford Road to SH 300 (Gilmer Road)**
27 ○ The proposed roadway would consist of four 12-foot lanes (two lanes in each direction), a
28 16-foot center two-way left-turn lane and a 6-foot bike lane in each direction; a 5-foot
29 sidewalk for pedestrians along the westbound travel lane; a 5-foot sidewalk for pedestrians
30 along the eastbound travel lane; 20-foot clear zone from each edge of travel lane; and a
31 closed drainage system (curb and gutter) all within a 130-foot minimum proposed ROW.
32 ○ Reconstruction of the SH 300 intersection with improvements to include exclusive left turn-
33 lanes.
34

35 The schematic of the Preferred Alternative is included in **Appendix C: Preferred Alternative Schematic**.
36

37 2.2.1 Logical Termini and Independent Utility

38 Federal regulations require that federally funded transportation projects have logical termini. Simply
39 stated, this means that a project must have rational beginning and end points. Those end points may
40 not be created simply to avoid proper analysis of environmental impacts. The project limits for the
41 proposed project consist of rational end points that are major traffic generators with intersecting
42 roadways. The eastern terminus would connect to the newly constructed FM 2275, east of SH 300.
43 The project would extend west through Longview and into White Oak, where it would terminate at
44 FM 3272 near the western limit of the City of White Oak.
45

46 Federal regulations require that a project have independent utility and be a reasonable expenditure
47 even if no other transportation improvements are made in the area. This means a project must be
48 able to provide benefit by itself, and that the project not compel further expenditures to make the
49 project useful. Stated another way, a project must be able to satisfy its purpose and need with no
50 other projects being built. While the proposed project would connect to the new FM 2275 at the

1 eastern terminus, the proposed improvements are a reasonable expenditure that “stand alone” and
 2 do not require additional transportation improvements at either terminus of the proposed project to
 3 provide improved connectivity and safety; therefore, the project has both logical termini and
 4 independent utility.

5
 6 Federal law prohibits a project from restricting consideration of alternatives for other reasonably
 7 foreseeable transportation improvements. This means that a project must not dictate or restrict any
 8 future roadway alternatives. Since the eastern and western terminus were already existing and serving
 9 as major traffic generators and will continue to function as such with the proposed project, the future
 10 consideration of alternatives for subsequent projects would not be affected.
 11

12 2.2.2 Planning Consistency

13 The Longview MPO identified the existing FM 2275 as an existing principal arterial in their Regional
 14 Thoroughfare Plan adopted on November 10, 2014. As part of the thoroughfare development, the
 15 Longview MPO identifies design recommendations for various functional classes. The
 16 recommendations for principal arterial are shown in **Table 1**.
 17

**Table 1: Longview MPO's Street Design
 Recommendations for Principal Arterials**

Right-of-Way	120 ft
Number of Lanes	4 or 6
Lane Width	12 ft
Median	16 ft – 40 ft
Pedestrian Realm	16 ft – 18 ft
Pedestrian Buffer	7 ft minimum
Sidewalk Width	5 ft minimum
Utility Location Width	15 ft minimum

Source: Longview Regional Thoroughfare Plan (November 2014)

18
 19
 20 The proposed improvements are in alignment with the MPO's design recommendations for principal
 21 arterials and align with the typical section of the George Richey Road Extension. The connection
 22 between the proposed project and the George Richey Road Extension at SH 300 would provide an
 23 important vehicular, pedestrian, and bicycle connection. As described earlier, the Longview MPO has
 24 determined that FM 2275 is a high priority road for the addition of bike lanes. With this expressed
 25 demand and with the facilities being provided on the George Richey Road Extension, safe and efficient
 26 connections for cyclists will become necessary.
 27

28 The project is not currently funded but is included in the 2040 Longview MPO Metropolitan
 29 Transportation Plan 2040 as two projects. The section between FM 1845 and SH 300 (urban section)
 30 has been identified to have a target year of 2021 and the section between FM 3272 to FM 1845
 31 (suburban section) has been identified to have a target year of 2023. The estimated cost for
 32 construction, preliminary engineering, ROW, and utility relocation for the urban section is
 33 approximately \$25.7 million and for the suburban section is \$25.5 million. The estimated total cost
 34 for the entire project is approximately \$51.2 million and is anticipated to have both federal and state
 35 funding. See **Appendix E: Plans and Program Excerpts** for project MTP page.

1 3.0 PURPOSE AND NEED

2 3.1 Need

3 This project is needed because the current facility is inadequate to meet future travel demand,
4 therefore resulting in inadequate connectivity between the cities of Longview and White Oak; there are
5 high crash rates that exceed the statewide average; FM 2275 does not meet current design standards
6 and does not accommodate plans for pedestrians and bicyclists.

7 3.2 Supporting Facts

8 This section discusses the specific needs for the FM 2275 proposed improvements. These needs
9 include enhancing connectivity between the City of Longview and the City of White Oak, improving
10 safety through enhanced facilities for vehicles, pedestrians and cyclists; and providing a roadway
11 designed for current standards.
12

13 3.2.1 Improve Connectivity

14 The George Richey Road Extension project, opened to the public in November 2017. It terminates at
15 the SH 300 intersection at the Extension's western terminus. This extension, which provides four
16 travel lanes and a continuous left-turn lane, provides much needed east-west connectivity to the
17 northeastern limits of the City of Longview to US 259. US 259 serves as an eastern relief route to
18 various north-south routes that through Longview. The George Richey Road Extension serves an area
19 lacking east-west routes, between FM 1844 to the north and US 80 to the south. The George Richey
20 Road Extension has been classified as a principal arterial in the Longview Regional Thoroughfare Plan.
21

22 The Toll 49 East Texas Hourglass (ETHG) project is a proposed extension of the existing Toll 49 located
23 in Tyler, Texas. The extension would extend the alignment of existing Toll 49 north to connect to I-20.
24 At I-20, the proposed alignment would utilize US 271, in the interim, to extend further north to the
25 proposed new alignment toll road which would connect to US 59 to the east. US 271 is the western
26 terminus of existing FM 2275; the interim use of US 271 would increase the demand on FM 2275.
27 The project will be included in the next update of the Longview MPO's future travel demand model.
28

29 With the new four-lane route connecting to the existing FM 2275 at the eastern terminus of this project
30 and the future Toll 49 ETHG extension, demand for continuous and efficient connectivity to the City of
31 White Oak and other communities to the west is anticipated to increase. Although the proposed
32 FM 2275 project would provide benefits for the future Toll 49 ETHG extension, the project is still
33 justified by projected traffic demand, required safety improvements and improved roadway design
34 standards described in further detail in following sections.
35

36 The Longview MPO has also identified the existing FM 2275 as a future principal arterial in the
37 Regional Thoroughfare Plan. As part of the thoroughfare development, the Longview MPO has
38 identified design recommendations for various functional classes, the recommendations for principal
39 arterial are shown in **Table 1**. The continuation of a four-lane facility would meet the recommendations
40 for the facility as a principal arterial minimum standard.
41

42 As described earlier, the Longview MPO has determined that FM 2275 is a high priority road for the
43 addition of bike lanes. With this expressed demand and with the facilities being provided on the
44 George Richey Road Extension, safe and efficient connections for cyclists will become necessary.
45

46 Level of Service (LOS) is a qualitative measure related to the volume/capacity of a particular section
47 of roadway. Categories range from ratings A through F. The range describes a progressive deterioration
48 from A through F:

- 1 • A: Free flow with low volumes and high speeds
- 2 • B: Reasonably free flow, but speeds beginning to be restricted by traffic conditions
- 3 • C: In stable flow zone, but most drives are restricted in the freedom to select their own speeds
- 4 • D: Approaching unstable flow; drivers have little freedom to select their own speeds
- 5 • E: Unstable flow; may be short stoppages
- 6 • F: Unacceptable congestion; stop-and-go; forced flow

7
8 Due to the George Richey Road Extension, the number and type of motorists accessing the areas
9 adjacent to the FM 2275 corridor will grow, increasing the demand on existing FM 2275. The Average
10 Daily Traffic (ADT), obtained from the Longview MPO's current travel demand model, is projected to
11 increase from approximately 8,000 vehicles per day in 2012 west of FM 1845 (LOS C) to approximately
12 11,000 vehicles per day in 2030 (LOS D), and approximately 12,000 vehicles per day in 2040 (LOS
13 D) (Longview MPO, February 2017). Under the current configuration of FM 2275, portions of the
14 roadway are anticipated to operate at LOS D in 2040. With the additional demand associated with
15 the Toll 49 ETHG extension, FM 2275, under the current conditions, would begin to operate at
16 unacceptable levels of service.

17
18 The interaction between vehicles traveling through the region and motorists accessing the surrounding
19 developments will continue to increase; therefore, it is necessary to address the overall functionality,
20 movement and safety within the corridor. Additionally, this segment of FM 2275 (between FM 3272
21 and SH 300) is part of an overall plan included in the MTP 2040 which would connect FM 2275 to US
22 271 in Gladewater to the west and US 259 in Longview to the east.

23 3.2.2 Improve Safety

24 The proposed project is necessary to improve safety for all users including vehicles, pedestrians, and
25 cyclists. Currently, the facility is two lanes wide with no shoulders and traverses rolling terrain.
26 Additionally, the existing FM 2275 has various curves that do not meet the current design standard
27 for the signed speed limits.

28
29 In addition to the facility not meeting current design standards, four consecutive years (2012-2015)
30 of crash data were obtained from the TxDOT Crash Records Information System (CRIS). The crash
31 data was mapped using the coordinates provided by the system and it was determined that crashes
32 are concentrated at intersections; 57 of the 76 crashes were classified as intersection related. The
33 highest crash location was the intersection of FM 2275 with FM 1845 (Pine Tree Road) which had 37
34 crashes recorded over the four-year period. Seventeen crashes were recorded at the intersection of
35 FM 2275 with SH 300 over the four-year period. Additionally, crashes were recorded at the
36 intersection of FM 2275 with FM 3272, Harley Ridge Road, and Charlene Street near SH 300.

37
38 Crash rates were calculated to determine relative safety of this section of FM 2275. Crash rates were
39 calculated based on the number of crashes per 100 million vehicle miles traveled, for comparison with
40 the annual statewide average calculations. Crash rates are influenced by roadway type, travel speed,
41 and accessibility. Typically, roadways are considered to have a substantial crash problem when the
42 crash rate is at least double the statewide average for that particular roadway facility type.

43
44 The statewide average, for years 2012-2015, for urban farm-to-market facilities was used to compare
45 to the calculated annual crash rates for FM 2275. Calculated crash rates were compared with
46 statewide averages provided by TxDOT as shown in **Table 2**. As shown, the crash rates are greater
47 than the statewide average and two years are greater than twice the statewide average, indicating a
48 need for safety improvements.

Table 1: 2012-2015 Annual FM 2275 Crash Rates

Year	Total Crashes	Crash Rate	State Rate for Urban Farm-to-Market	Segment Crash Rate over Statewide Rate
2012	25	526.51	208.42	2.53
2013	23	482.89	216.98	2.23
2014	12	329.47	233.13	1.41
2015	16	308.54	284.69	1.08

Source: TxDOT CRIS database, 2015, 2016.

Within the four-year period, ten crashes were related to left-turns, one crash was related to a right-turn, and the remaining 65 crashes were related to vehicles going straight, including angle crashes and rear-ends.

3.2.3 Improve Roadway Design Standards

The proposed project is necessary to bring the existing FM 2275 to current design standards to improve safety for all users including vehicles, pedestrians, and cyclists. Currently, the facility is two lanes wide with no shoulders and traverses rolling terrain. The suburban section of FM 2275, from FM 3273 to just east of FM 1845, is signed for 55 miles per hour (mph) and the urban section, from just east of FM 1845 to SH 300, is signed for 45 mph. With the current lack of shoulders and sidewalks on FM 2275 between FM 3272 to SH 300, cyclists must use the existing travel lanes and pedestrians must use either the existing travel lanes or the grassy area adjacent to the travel lanes. Existing obstruction pedestrians may encounter adjacent to the travel lanes include ditches, signage, mail boxes, and utilities. Additionally, no pedestrian or bicycle accommodations are provided on the existing two-lane bridge over Hawkins Creek. The current vertical profile of the facility does not meet current design standards due to insufficient stopping sight distance at nine low elevation locations and eight elevated curve locations.

Currently, the distance between the edge of the travel lane to the ROW line, or clear zone, is 28 feet in the suburban section. To meet current design criteria for 55 mph, the clear zone should be 30 feet for two-lane roadways with no curb and gutter that have an ADT greater than 1,500 vehicles per day. According to the MPO, the 2012 ADT on FM 2275 varies between 2,200 and 8,000 vehicles per day (Longview MPO, February 2017). The rail at the bridge over Hawkins Creek is obsolete and the channel railing is fitted with a non-standard guard fence and terminals.

3.3 Purpose

The purpose of the proposed project is to:

- Provide improved connectivity between the cities of Longview and White Oak by providing a highway that will adequately satisfy increased demand;
- Improve safety on FM 2275; and
- Upgrade FM 2275 to current design standards, providing satisfactory accommodation for vehicles, pedestrians, and cyclists.

4.0 ALTERNATIVES

4.1 Build Alternative

The Build Alternative, described in Section 2.2, would meet the need of the project by providing a direct connection between the cities of Longview and White Oak by connecting to the George Richey Road Extension, by improving safety through the addition of a center two-way left-turn lane and an additional travel lane in each direction, and by providing a roadway designed to current standards for a 55-mph urban/suburban roadway.

1 The proposed improvements would align with the MPO's design recommendations for principal
2 arterials and align with the typical section of the George Richey Road Extension. The connection
3 between the proposed project and the George Richey Road Extension at SH 300 would provide the
4 necessary vehicular, pedestrian and bicycle connection.

5
6 With the addition of a 16-foot center left-turn lane, left-turning vehicles would be able to move out of
7 the travel lane into a protected area to complete turns within an appropriate gap in traffic. Additionally,
8 the proposed changes in roadway profile, changing between low and high elevation points, will be
9 improved which will increase vehicle stopping sight distance and help reduce rear-end crashes.

10
11 The proposed project would be designed to current design standards for 55 mph for both the urban
12 and suburban sections. Both sections would include the addition a 10-foot shared use path,
13 redesigned vertical and horizontal curves, and a sufficient clear zone for the design speed. The
14 proposed 20-foot clear zone is desirable for the proposed curb and gutter suburban roadway with an
15 ADT less than 8,000. The projected 2045 ADT varies between 7,100 and 8,200 vpd¹. The center left-
16 turn lane would allow vehicles to safely stop on the roadway without impeding traffic operations. The
17 shared use path traversing the length of the corridor would also provide a safe facility for pedestrians
18 and cyclists to use.

19
20 The Build Alternative (Alternative 2), was developed following the first public meeting held on June 28,
21 2016 and the following comment period. Comments received from the public generally stated the
22 property owner's preference of alternatives and concerns over ROW impacts related to the three build
23 alternatives including a desire to reduce ROW impacts. Alternative 2 received the most support from
24 the public.

25
26 To address the public's concern regarding ROW and utility impacts, a fourth alternative (the Preferred
27 Alternative) was developed that was a hybrid of Alternatives 2 and 3 (see Section 4.3). The typical
28 section was modified to include sidewalks and/or a shared-use path for pedestrians and cyclists, bike
29 lanes were eliminated from both directions of travel, and retaining walls were implemented where
30 prudent to minimize ROW impacts. Additionally, the alignment generally follows Alternative 2 from
31 FM 3272 to Jackson Road and from Jackson Road to SH 300 the alignment generally follows
32 Alternative 3 to reduce impacts.

33
34 The revised preferred alternative was presented to the public at the second public meeting held on
35 November 17, 2016. Seventeen comments were received with half in support of the project and most
36 concerns being related to ROW impacts. Further evaluation of the preferred alternative presented at
37 the second public meeting determined that these proposed revisions would have required extensive
38 ROW impacts on both the north and south side of the proposed roadway to tie the driveways to the
39 new pavement edges while meeting driveway grade requirements. Using the required driveway grades
40 removed access from seven (7) homes on both sides of the proposed roadway.

41
42 To reduce impacts, several design options were evaluated including the removal of the on-street
43 bicycle lanes. Based on several meetings with the City of Longview, it was decided that the proposed
44 bicycle lanes, off-street shared use path, and sidewalks from Fenton Road east to SH 300 were all
45 necessary to serve the nearby schools and park facilities and meet the purpose and need. The
46 sidewalks and bike lanes provide a way to access these destinations safely without direct interaction
47 with vehicular traffic.

48
49 It was determined that shifting the proposed ROW to the south would meet the purpose and need and
50 reduce overall potential displacements from 34 to 31. Additionally, shifting the ROW south also
51 allowed for the removal of reverse curves to further improve safety on the roadway.

1 This revised alternative was presented on September 18, 2018 at a meeting of affected property
2 owners (MAPO) for those impacted by the changes. Twenty-five property owners attended, and two
3 formal comments were received at this MAPO in support of the proposed project.
4

5 4.2 No-Build Alternative

6 The No-Build Alternative consists of leaving FM 2275 as it is today, a two-lane, undivided, minor arterial
7 roadway with no shoulders and making no improvements to the FM 2257 intersection with SH 300.
8 The No-Build Alternative would not meet the Need and Purpose of the proposed project. The No-Build
9 Alternative is carried forward throughout the document as a baseline for comparison to the Build
10 Alternative.

11 4.3 Preliminary Alternatives Considered but Eliminated from Further Consideration

12 Three build alternatives, Alternative 1, Alternative 2 and Alternative 3, were designed and considered
13 for environmental and engineering constraints and public input. All three alternatives are similar
14 because all three proposed a four-lane highway with a center two-way left-turn lane. Each alternative
15 proposed a 55-mph design speed for the study corridor and 6-foot bike lanes in each direction located
16 adjacent to the outside travel lane. The alternatives differed in how the alignment was shifted in
17 relation to the existing roadway centerline:
18

- 19 • Alternative 1 generally widens equally to either side of the existing centerline;
- 20 • Alternative 2 generally widens to the south of the existing centerline; and
- 21 • Alternative 3, a “best fit alternative”, widens to alternating sides to minimize conflicts and
22 ROW.
23

24 The three build alternatives were brought to the public at the first public meeting held on June 28,
25 2016. Meeting attendees were encouraged to review the three alternatives, discuss the project with
26 the project team and provide comments. In addition to voicing their questions and concerns, the
27 public was provided the opportunity to identify their preferred alternative by submitting an official
28 comment. Alternative 2 received the most support from the public, although concerns were noted
29 regarding ROW and utility impacts.
30

31 Following the public meeting, the three alternatives were evaluated in a matrix that considered
32 engineering criteria, cost constraints, environmental resources, and public input. Using the matrix, it
33 was determined that Alternative 2 was the preferred alternative of the three build alternatives
34 presented to the public in June 2016. Because public concerns were raised, the study team developed
35 a fourth alternative to be carried forward as the preferred alternative which was adjusted to reduce
36 ROW impacts in 2018 and is evaluated in this EA. Therefore, the three build alternatives presented
37 to the public in June 2016 were eliminated from further consideration.

38 5.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

39 The proposed project is in the northwest portion of Gregg County, Texas, and traverses through the
40 cities of Longview and White Oak. Residential, commercial, and agricultural properties are located
41 within and adjacent to the proposed project. Representative project photographs are including in
42 **Appendix B: Project Photographs.**
43

44 In support of this EA, the following technical reports were prepared:
45

- 46 • Traffic Noise Technical Report
- 47 • Hazardous Materials Initial Site Assessment (ISA) Report

- 1 • Community Impact Assessment Technical Form
- 2 • Archeological Background Study
- 3 • Archeological Survey Report
- 4 • Project Coordination Request (PCR) for Historical Studies Project
- 5 • Historic Resource Survey Report
- 6 • Biological Evaluation
- 7 • Water Resources Technical Report

8
9 The above technical reports are available for review or copying at the TxDOT Tyler District office located
10 at 2709 W. Front Street, Tyler, Texas, 75702.

11 5.1 Right-of-Way/Displacements

12 *No-Build Alternative*

13 Implementation of the No-Build Alternative would not require ROW acquisition, relocations, or
14 displacements.

15 *Build Alternative*

16 The Build Alternative would require the acquisition of approximately 41.67 acres of ROW. Thirty-one
17 single family home residential potential displacements will occur as a result of the proposed project.
18 Six of the homes are located in an area with sporadic residential properties, and the others are located
19 on the east side of the proposed project. One commercial business would be displaced. The potential
20 displacements are summarized in **Table 3**. Additionally, the Build Alternative would impact four
21 parking spaces at the New Beginnings Baptist Church and would impact 0.049 acres of Panther Park
22 Community Center with anticipated impacts to seven parking spaces and a portion of the playground.
23 Displacement of a shed would occur on a residential parcel and fifteen oil and gas wells would be
24 impacted by the Build Alternative.
25
26

Table 2. Summary of Potential Displacements

Type of Displacement	Number of Displacements
Single-Family Residential	31
Commercial	1
Shed/Out-building	1
Parkingspaces	11
Wells	15

27 *Source: Design schematic (October 2018) and field observations (2016).*

28
29 For this assessment, a structure that is anticipated to be touched by the proposed ROW was
30 determined to be a displacement. The displacement information presented is based on the proposed
31 ROW presented in **Appendix C: Preferred Alternative Schematics**. For more detailed information on
32 the potential displacements please see the Community Impacts Assessment Technical Report on file
33 at the TxDOT Tyler District Office.

34
35 TxDOT would be responsible for the ROW acquisitions. Acquisition and relocation assistance would be
36 in accordance with the TxDOT Right-of-Way Acquisition and Relocation Assistance Program. Consistent
37 with the USDOT policy, as mandated by the Uniform Relocation Assistance and Real Property
38 Acquisition Act (URARPA), as amended in 1987, TxDOT would provide relocation resources (including
39 any applicable special provisions or programs) to all displaced persons without discrimination. The
40 available structures must also be open to persons regardless of race, color, religion, or nationality and
41 be within the financial means of those individuals affected. All property owners from whom property
42 is needed are entitled to receive just compensation for their land and property. Just compensation is

1 based upon the fair market value of the property. Through its Relocation Assistance Program, TxDOT
 2 also provides payment and services to aid in movement to a new location.

3
 4 Relocation assistance is available to all individuals, families, businesses, farmers, and non-profit
 5 organizations displaced as a result of the state highway project or other transportation project. Thus,
 6 assistance applies to tenants as well as owners occupying the real property needed for the project. As
 7 stated previously, assistance would be provided should the local existing housing market be
 8 insufficient for relocation. TxDOT would complete a survey of the housing market and provide housing
 9 supplements to displaced residents, if necessary. The TxDOT Relocation Office would also help
 10 displaced businesses to aid in their satisfactory relocation with a minimum delay and loss in earnings.
 11 The proposed project would proceed to construction only when all displaced residents have been
 12 provided the opportunity to be relocated to adequate replacement sites. No special relocation
 13 considerations or measures to resolve relocation concerns have been identified to date.

14 5.2 Land Use

15 *No-Build Alternative*

16 Under the No-Build Alternative, land use would not be affected by the acquisition of land for
 17 transportation use.

18 *Build Alternative*

19 The proposed project is located within the cities of White Oak and Longview, which have both suburban
 20 and urban areas. **Table 4** presents the acreage of land use to be acquired for the proposed project,
 21 based on land use data from the City of Longview, parcel data from Gregg County, and field verification.
 22 Property to be acquired for the proposed project is primarily categorized as vacant/agricultural and
 23 residential.

24
 25
 26 Based on projections prepared by the Longview MPO, land use in the project area is anticipated to be
 27 increasingly low density residential. The transition from vacant/agricultural is anticipated to be
 28 focused on the western half of the project area. See **Appendix A-5** for Land Use Map.

29
Table 4. Land Use Impacts for Proposed Project

Land Use	Acres within Proposed ROW
Commercial	2.02
Multi-Family	1.16
Office	2.54
Park	0.05
General Retail	1.83
Residential - Low	0.59
Single Family Residential	20.04
Vacant/Agricultural	12.46
Other	11.23
Transportation Use	10.29
Total	51.96

Source: Design schematic 2018, City of Longview 2016

30 5.3 Farmlands

31 *No-Build Alternative*

32 Under the No-Build Alternative, there would be no impacts to prime farmlands.

1 *Build Alternative*

2 Two of the seven soil types within the existing and proposed ROWs are classified as prime farmland:
3 Bowie fine sandy loam, 1 to 5 percent slopes (BoC) and Ruston fine sandy loam, 3 to 5 percent slopes
4 (RuC). These two soils account for 44.96 acres of prime farmland within the existing and proposed
5 ROW.
6

7 The Farmland Protection Policy Act (FPPA), as detailed in Subtitle I of Title XV of the Agricultural and
8 Food Act of 1981, provides protection to the following: (1) prime farmland, (2) unique farmland, and
9 (3) farmland of local or statewide importance. Transportation projects conducted by a Federal agency
10 or with Federal agency assistance that irreversibly convert protected farmland (directly or indirectly) to
11 nonagricultural use are required to coordinate with the Natural Resources Conservation Service
12 (NRCS) under the FPPA. The proposed project was scored using the U.S. Department of Agriculture's
13 Farmland Conversion Impact Rating Form, **see Appendix G: U.S. Department of Agriculture's Farmland**
14 **Conversion Impact Rating Form**. Although the proposed project would convert some farmland subject
15 to the FPPA to a non-agricultural, transportation use, the resulting score (14) was below that required
16 for coordination with the NRCS; therefore, no coordination with the NRCS is required.
17

18 No substantial direct impacts to prime farmland are anticipated due to the proposed project. The
19 proposed project would convert farmland but the relative value of the farmland scored less than 60 in
20 Part IV of the Farmland Protection Policy Act Form.
21

22 **5.4 Utilities/Emergency Services**

23 *No-Build Alternative*

24 Under the No-Build Alternative, there would be no impact to utilities or changes in access for
25 emergency service providers.
26

27 *Build Alternative*

28 Direct Impacts

29 Numerous utilities including water, electricity, gas, sewer, pipelines and overhead power lines would
30 need to be relocated or adjusted due to the proposed project. At this time, exact locations and numbers
31 of utilities have not been determined. Utility adjustment and relocation would occur during the detailed
32 design phase in a manner that would cause the least amount of disruption to affected consumers.
33 Additionally, numerous oil and gas lines along with active and plugged oil and gas wells are located in
34 the immediate project area and would have to be adjusted. Again, these adjustments and relocations
35 would be addressed during the detailed design phase and ROW acquisition process prior to
36 construction. Public utilities would be adjusted under the Uniform Accommodation Policy. Private
37 utilities would be compensated for/adjusted during the ROW appraisal process.
38

39 The Longview Fire Station Number 4 is located along the project corridor. The proposed project is
40 anticipated to impact a portion of the fire station parcel, although the building and parking facilities
41 are not anticipated to be affected. During construction, temporary access to the fire station driveways
42 would be provided and travel in both directions of FM 2275 would be maintained. The proposed
43 project, when completed, is anticipated to have positive impacts to access and travel patterns for
44 emergency service vehicles due to the increased roadway capacity.

45 Utilities would be relocated or adjusted in a manner to cause the least temporary disruption to
46 services. The proposed project would positively impact access and travel patterns for emergency
47 service vehicles. These positive impacts are not anticipated to cause indirect effects to other
48 roadways.

1 5.5 Bicycle and Pedestrian Facilities

2 *No-Build Alternative*

3 Under the No-Build Alternative, there would be no bicycle and pedestrian facilities provided along
4 FM 2275 within the study corridor.

6 *Build Alternative*

7 Direct Impacts

8 The proposed project is anticipated to have positive impacts to access and travel patterns for cyclists
9 and pedestrians due to the increased roadway capacity and new shared use path, sidewalk, and bike
10 lanes. The Build Alternative would provide bicycle and pedestrian accommodations for the entire study
11 corridor. From FM 3272 to Lansford Road, a 10-foot shared-use path would be located along the
12 westbound travel lanes. From Lansford Road to SH 300, approximately 1,000 feet, the proposed
13 improvements would include a 6-foot bike lane in each travel direction and 5-foot sidewalks in each
14 travel direction. The 5-foot sidewalk along the eastbound travel lanes begins at FM 1845 and
15 continues east to SH 300. The proposed improvements comply with TxDOT's *Policy for Bicycle and*
16 *Pedestrian Accommodations* (February 2014).

17
18 The proposed project would positively impact access and travel patterns in the community, particularly
19 for pedestrians and cyclists. These positive impacts are not anticipated to cause indirect effects to
20 other roadways.

21 5.6 Community Impacts Assessment

22 The community impacts assessment established a study area that includes portions of the City of
23 White Oak and Longview, Texas. The general character of the communities within the study area varies
24 with areas of scattered rural, suburban and urban developments near and surrounding the proposed
25 project limits. The following sections summarize findings from the Community Impacts Assessment
26 and included in the *Community Impacts Assessment Technical Report Form* prepared in December
27 2018 and on file at the TxDOT Tyler District Office.

28 5.6.1 Relocations and Displacements

29 *No-Build Alternative*

30 The No-Build Alternative would not result in any relocations or displacements.

32 *Build Alternative*

33 The Build-Alternative would result in thirty-one potential residential displacements. Using the online
34 website, www.zillow.com (accessed November 29, 2018), 124 comparable single-family homes are
35 available for sale within the zip code in which the proposed project is located, 75604. The homes
36 range from 1,044 to 3,145 square feet and selling in the range between \$75,000 and \$300,000.
37 TxDOT would provide relocation assistance in accordance with the URARPA.

38
39 Although no community centers or public facilities would be adversely impacted or displaced,
40 approximately 0.049 acres of proposed ROW would be required from Panther Park Community Center.
41 Additionally, one commercial business, East Texas Cabinets, would be displaced. Thirty-one residential
42 potential displacements anticipated to occur as a result of the proposed project.

44 5.6.2 Access Changes

45 *No-Build Alternative*

46 The No-Build Alternative would not result in access changes to the existing facility which would
47 potentially result in a reduction of travel times over time.

48

1 *Build Alternative*

2 Direct Impacts

3 The proposed project is anticipated to have positive impacts to access patterns due to the increased
4 roadway capacity and new shared use path, sidewalks, and bike lanes. Access to adjacent properties
5 would be maintained through reconstructed driveways and no medians would be proposed that would
6 inhibit access from either direction of the roadway. Bicycle and pedestrian accommodations as well
7 as the additional travel and center turn lane improvements are included in the proposed project which
8 would provide a positive impact to adjacent and nearby properties.

9
10 The proposed project would positively impact access and travel patterns in the community. These
11 positive impacts are not anticipated to cause indirect effects to this or other roadways.

12 5.6.3 Public Facilities and Services

13 *No-Build Alternative*

14 The No-Build Alternative would not impact any public facilities or services.

15
16 *Build Alternative*

17 The proposed project would widen the existing roadway to include an additional travel lane in each
18 direction, a center turn lane, as well as bicycle and pedestrian accommodations. Emergency service
19 responders may see improvements in overall traffic flow and travel times. The proposed project would
20 not displace any community facilities or public services or change the way people access these
21 services or facilities. Currently along the roadway, vehicles are the main mode of travel, the addition
22 of bicycle and pedestrian accommodations would provide additional modes of travel for people to use
23 local services and facilities, such as to the schools, Panther Park Community Center and parks.
24 Pedestrians and cyclists who would like to access Spring Hill Park from the north side of FM 2275
25 could do so at the signalized intersection of SH 300 and FM 2275, approximately 0.5 miles from Spring
26 Hill Park. Approximately 0.049 acres of proposed ROW would be required from Panther Park
27 Community Center but no public facilities would be displaced or relocated as a result of the Build
28 Alternative.

29
30 These accommodations would be in compliance with the Americans with Disabilities Act.

31 5.6.4 Community Cohesion

32 Community Cohesion is a term that refers to an aggregate quality of a residential area. Cohesion is a
33 social attribute that indicates a sense of community, common responsibility, and social interaction
34 within a limited geographic area. It is the degree to which residents have a sense of belonging to their
35 neighborhood or community or a strong attachment to neighbors, groups, and institutions because of
36 continual association over time.

37
38 *No-Build Alternative*

39 Under the No-Build Alternative, there would be no impacts to community cohesion.

40
41 *Build Alternative*

42 Direct Impacts

43 Currently the existing roadway is two-lanes wide with no shoulders along rolling terrain. The existing
44 FM 2275 has various curves that do not meet the current design standard for the signed speed limits.
45 Additionally, the current crash rate along FM 2275 is greater than the statewide average indicating a
46 need for safety improvements. The current vertical profile of the facility does not meet current design
47 standards due to insufficient stopping sight distance at nine low elevation locations and eight elevated
48 curve locations.

49

1 As well as safety, the current facility is inadequate to meet the anticipated future travel demand. The
2 George Richey Road Extension, now fully open to traffic, the Toll 49 ETHG extension, as well as
3 pressure from motorists accessing the areas adjacent to the FM 2275 corridor; is expected to increase
4 the demand on the existing FM 2275. Under this additional demand in its current state, FM 2275
5 would begin to operate at unacceptable levels of service.
6 The proposed project would provide efficient traffic operations and improve mobility by increasing
7 capacity for the increased demand as well as improve safety by bringing the existing FM 2275 to
8 current design standards to improve safety for all users including vehicles, pedestrians, and bicyclists.
9

10 Community cohesion would be negatively impacted by the proposed project on the east side of the
11 project near SH 300 due to the widening of the roadway and the 17 potential displacements of the
12 residences concentrated on the south side of FM 2275 and 4 on the north side. Cohesion would be
13 lost between the residents on either side of Panther Park Community Center and Spring Hill Park by
14 relocating the residences on the south side; and therefore, removing them from the immediate
15 community. Although the existing FM 2275 is already a barrier between the community, widening this
16 roadway to a principal arterial has the potential to increase this barrier effect within the community,
17 making it more difficult for residences on the northside of FM 2275 in this location to access Spring
18 Hill Park. A signalized intersection at FM 2275 and SH 300 would allow pedestrians and bicycles to
19 cross the roadway to gain access to Spring Hill Park and Panther Park Community Center. The
20 implementation of crosswalks and pedestrian signals at this location will be evaluated during final
21 design.
22

23 Shared use bicycle and pedestrian lanes and sidewalks along the proposed project would improve
24 future cohesion making it easier to move between the parks in the community, schools and residences
25 along the project.
26

27 The community would also experience a visual change as a result of the proposed potential
28 displacements on FM 2275 near SH 300. Once the homes are removed, Springhill Park would be
29 visible from the roadway and from the homes located on the north side of FM 2275, creating more
30 open space. In addition to the visual changes, the widening of the FM 2275 would change the existing
31 rural character of the roadway to a more urban feel.
32

33 To date, two public meetings and one meeting with affected property owners have been held. On June
34 28, 2016 the first public meeting was held, three alternatives were presented to the public. Twenty-
35 eight comments were received with most of the public in favor of Alternative Two and most of the
36 concerns related to ROW impacts.
37

38 To address the public's concern regarding ROW and utility impacts, a fourth alternative (the Preferred
39 Alternative) was developed that was a hybrid of Alternatives Two and Three. The typical section was
40 modified to include sidewalks and/or a shared-use path for pedestrians and cyclists, bike lanes were
41 eliminated from both directions of travel, and retaining walls were implemented where prudent to
42 minimize ROW impacts. Additionally, the alignment generally follows Alternative Two from FM 3272
43 to Jackson Road, and from Jackson Road to SH 300 the alignment generally follows Alternative Three
44 to reduce impacts.
45

46 The revised preferred alternative was presented to the public at the second public meeting held on
47 November 17, 2016. Seventeen comments were received with half in support of the project and most
48 concerns being related to ROW impacts. Further evaluation of the preferred alternative presented at
49 the second public meeting determined that these proposed revisions would have required extensive
50 ROW impacts on both the north and south side of the proposed roadway to tie the driveways to the

1 new pavement edges while meeting driveway grade requirements. Using the required driveway grades
2 removed access from seven (7) homes on both sides of the proposed roadway.

3
4 To reduce impacts, several design options were evaluated including the removal of the on-street
5 bicycle lanes. Based on several meetings with the City of Longview, it was decided that the proposed
6 bicycle lanes, off-street shared use path, and sidewalks from Fenton Road east to SH 300 were all
7 necessary to serve the nearby schools and park facilities and meet the purpose and need. The
8 sidewalks and bike lanes provide a way to access these destinations safely without direct interaction
9 with vehicular traffic.

10
11 It was determined that shifting the proposed ROW to the south would meet the purpose and need and
12 reduce overall potential displacements from 34 to 31. Additionally, shifting the ROW south also
13 allowed for the removal of reverse curves to further improve safety on the roadway.

14
15 This revised alternative was presented on September 18, 2018 at a meeting of affected property
16 owners (MAPO) for those impacted by the changes. Twenty-five property owners attended and two
17 formal comments were received at this MAPO in total and both were in support of the proposed project
18

19 Although the proposed project would impact community cohesion on FM 2275 near SH 300, overall
20 the proposed project would improve safety and provide more connections within the community.
21

22 5.6.5 Environmental Justice

23 *No-Build Alternative*

24 The No-Build Alternative would not result in any impacts to Environmental Justice (EJ) populations.
25

26 *Build Alternative*

27 Direct Impacts

28 Under the Build Alternative, the proposed project would potentially result in 32 displacements and four
29 noise impacts, one church and three residential; however, these effects would not be
30 disproportionately high and adverse to EJ populations.
31

32 Direct impacts to a majority of minority or low-income populations due to the proposed project would
33 not occur. In addition, the potential residential displacements do not occur in census geographies with
34 majority minority or low-income populations. None of the potential displacements are located within
35 census geographies that are predominantly minority or low-income populations. Noise impacts are
36 anticipated as a result of the proposed project; however, these impacts would affect only adjacent
37 properties and geographies. Census blocks with minority populations greater than 50 percent of the
38 total population are located in the study area but not adjacent to the project ROW. The potential
39 residential displacements are not located within census geographies with predominantly minority
40 populations and median household incomes below the 2018 DHHS poverty guideline of \$25,100 for
41 a family of four. Although noise impacts are anticipated, no census geographies with predominantly
42 minority or low-income populations would be affected. Based on the above discussion, no
43 disproportionately high and adverse impacts to minority and/or low-income populations would result
44 from the proposed project.

1 5.6.6 Limited English Proficiency

2 *No-Build Alternative*

3 The No-Build Alternative would not result in any impacts to Limited English Proficiency (LEP) individuals
4 or populations.

6 *Build Alternative*

7 Direct Impacts

8 Direct impacts due to the proposed project would not disproportionately affect LEP populations. In
9 addition, the potential residential displacements do not occur in census geographies with LEP
10 populations. The proposed project would provide accommodations to LEP populations for all public
11 involvement activities. A public meeting was held in November 2016, with a MAPO held in September
12 2018, both provided individuals an opportunity to request for translation or other language assistance
13 services to ensure equal access to the services and information that TxDOT provides.

14
15 There is a presence of Spanish speakers (15.4%), other Indo-European language speakers (1.7%), and
16 Asian and Pacific Island language speakers (0.3%) within the study area. The opportunity to request
17 for language accommodations and translation was provided and published in legal notices and
18 property owner notifications. The November 2016 public meeting included notices in both English and
19 Spanish. No translating requests were made for the public meeting held in November 2016 or the
20 MAPO's held on September 18, 2018. Public hearing translation services would be provided for
21 requests made within seven days of the hearing. Copies of the public involvement materials are
22 available in TxDOT's Public Involvement section and available at the TxDOT Tyler District Office.

23 5.7 Visual/Aesthetic Impacts

24 A visual quality assessment is used to determine whether the proposed project would be compatible
25 with the visual character of the setting into which it would be introduced. The impact assessment also
26 takes into consideration the fact that FM 2275 is an existing transportation corridor. Visual impacts
27 are discussed in terms of the effect that the new physical elements associated with the proposed
28 project would have on landform quality (i.e., the existing natural or man-made landform) and visual
29 resources (i.e., the physical resources, including native vegetation, introduced landscaping, and the
30 built environment that make up the character of the area).

31
32 Federal and state regulations require that visual impacts be addressed for Section 106 and Section
33 4(f) properties; although there are no specific Federal or state visual regulatory requirements that
34 apply to properties that are not designated historic, and/or eligible for listing in the NRHP (National
35 Register of Historic Places), or parkland.

36
37 Generally, the existing visual and aesthetic qualities of the study area include undeveloped land and
38 residential housing. Panther Park Community Center, located on the eastern end of the study area, is
39 located adjacent to the corridor.

41 *No-Build Alternative*

42 Aesthetic impacts are not anticipated under the No-Build Alternative.

44 *Build Alternative*

45 The visual landscape near the project area is characterized by a combination of land uses, including
46 existing roadways, dispersed residential parcels, commercial uses, and some vacant land. Visual
47 changes are anticipated as a result of the proposed potential displacements on FM 2275 near SH
48 300. Once the homes are removed, Springhill Park would be visible from the roadway and from the
49 homes located on the north side of FM 2275, creating more open space adjacent to the facility. In
50 addition to the visual changes, the widening of the FM 2275 to a principal arterial would change the

1 existing rural character of the roadway to a more urban feel. There are no proposed grade-separations;
2 therefore, there would be no anticipated impacts to existing sight lines.

3 5.8 Cultural Resources

4 The evaluation of impacts to cultural resources has been conducted in accordance with TxDOT's
5 Memorandum of Understanding (MOU) with the THC or the Programmatic Agreement among FHWA,
6 TxDOT, the Texas State Historic Preservation Officer (SHPO) and the Advisory Council on Historic
7 Preservation Regarding the Implementation of Transportation Undertakings.

8 5.8.1 Archeology

9 *No-Build Alternative*

10 Under the No-Build Alternative, no impacts to archeological sites are anticipated.

11

12 *Build Alternative*

13 In January of 2018 AmaTerra Environmental, Inc. (AmaTerra) conducted an intensive archeological
14 survey in advance of proposed improvements to Farm-to-Market (FM) 2275 in Gregg County, Texas.
15 The proposed improvements will extend from State Highway (SH) 300 (Gilmer Road) to FM 3272
16 (N White Oak Road)). The project is being funded by the Federal Highway Administration and will take
17 place within ROW controlled or owned by the State of Texas. Therefore, to comply with Section 106 of
18 the National Historic Preservation Act of 1966, as amended, and the Antiquities Code of Texas (ACT),
19 AmaTerra conducted the archeological survey under Texas Antiquities Permit No. 8272.

20

21 Archeological investigations consisted of a thorough pedestrian survey accompanied by shovel testing,
22 and mechanical trenching at a previously recorded site (41GG55). Along the 4-mile-long Area of
23 Potential Effect (APE), 103 shovel tests were excavated. A total of 13 shovel tests contained cultural
24 materials resulting in the discovery and documentation of three archeological sites and one isolated
25 find. The sites include one previously recorded (41GG55) and two newly discovered sites (41GG124
26 and 41GG125). Based on the results of this survey, one site (41GG55) is of unknown National Register
27 of Historic Places (NRHP) eligibility and should be avoided until its eligibility can be determined. Further
28 testing is recommended for this site. The remaining two sites are recommended not eligible for
29 inclusion in the NRHP and no further work is warranted at these sites.

30 5.8.2 Historic Properties

31 *No-Build Alternative*

32 Under the No-Build Alternative, additional ROW would not be acquired; therefore, no impacts to historic
33 resources are anticipated.

34

35 *Build Alternative*

36 TxDOT certified historians surveyed the project area within the APE of 150 ft. in December 2016 and
37 identified 62 historic-age resources built in or before 1975, *Report for Historical Studies Survey, FM*
38 *2275: From FM 3272 to SH 300, Gregg County, Texas, AmaTerra, November 14, 2017*. After
39 evaluating the properties for eligibility for listing in the National Register of Historic Places (NRHP),
40 project historians recommend that none of the individual surveyed properties are eligible for NRHP
41 listing. The East Texas Oil Field, in the north end of which the project is located, is recommended as
42 eligible for NRHP listing at the State level under Criterion A in the area of Industry. The proposed
43 undertaking would not impact the historic industrial landscape's ability to convey its significance.
44 Cleared for non-archeological historic properties on 6/20/2018. NEPA finding: In compliance with the
45 Antiquities Code of Texas and the MOU, TxDOT historians determined project activities have no
46 potential for adverse effects to the NRHP eligible East Texas Oilfield Historic District. Individual project
47 coordination with SHPO is not required.

1 5.9 DOT Act Section 4(f), LWCF Act Section 6(f), and PWC Chapter 26

2 *No-Build Alternative*

3 Under the No-Build Alternative, there would be no impacts to properties protected by Section 4(f) or
4 Section 6(f).

6 *Build Alternative*

7 The proposed project would require approximately 0.049 acres from Panther Park Community Center
8 (200 George Richey). Panther Park Community Center is classified as a recreation center in the 2015
9 Longview Comprehensive Plan. Panther Park Community Center is approximately 0.78 acres in size
10 and on-site facilities include a pavilion (bbq, lighted and electrical plugs), a play area, a meeting room,
11 and hose connections.

12
13 Section 4(f) statute requires that a property must be a significant public park, recreation area, or
14 wildlife and waterfowl refuge to be considered a section 4(f) property. Significance determinations of
15 publicly owned land considered to be a park, recreation area, or wildlife and waterfowl refuge are made
16 by the official(s) with jurisdiction over the property (FHWA 2012). Coordination between the City of
17 Longview and TxDOT have determined that the City of Longview does not consider Panther Park
18 Community Center to be a significant public park or recreation area. Therefore, it has been determined
19 that Section 4(f) is not applicable to this city property. Documentation of the City's determination will
20 be added to the Final EA following the Public Hearing.

21
22 The location of the Panther Park Community Center and a photograph is provided in **Appendix B:**
23 **Project Photographs and Appendix F: Resource Specific Maps, F-2: Panther Park Community Center**
24 **Location Map**. Spring Hill Park is located adjacent to FM 2275 with a row of homes separating the
25 park from the roadway. The proposed improvements would remove this row of homes from in front
26 of the park. However, no permanent, temporary, or constructive use impacts are expected as a
27 result. No impacts to wildlife or waterfowl refuge, or historic site of national, state, or local
28 significance protected by Section 4(f) of the U.S. Department of Transportation Act of 1966 are
29 anticipated. The proposed project would not require the acquisition of any land within park areas
30 subject to Section 6(f).

31
32 Chapter 26 applies whenever there is a proposed use or take of any public land designated as a
33 park, recreation area, scientific area, wildlife refuge or historic site. A public hearing will be held in
34 accordance with Chapter 26 of the Texas Parks and Wildlife Code (PWC) requirements. At the public
35 hearing, all interested persons would have the right to appear and be heard on the use of public land
36 designated and used as parkland in Panther Park Community Center.
37

38 5.10 Water Resources

39 5.10.1 Clean Water Act Section 404

40 Section 404 of the Clean Water Act (CWA) establishes a program to regulate the discharge of dredged
41 or fill material into waters of the United States, including wetlands. Activities in waters of the United
42 States regulated under this program include fill for infrastructure development such as roadways.
43 Authorization is required from the U.S. Army Corps of Engineers (USACE) for any activity that would
44 result in the discharge of dredged or fill material into waters of the U.S.

45
46 Field investigations were conducted in July 2016 and November 2016. The field investigations
47 enabled project scientists to identify potentially jurisdictional waters and wetlands located within the
48 proposed project ROW. Determinations were made as to the potential presence of waters of the U.S.,
49 including wetlands, subject to USACE jurisdiction. The findings are detailed in the Water Resources
50 Technical Report, on file at the TxDOT Tyler District Office, and are summarized below. Pursuant to the

1 requirements of USACE Regulatory Guidance Letter 08-02, all waters and wetlands identified within
 2 the proposed ROW were included within the Preliminary Jurisdictional Determination (PJD) as they
 3 “may be” jurisdictional waters of the U.S.
 4

5 The proposed ROW was delineated using the 1987 Wetland Delineation Manual (Environmental
 6 Laboratory 1987) and the Atlantic and Gulf Coastal Plain Region Regional Supplement (U.S. Army
 7 Corps of Engineers [USACE] 2010). The limits of the potential wetlands and waters of the U.S. were
 8 mapped using a global positioning system (GPS) unit and the data were input into a geographic
 9 information system (GIS) program for analysis.
 10

11 Based on the results of the on-site evaluations, it was determined that potential Waters of the U.S.,
 12 including wetlands, are present within the project area. There are five single and complete crossings
 13 of aquatic features within the study area. Within these crossings, a total of seven water and/or wetland
 14 features were identified, consisting of five waters (streams) and two wetlands (**Table 5**). All the
 15 identified features were considered potential Waters of the U.S. The water features include three
 16 unnamed ephemeral streams, one intermittent stream (a tributary of Hawkins Creek), and one
 17 perennial stream (Hawkins Creek). The two wetlands are small emergent features situated within or
 18 adjacent to the floodplain of Hawkins Creek. The waters and wetlands total approximately 0.33 acres.
 19 The five waters consist of 955 linear feet of stream.
 20

Table 5: Waters of the U.S., Including Wetlands, within the Proposed Project Area

Waters/Wetland Area	Lat/Long (decimal degrees)	Description of Area	Total Jurisdictional Acres within Study Area	Linear Feet within Study Area
Water 1	32.561493 -94.860503	Ephemeral stream	0.03	124
Water 2	32.561149 -94.856749	Ephemeral stream	0.01	146
Water 3*	32.556996 -94.839800	Perennial stream	0.10	145
Water 4	32.565580 -94.816060	Ephemeral stream	0.02	134
Water 5	32.565714 -94.813467	Intermittent stream	0.08	406
Wetland 1*	32.557162 -94.840129	Palustrine emergent wetland	0.04	NA
Wetland 2*	32.556922 -94.840372	Palustrine emergent wetland	0.05	NA

21 *For permitting purposes, acreages for Water 3, Wetland 1, and Wetland 2 will be combined because they comprise a single
 22 and complete crossing. Combined acreage of these features is 0.19 acre.
 23

24 *No-Build Alternative*

25 Under the No-Build Alternative, there would be no impacts to waters of the U.S., including wetlands.
 26

27 *Build Alternative*

28 Direct Impacts

29 The preferred alignment follows an existing roadway alignment and would result in the replacement of
 30 culverts and an existing bridge to accommodate the proposed improvements. If the build alternative
 31 is implemented, complete avoidance of wetlands may be possible due to bridging of these areas. If
 32 wetlands would be impacted, roadway and drainage improvements would be designed to minimize
 33 permanent and temporary impacts to waters of the U.S., including wetlands. Replacement of these

1 structures along the existing roadway alignment as proposed for the project would result in the least
2 environmental impacts.

3
4 The development of a site plan is necessary before final impacts can be calculated. It is currently
5 anticipated that less than 0.10 acre of permanent fill impacts would occur at each single and complete
6 crossing, so permanent and temporary impacts would be authorized by a NWP 14, likely with no
7 mitigation requirements. Where possible, roadway and drainage improvements would be designed to
8 avoid or minimize impacts to waters of the U.S., including wetlands. If temporary fills are needed, the
9 affected areas would be returned to their pre-existing contours. If it is necessary for heavy machinery
10 to work in a wetland, then the placement of mats would occur to minimize soil disturbance. The
11 temporary and permanent impacts would need to be determined once detailed design is available.

12
13 Depending on final design, it is possible that direct impacts may be avoidable. If the project results in
14 direct impacts they would be permitted under a NWP 14, which only authorizes activities that have
15 minimal individual and cumulative adverse environmental effects. With impact minimization measures
16 to be implemented in the design phase and the use of BMPs, the proposed project is not anticipated
17 to cause indirect impacts.

18 5.10.2 Executive Order 11990 Wetlands

19 *No-Build Alternative*

20 Under the No-Build Alternative, Executive Order (EO) 11990 would not apply because no wetland
21 impacts would occur.

22 23 *Build Alternative*

24 Direct Impacts

25 EO 11990, Protection of Wetlands (42 Federal Register 26961, May 24, 1977), provides the
26 requirement "to avoid to the extent possible the long and short term adverse impacts associated with
27 the destruction or modification of wetlands and to avoid direct or indirect support of new construction
28 in wetlands wherever there is a practicable alternative." If the build alternative is implemented,
29 complete avoidance of wetlands may be possible. If unavoidable impacts would occur, roadway and
30 drainage improvements would be designed to minimize permanent and temporary impacts to Waters
31 of the U.S., including wetlands. Replacement of these structures along the existing roadway alignment
32 as would occur with the preferred alternative would result in the least environmental impacts. The
33 alternative would comply with EO 11990 by observing the mitigation sequence of avoidance,
34 minimization, and compensation. Pursuant to CWA Section 404(b)(1), the build alternative is the least
35 environmentally damaging practicable alternative.

36 5.10.3 Clean Water Act Section 401

37 *No-Build Alternative*

38 Under the No-Build Alternative, Section 401 certification would not be required.

39 40 *Build Alternative*

41 Direct Impacts

42 The Texas Commission on Environmental Quality (TCEQ) conducts Section 401 certification reviews of
43 projects requiring a Section 404 permit from the USACE for the discharge of dredged or fill material
44 into waters of the U.S., including wetlands. If a USACE permit is required, it is anticipated that a
45 NWP 14 would be used to authorize the construction. The Section 401 Certification requirements for
46 NWP 14 would be met by implementing approved erosion and sedimentation control measures and
47 post-construction Total Suspended Solids (TSS) Best Management Practices (BMPs) from the TCEQ's
48 401 Water Quality Certification Conditions for NWPs (TCEQ 2012). Due to these measures being
49 implemented, direct impacts to water quality from erosion and sedimentation are not anticipated.

1 Increases in impervious cover due to the proposed project could cause increases in runoff, which could
2 impact the water quality of downstream sources. Because BMPs for sedimentation would be
3 implemented and drainage would be included for compensatory storage, the proposed project is not
4 anticipated to cause indirect impacts.

5 5.10.4 Rivers and Harbors Act

6 *No-Build Alternative*

7 Under the No-Build Alternative, there would be no impacts to waters regulated under Section 9 or
8 Section 10 of the Rivers and Harbors Act.

9

10 *Build Alternative*

11 The project would not involve work within or over a navigable water of the U.S., therefore, Sections 9
12 and 10 of the Rivers and Harbors Act does not apply.

13 5.10.5 Clean Water Act Section 303(d)

14 *No-Build Alternative*

15 Under the No-Build Alternative, Section 303(d) requirements would not apply.

16 *Build Alternative*

17 Direct Impacts

18 Under Section 303(d) of the Clean Water Act, states are required to develop lists of impaired waters
19 and develop total maximum daily load plans to calculate the maximum amount of a pollutant that a
20 waterbody can receive and still meet a given water quality standard. Based on the 2014 Texas
21 Integrated Report of Surface Water Quality, formerly called the Texas Water Quality Inventory and
22 303(d) List, runoff from this project would not discharge directly into a Section 303(d) listed threatened
23 or impaired water, or into a stream within 5 miles upstream of a Section 303(d) listed threatened or
24 impaired water. Runoff from this project would discharge into Hawkins Creek of the Hawkins Creek
25 sub-watershed within the Rabbit Creek - Sabine River watershed, which is not a Section 303(d)-listed
26 threatened or impaired water. Therefore, the project would result in no direct impacts to a Section
27 303(d)-listed threatened or impaired water.

28 5.10.6 Clean Water Act Section 402/TPDES

29 *No-Build Alternative*

30 Under the No-Build Alternative, no pollutants would be introduced into waters; therefore, Section 402
31 and TPDES requirements would not apply.

32

33 *Build Alternative*

34 Direct Impacts

35 Portions of the project are located within the City of Longview regulated Municipal Separate Storm
36 Sewer System (MS4) boundaries. All aspects of project design would comply with the applicable MS4
37 requirements; therefore, no CWA Section 402 direct impacts are anticipated.

38

39 *TPDES*

40 Project construction would result in temporary increases in sedimentation and turbidity. Construction
41 impacts would be minimized through the incorporation of appropriate BMPs for erosion control.
42 Construction activities that disturb one or more acres (or less in some cases) would be required to
43 obtain authorization under Texas Pollutant Discharge Elimination System (TPDES) general permit
44 TXR150000. This project would include five or more acres of earth disturbance. TxDOT would comply
45 with TCEQ's TPDES Construction General Permit (CGP). A Storm Water Pollution Prevention Plan
46 (SW3P) would be implemented, and a construction site notice would be posted on the construction
47 site. A Notice of Intent (NOI) and a Notice of Termination (NOT) would be required.

1 Increases in impervious cover due to the proposed project could cause increases in runoff, which could
2 impact the water quality of downstream sources. Because BMPs for sedimentation and turbidity would
3 be implemented and drainage would be included for compensatory storage, the proposed project is
4 not anticipated to cause indirect impacts.

5 5.10.7 Floodplains

6 Floodplains are lowlands adjacent to a river, lake, or ocean that flood during storm events. The 100-
7 year floodplain is defined as the area that will be inundated by the flood event having a 1-percent
8 chance of being equaled or exceeded in any given year. Floodplains are protected by Executive Order
9 (EO) 11988, Floodplain Management; 23 Code of Federal Regulations (CFR) Part 650, Location and
10 Hydraulic Design of Encroachments on Floodplains; and Department of Transportation (DOT) Order
11 5650.2, Floodplain Management and Protection. These regulations require that encroachments within
12 the 100-year floodplain be minimized and that land development inconsistent with floodplain values
13 is avoided.

14
15 A floodplain evaluation was conducted in accordance with EO 11988 and 23 CFR 650. FEMA Flood
16 Insurance Rate Maps (FIRMs) were reviewed to determine flood zones within the area for the proposed
17 project. The study area is located within four Flood Insurance Rate Maps (FIRMS) (FEMA Map Number
18 48183C0086F, September 3, 2014; FEMA Map Number 48183C0087F, September 3, 2014; FEMA
19 Map Number 48183C0079F, September 3, 2014, and FEMA Map Number 48183C0083F,
20 September 3, 2014). There are two locations within the study area that are designated as special flood
21 hazard areas inundated by the 100-year flood as either Zone A, no base flood elevations determined
22 or Zone AE, base flood elevations determined:

- 23
- 24 • Hawkins Creek: Location is approximately 0.5 mile west of the intersection of FM 2275 and
25 FM 1845 and designated as Zone AE, per FEMA Map Number 48183C0087F.
- 26 • Hawkins Creek Tributary 1: Location is approximately 0.55 mile west of the east project limit
27 at SH 300 and is designated as Zone AE, per FEMA Map Number 48183C0079F.
- 28

29 There are approximately 2.43 acres of 100-year floodplain within the study area. All other areas are
30 designated as Zone X, areas determined to be outside the 500-year floodplain. Gregg County is a
31 participant in the National Flood Insurance Program (NFIP). The 100-year floodplain areas are shown
32 on **Appendix A: Project Location Maps, FEMA Floodplain**.

33 *No-Build Alternative*

34 Under the No-Build Alternative, there would be no impacts to floodplains.

35 *Build Alternative*

36 In accordance with EO 11988, the alternative considered during the course of project development
37 that would avoid encroachment on floodplains was the no-build alternative. This was determined to
38 be not practicable and would not meet the purpose and need of the proposed project. Parts of the
39 Build Alternative would be constructed within the 100-year floodplain. The proposed project would
40 replace existing bridges and drainage structures to widen the existing roadway facility.

41 Direct Impacts

42 The proposed project would be in compliance with 23 C.F.R. 650 regarding location and hydraulic
43 design of highway encroachments within the floodplains. Roadway impacts on floodplains would be
44 analyzed to determine any effects caused by the proposed facility should a 100-year flood occur. The
45 hydraulic design practices would be in accordance with current TxDOT and FHWA design policies and
46 standards. The facility would permit the conveyance of the 100-year flood, inundation of the roadway
47 being acceptable, without causing significant damage to the facility, stream, or other property. The
48
49
50

1 proposed project would not increase the base flood elevation to a level that would violate applicable
2 floodplain regulations and ordinances. Drainage would be designed to compensate for increases in
3 impervious cover in accordance with federal and state regulations. For these reasons, the proposed
4 project is not anticipated to create a significant encroachment on any area floodplains as defined in
5 23 CFR 650; therefore, direct impacts to floodplains are not anticipated.
6

7 Although there may be increases in impervious cover due to the proposed project, the proposed
8 drainage for the project will provide compensatory storage for increases in runoff. Therefore, no
9 indirect encroachment impacts are anticipated. Although floodplains can be considered a sensitive
10 resource, the proposed project would be designed in accordance with state and federal floodplain
11 regulations that aim to minimize impacts to floodplains.

12 5.10.8 Groundwater

13 *No-Build Alternative*

14 Under the No-Build Alternative, there would be no impacts to groundwater.
15

16 *Build Alternative*

17 Texas Water Development Board (TWDB) and TCEQ data were reviewed in February 2017 and eight
18 water wells were identified within 500 feet of the study area. Two of the water wells mapped by TWDB
19 are for domestic use, withdrawal of water. One is mapped on the south side of FM 2275 west of
20 Adams Road at the edge of the existing ROW, within the proposed ROW, and was drilled in 1967. The
21 second well is mapped approximately 90 feet south of the proposed ROW and approximately 800 feet
22 east of Alexander Road. A drilling date was not provided in the documentation. There are two water
23 wells mapped as plugged. One is located south of FM 2275 within the proposed ROW approximately
24 815 feet east of Remington Trail. The second is located approximately 220 feet north of the proposed
25 ROW north of FM 2275 approximately 515 feet west of Remington Trail. There are four monitoring
26 wells located approximately 490 feet north of the proposed ROW on the New Beginnings Baptist
27 Church property.
28

29 Direct Impacts

30 One water well would be directly impacted by the proposed project. This well, located west of Adams
31 Road, would need to be properly plugged in accordance with state statutes. If the remaining wells
32 within the proposed ROW, and any unknown wells, are encountered during construction activities, they
33 would also need to be properly plugged in accordance with state statutes.
34

35 The well would be plugged in accordance with state regulations, and there would be the potential for
36 other wells to be dug in the nearby area. Therefore, indirect impacts due to the plugged well are not
37 anticipated.

38 5.11 Biological Resources

39 *Overview of Habitats*

40 The study area consists of the existing and proposed project right of way (ROW) limits and is located
41 in the Western Gulf Coastal Plain (WGCP) ecoregion, as described in the 2012 Texas Conservation
42 Action Plan (TCAP). The WGCP ecoregion is rich with meandering rivers and complex forests and
43 woodlands. This ecoregion is highly dissected by perennial streams through rolling plains, forming flat
44 fluvial terraces, bottomlands, sandy low hills and low cuestas. Historically, longleaf pine woodlands
45 and savannas to the south and shortleaf pine – hardwood forests in the north dominated the ecology.
46 Southern floodplain forests typified bottomlands. Wildlife species that are significantly different from
47 most of the rest of the state occur here, such as beaver (*Castor canadensis*), muskrat (*Ondatra*
48 *zibethicus*), river otter (*Lontra canadensis*), swamp rabbit (*Sylvilagus aquaticus*), red-cockaded
49 woodpecker (*Leuconotopicus borealis*), white ibis (*Eudocimus albus*), Mississippi kite (*Ictinia*

1 *mississippiensis*), alligator (*Alligator mississippiensis*), and Louisiana pine snake (*Pituophis ruthveni*).
 2 Communal bird roosts and rookeries are important in the region.

3
 4 Most of the native forests have been converted to productive monotypic commercial timber stands in
 5 this ecoregion, including bottomland areas. Livestock, oil and gas production are all major land uses
 6 as well. Cropland is generally limited to leveed bottomlands and is a minor land use in the region.
 7 Overall, there are few native plant communities left in the region in connected, ecologically functional
 8 landscapes.

9 5.11.1 Texas Parks and Wildlife Coordination

10 Under the terms of the TxDOT-TPWD MOU, a Tier I Site Assessment was performed to determine
 11 whether coordination with TPWD would be required to assess potential wildlife impacts of the
 12 proposed project. Resources used to conduct the assessment included the EMST, TPWD's Texas
 13 Natural Diversity Database (TXNDD), Annotated County Lists of Rare Species, and Texas Conservation
 14 Action Plan: Species of Greatest Conservation Need lists; U.S. Fish and Wildlife Service's (USFWS)
 15 Information for Planning and Conservation Trust Resources Report (custom-generated for this project),
 16 NRCS soil data; aerial photography; and information collected during field investigations. Desktop
 17 mapping of biological resources was performed in a GIS mapping system using spatial data obtained
 18 from TPWD. A Biological Evaluation (BE) was prepared and is included in **Appendix G: Resource Agency**
 19 **Coordination**, with environmental review by TPWD pursuant to 23 U.S.C. 327 and a MOU dated
 20 December 16, 2014 and executed by FHWA and TxDOT. TxDOT has initiated early coordination with
 21 TPWD for MOU habitat type threshold exceedances.

22 5.11.2 Impacts to Vegetation

23 The study area was assessed on desktop using Ecological Mapping Systems of Texas (EMST)
 24 vegetation data collected for this project (**Table 6**). The EMST identified 10 vegetation types as
 25 occurring within the study area. The EMST data were field-verified by project biologists. Based on the
 26 field verifications, adjustments were made to the EMST vegetation values to reflect existing conditions.
 27 There are four existing habitat types that were identified in the study area: Urban, Mixed Woodlands
 28 and Forest, Disturbed Prairie, and Riparian. The adjusted vegetation corresponds with the vegetation
 29 types for the WGCP, as outlined in TxDOT's 2013 Memorandum of Understanding (MOU) with the Texas
 30 Parks and Wildlife Department (TPWD). **Tables 6** and **7** provide data for mapped and adjusted habitat
 31 acreages within the study area.

32

Table 6: EMST Habitat Table

EMST Habitat Type	Ecological System Name	MOU Habitat Type	Acreage Existing	Acreage Proposed	Total
Pineywoods: Northern Mesic Hardwood Forest	West Gulf Coastal Plain Mesic Hardwood Forest	Mixed Woodlands and Forest	0.03	0.26	0.29
Pineywoods: Upland Hardwood Forest	West Gulf Coastal Plain Pine - Hardwood Forest	Mixed Woodlands and Forest	5.79	16.82	22.61
Pineywoods: Northern Mesic Pine/Hardwood Forest	West Gulf Coastal Plain Mesic Hardwood Forest	Mixed Woodlands and Forest	0.00	0.62	0.62
Pineywoods: Pine/Hardwood Forest or Plantation	West Gulf Coastal Plain Pine - Hardwood Forest	Mixed Woodlands and Forest	0.00	1.31	1.31
Pineywoods: Pine Forest or Plantation	West Gulf Coastal Plain Pine - Hardwood Forest	Mixed Woodlands and Forest	0.37	0.91	1.28
Pineywoods: Disturbance or	Herbaceous Vegetation	Disturbed	5.27	5.28	10.55

Table 6: EMST Habitat Table

EMST Habitat Type	Ecological System Name	MOU Habitat Type	Acreage Existing	Acreage Proposed	Total
Tame Grassland		Prairie			
Pineywoods: Small Stream Riparian Temporarily Flooded Hardwood Forest	West Gulf Coastal Plain Small Stream and River Forest	Riparian	0.28	0.22	0.50
Pineywoods: Small Stream and Riparian Wet Prairie	West Gulf Coastal Plain Small Stream and River Forest	Riparian	0.00	0.02	0.02
Urban High Intensity	N/A	Urban	1.15	0.71	1.86
Urban Low Intensity	N/A	Urban	24.61	15.11	39.72
Total			37.50	41.26	78.76

1 Source: EMST Habitat Table (attachment to FM 2275 Biological Evaluation)

Table 7: Adjusted MOU Habitat Acreage from Field Observations

MOU Habitat Type	EMST Mapped Acreage	* Actual Field Acreage	Anticipated Impact Acreage	MOU Threshold (acres)	Threshold Exceeded
Mixed Woodlands and Forest	26.11	18.57	18.57	3.0	Yes
Disturbed Prairie	10.55	6.86	6.86	3.0	Yes
Riparian	0.52	0.21	0.21	0.1	Yes
Urban	41.58	53.12	51.12	None	N/A
Total	78.76	78.76	78.76		

2 Source: EMST Habitat Table - Attachment to FM 2275 Biological Evaluation

3
4 Descriptions of the observed habitat types follow.

5
6 Urban

7 Urban areas contain trees, shrubs, and grasses associated with maintained adjacent properties. These
8 areas provide minimal habitat for wildlife; however, certain species that have adapted more readily to
9 co-exist with an urban environment can utilize some of these vegetated urban areas for foraging and
10 habitat. Trees in these areas include mostly native species that remained after land clearing activities,
11 and native and exotic trees planted for landscaping purposes. Similarly, herbaceous species include
12 a mix of native and exotic herbs and grasses used mostly for groundcover. Trees commonly observed
13 in urban communities include hickories (*Carya* spp.), sugarberry (*Celtis laevigata*), pecan (*Carya*
14 *illinoensis*), loblolly pine (*Pinus taeda*), water oak (*Quercus nigra*), Southern magnolia (*Magnolia*
15 *grandiflora*), and American elm (*Ulmus americana*). Representative herbaceous species include
16 bermudagrass (*Cynodon dactylon*), bahia (*Paspalum notatum*), dallisgrass (*Paspalum dilatatum*), and
17 Johnsongrass (*Sorghum halepense*). Within the study area, 53.12 acres of Urban habitat exist.

18
19 Mixed Woodlands and Forest

20 The Mixed Woodlands and Forest habitats contain mostly upland native trees and shrubs that have
21 been previously harvested and have regenerated to various growth stages. In some areas the trees
22 have been thinned to accommodate residential and commercial growth. Overstory species commonly
23 observed were loblolly pine (*Pinus taeda*), shortleaf pine (*Pinus echinata*), water oak (*Quercus nigra*),
24 hickories (*Carya* spp.), red maple (*Acer rubrum*), and Southern red oak (*Quercus falcata*). Understory
25 species included yaupon (*Ilex vomitoria*), Chinese privet (*Ligustrum sinense*), and winged sumac (*Rhus*
26 *copallinum*). The herbaceous understory is dominated by giant ragweed (*Ambrosia trifida*), perennial
27 ragweed (*Ambrosia psilostachya*), muscadine (*Vitis rotundifolia*), Indian wood-oats (*Chasmanthium*
28 *latifolium*), southern dewberry (*Rubus trivialis*), and greenbriers (*Smilax* spp). Within the study area,
29 18.57 acres of Mixed Woodlands and Forest habitat exists.

1 Disturbed Prairie

2 The Disturbed Prairie habitats at the project site consist of herbaceous species categorized by the
3 EMST as Disturbance or Tame Grassland. These areas occur where forested land has been root-
4 plowed and cleared for human uses, and along roadsides of the existing FM 2275. These habitat types
5 are characterized by mostly exotic grasses and closely mowed and maintained forbs. Common species
6 include bermudagrass, dallisgrass, bahia, smutgrass (*Sporobolus indicus*), and Johnsongrass. Within
7 the study area, 6.86 acres of Disturbed Prairie habitat exists.

8 9 Riparian

10 Riparian habitat at the project site occurs along the sandy uplands and mesic areas of Hawkins Creek.
11 The most common tree species in this habitat is river birch (*Betula nigra*). Other trees include American
12 hornbeam (*Carpinus caroliniana*), water oak, sugarberry, sweetgum (*Liquidambar styraciflua*), and
13 American elm. Riparian understory and shrubby species consist of Chinese privet (*Ligustrum sinense*)
14 and yaupon. Ground cover consists primarily of Indian wood-oats. Poison ivy (*Toxicodendron*
15 *radicans*), muscadine, and greenbriers are common vines. Within the study area, 0.21 acre of Riparian
16 habitat exists. This habitat, though limited, provides the best wildlife habitat in the project area.

17 18 No-Build Alternative

19 Under the No-Build Alternative, there would be no impacts to vegetation.

20 21 Build Alternative

22 **Table 7** indicates that the acreage thresholds set by the Programmatic Agreement between TxDOT and
23 TPWD under the 2013 MOU would be exceeded for the mixed woodlands and forest, disturbed prairie,
24 and riparian vegetation types. As such, the project is being coordinated with TPWD. Long-term, mostly
25 minor, adverse impacts would also be expected to occur to existing non-classified vegetation
26 communities. Habitat loss and disturbance would be minor due to the linear nature of the proposed
27 project, the previously disturbed nature of the project area and adjacent areas, and the previous
28 removal of native vegetation communities. Long-term localized impacts from construction activities
29 would be expected and would include removal of trees and shrubs. However, most of the vegetation
30 that may be removed would consist of planted maintained roadside grasses or early-successional
31 native and exotic grasses and herbs that will quickly re-establish following the construction
32 disturbance.

33
34 The proposed project could result in fragmentation or loss of important vegetation habitat. Similar
35 habitats, though, are found near the project area, and no remnant vegetation occurs within the
36 proposed project area.

37 **5.11.3 Executive Order 13112 on Invasive Species**

38 This project is subject to and will comply with federal Executive Order 13112 on Invasive Species. The
39 department implements this Executive Order on a programmatic basis through its Roadside Vegetation
40 Management Manual and Landscape and Aesthetics Design Manual.

41 **5.11.4 Executive Memorandum on Environmentally and Economically Beneficial Landscaping**

42 This project is subject to and will comply with the federal Executive Memorandum on Environmentally
43 and Economically Beneficial Landscaping, effective April 26, 1994. The department implements this
44 Executive Memorandum on a programmatic basis through its Roadside Vegetation Management
45 Manual and Landscape and Aesthetics Design Manual.

1 5.11.5 Impacts to Wildlife

2 *No-Build Alternative*

3 Under the No-Build Alternative, there would be no impacts to wildlife.

4

5 *Build Alternative*

6 Short-term, minor, adverse impacts could be expected to terrestrial and aquatic wildlife during
7 construction. Clearing the ROW would cause localized and temporary dispersal impacts, but wildlife
8 would be expected to return to adjacent areas after construction is complete and to the project area
9 once the area is re-vegetated. The improvements are not expected to alter existing migration or
10 movement corridors of aquatic and terrestrial wildlife, as the proposed project would generally follow
11 the alignment of the existing roadway facility. Only one wooded riparian corridor containing a stream
12 (Hawkins Creek) exists within the ROW. The area is currently bridged and the proposed design would
13 also bridge the area. Temporary impacts would occur to this riparian corridor during construction
14 activities. During construction, areas of bare ground could increase the potential for erosion of the
15 surface material into the water features during storm events. Sedimentation could temporarily
16 degrade water quality by increasing turbidity, suspended solids, and pollutants. Sediment deposition
17 in the water features could potentially cover benthic organisms, resulting in an adverse impact.
18 Increased turbidity can result from direct disturbance of sediments through proposed activities such
19 as the construction of bridge piers in the water bodies. Turbid water interferes with respiration and
20 filter-feeding behavior of macroinvertebrates as well as reducing fish feeding success due to visual
21 impairment. Turbidity also decreases photosynthesis for primary producers. As detailed in the BE,
22 species-appropriate BMPs will be implemented per the 2013 MOU or as precautionary measures for
23 the proposed project and included on the Environmental Permits, Issues and Commitments (EPIC)
24 sheet.

25

26 Direct impacts would be mostly minor and temporary. With the implementation of appropriate BMPs,
27 the project is not anticipated to result in indirect impacts.

28 5.11.6 Migratory Bird Protections

29 The Migratory Bird Treaty Act (MBTA) of 1918 states that it is unlawful to kill, capture, collect, possess,
30 buy, sell, trade, or transport any migratory bird, nest, young, feather, or egg in part or in whole, without
31 a Federal permit issued in accordance within the Act's policies and regulations. Field investigations by
32 project biologists did not identify migratory birds or active nests, although abandoned swallow nests
33 were observed on bridge decks and supports at Hawkins Creek.

34

35 *No-Build Alternative*

36 Under the No-Build Alternative, no impacts to migratory birds would be anticipated.

37

38 *Build Alternative*

39 Depending on the migration patterns of various species, the potential may exist for breeding colonies
40 of migratory birds to be present during construction activities. However, due to past landscape
41 alterations that removed most trees and native groundcover, most vegetative cover within the ROW
42 consists of maintained grasses, so project-related vegetation clearing activities would be minimal. It is
43 not anticipated that migratory birds would be impacted as a result of the construction of the project
44 due to the lack of remaining reproductive and foraging habitat. TxDOT will take all appropriate actions
45 to prevent the take of migratory birds, their active nests, eggs, or young by the use of proper phasing
46 of the project or other appropriate actions. A MBTA-appropriate EPIC will be included in the project file
47 to include:

48

- 1 • No active migratory bird nests (nests containing eggs and/or young) will be removed or
2 destroyed at any time of the year.
- 3 • No colonial nests (swallows, for example) on or in structures will be removed until all nests in
4 the colony become inactive.
- 5 • Measures, to the extent practicable, will be used to prevent or discourage migratory birds from
6 building nests within portions of the project area planned for construction.
- 7 • Inactive nests will be removed from the project area to minimize the potential for reuse by
8 migratory birds.
- 9 • Construction or demolition activities will be scheduled outside the typical nesting season
10 (February 15 to October 1), and will comply with the previously listed prohibitive provisions of
11 the MBTA, which apply year-round.

12 5.11.7 Fish and Wildlife Coordination Act

13 The Fish and Wildlife Coordination Act (FWCA) of 1958 requires that federal agencies obtain comments
14 from USFWS and TPWD. This coordination is required whenever a project involves impounding,
15 diverting, or deepening a stream channel or other body of water. Any impacts to Waters of the U.S.
16 would likely be authorized under a USACE Section 404 of the CWA NWP permit; therefore, no
17 coordination under FWCA would be required.

18 5.11.8 Bald and Golden Eagle Protection Act of 2007

19 *No-Build Alternative*

20 Under the No-Build Alternative, no impacts to Bald and Golden Eagles would be anticipated.

21 22 *Build Alternative*

23 The Bald and Golden Eagle Protection Act of 2007 (BGEPA) was enacted in 1940 to provide for the
24 protection of the Bald Eagle and the Golden Eagle by prohibiting, except under certain specified
25 conditions, the taking, possession and sale of such birds. The proposed project is located in an area
26 that is primarily composed of residential and urban/recreational/ industrial properties. Scattered trees
27 and woodlands exist along the project right-of-way that could provide minimal eagle habitat; however,
28 the proposed project is located within and/or adjacent to an existing roadway. The human/urban
29 disturbances and habitat fragmentation that occur in the area would make it unlikely that bald eagles
30 would utilize the proposed project area for nesting or as stopover habitat during migration, considering
31 that less disturbed habitat likely occurs nearby.

32 5.11.9 Magnuson-Stevens Fishery Conservation Management Act

33 The Magnuson-Stevens Fishery Conservation and Management Act (MSA) is the primary law governing
34 marine fisheries management in U.S. federal waters. Essential fish habitat is defined by the MSA as
35 those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.
36 The project does not occur within a coastal county and tidally influenced waters do not occur within
37 the project action area. Coordination with National Marine Fisheries Service (NMFS) is not required.

38 5.11.10 Marine Mammal Protection Act

39 Marine mammals are protected under the Marine Mammal Protection Act (MMPA). The Texas coast
40 provides suitable habitat and is within range of several marine mammals including the West Indian
41 Manatee (*Trichechus manatus*), and bottlenose dolphin (*Tursiops truncatus*). The project area does
42 not occur within a coastal county and tidally influenced waters do not occur within the project action
43 area. Therefore, there is no suitable habitat for marine mammals and coordination with NMFS is not
44 required.

1 5.11.11 Threatened, Endangered, and Candidate Species

2 The Endangered Species Act (ESA) affords protection for federally-listed threatened and endangered
3 species and, where designated, critical habitat for these species. The BE included a Threatened and
4 Endangered Species Habitat Assessment that considered potential effects of the project on both
5 federal and state listed species. The findings of the assessment are summarized below.
6

7 According to the USFWS Information for Planning and Conservation Trust Resources Report (custom
8 generated for this project on August 23, 2018), for non-wind energy projects, the least tern is the only
9 federally-listed species potentially occurring in Gregg County. TPWD maintains a list of threatened and
10 endangered species (both state and federally-listed) and state species of concern for each Texas
11 county. Based on the evaluation performed for the BE, the proposed project is within the range of and
12 may provide suitable habitat for nine state-listed species. TPWD also maintains special species lists
13 through the Texas Natural Diversity Database (TXNDD) by county. The TXNDD is a geo-referenced
14 database of documented sightings of rare, threatened and endangered species of Texas. The TXNDD
15 data were obtained from TPWD on March 10, 2016 and reviewed for the proposed project. The TXNDD
16 review met all the requirements of the TxDOT-TPWD MOU for sharing and maintaining TXNDD
17 information. The data indicated that no listed and rare species or assemblages are documented as
18 occurring or having occurred within the USGS 7.5-minute White Oak quad. The data also concurred
19 with the TCAP review finding that no remnant vegetation occurs within the project area.
20

21 *No-Build Alternative*

22 Under the No-Build Alternative, there would be no impacts to threatened and endangered species.
23

24 *Build Alternative*

25 Although the federally-listed least tern has the potential for occurring in the county, the project area
26 contains no suitable habitat for the species such as sand and gravel bars within braided streams or
27 rivers. Therefore, there would be no direct impacts to federally listed species, and coordination with
28 the USFWS would not be required. However, measures to avoid harm to any threatened or endangered
29 species would be taken should they be observed during construction of the proposed project.
30

31 Because the proposed project is within the range of and may provide suitable habitat for nine state-
32 listed species, species-specific BMPs will be implemented per the TxDOT-TPWD MOU or as
33 precautionary measures for the proposed project and included on the EPIC sheet. If any individuals of
34 state-listed species are observed within the project area during construction, care would be taken to
35 avoid harming them. With the implementation of these measures, the proposed project is anticipated
36 to have no direct adverse impacts to state-listed species.
37

38 There is no critical habitat within the project area or within the county for federally-listed threatened
39 or endangered species; therefore, indirect impacts on federally-listed species are not anticipated due
40 to the proposed project. There are no resources within the proposed project area or county to identify
41 as in poor/declining health, at-risk, or sensitive for federally-listed species.
42

43 State-listed threatened and endangered species within Gregg County would be considered an at-risk
44 and sensitive resource due to declining populations and habitat. No direct impacts to state-listed
45 threatened or endangered species are anticipated due to the proposed project. In addition, species-
46 specific BMPs would be implemented to minimize harm; therefore, no indirect impacts to state-listed
47 species are anticipated due to the proposed project.

1 5.12 Air Quality

2 *No-Build Alternative*

3 Implementation of the No-Build Alternative would lead to increased traffic congestion and decreased
4 mobility along FM 2275, resulting in decreased vehicular speed and increased stop-and-go traffic.
5 However, EPA's new fuel and vehicle standards are projected to reduce emissions of air pollutants and
6 Mobile Source Air Toxics (MSAT) and to contribute to continued maintenance and improvement of air
7 quality regardless of the alternative chosen.

8 9 *Build Alternative*

10 Transportation Conformity

11 The proposed action is consistent with the Longview Metropolitan Transportation Plan 2040 (Nov.
12 2014). The project is located in Gregg County, which is in an area in attainment or unclassifiable for
13 all national ambient air quality standards (NAAQS); therefore, the transportation conformity rules do
14 not apply.

15 16 Carbon Monoxide (CO)

17 Based on the Transportation Planning and Programming (TP&P) traffic forecasts for the proposed
18 project prepared in December 2015, traffic data for the design year 2045 varies between 7,100 to
19 8,200 vehicles per day (vpd) along FM 2275 between FM 3272 and SH 300. A prior TxDOT modeling
20 study and previous analyses of similar projects demonstrated that it is unlikely that a carbon monoxide
21 standard would ever be exceeded as a result of any project with an average annual daily traffic (AADT)
22 below 140,000. The AADT projections for the project do not exceed 140,000 vpd; therefore, a Traffic
23 Air Quality Analysis was not required.

24 25 Congestion Management Process (CMP)

26 This project is located in an area that is in attainment or unclassifiable for all NAAQS; therefore, a CMP
27 analysis is not required.

28 29 Mobile Source Air Toxics (MSAT)

30 Although the proposed project is increasing capacity, it has a design year ADT of less than 140,000
31 vpd and is not considered a project of air quality concern; therefore, this project has been determined
32 to have a low potential for MSAT effects and a qualitative MSAT analysis was completed.

33 34 Background

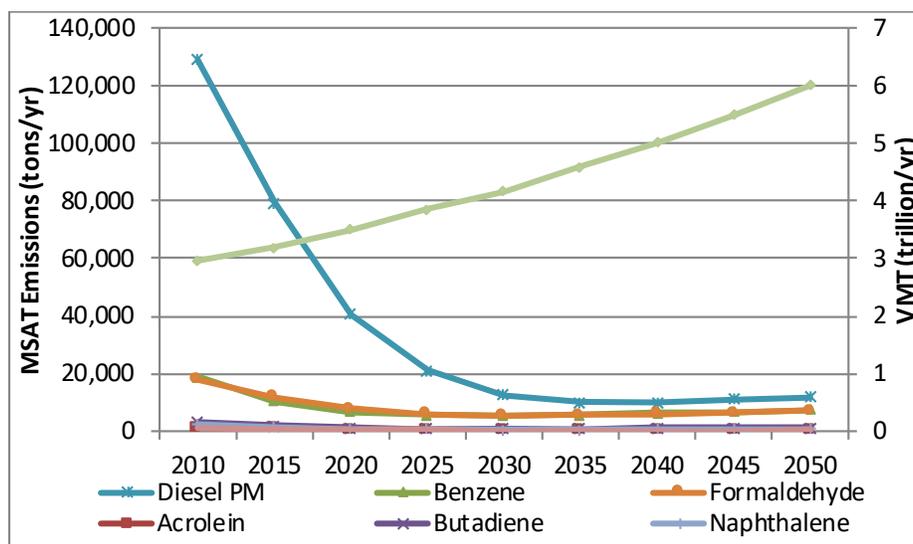
35 Controlling air toxic emissions became a national priority with the passage of the Clean Air Act (CAA)
36 Amendments of 1990, whereby Congress mandated that the Environmental protection Agency (EPA)
37 regulate 188 air toxics, also known as hazardous air pollutants. The EPA has assessed this expansive
38 list in their latest rule on the Control of Hazardous Air Pollutants from Mobile Sources (Federal Register,
39 Vol. 72, No. 37, page 8430, February 26, 2007) and identified a group of 93 compounds emitted
40 from mobile sources that are listed in their Integrated Risk Information System (IRIS)
41 (<http://www.epa.gov/ncea/iris/index.html>). In addition, EPA identified seven compounds with
42 significant contributions from mobile sources that are among the national and regional-scale cancer
43 risk drivers from their 1999 National Air Toxics Assessment (NATA)
44 (<http://www.epa.gov/ttn/atw/nata1999/>). These are acrolein, benzene, 1,3- butadiene, diesel
45 particulate matter plus diesel exhaust organic gases (DPM), formaldehyde, naphthalene, and
46 polycyclic organic matter. While FHWA considers these the priority MSAT, the list is subject to change
47 and may be adjusted in consideration of future EPA rules.

48
49 The 2007 EPA MSAT rule mentioned above requires controls that will dramatically decrease MSAT
50 emissions through cleaner fuels and cleaner engines. Based on an FHWA analysis using EPA's
51 MOVES2010b model, as shown in **Figure 1** and **Table 8**, even if vehicle-miles travelled (VMT) increases

1 by 102 percent as assumed from 2010 to 2050, a combined reduction of 83 percent in the total
 2 annual emissions for the priority MSAT is projected for the same time period.

3
 4 Air toxics analysis is a continuing area of research. While much work has been done to assess the
 5 overall health risk of air toxics, many questions remain unanswered. In particular, the tools and
 6 techniques for assessing project-specific health outcomes as a result of lifetime MSAT exposure
 7 remain limited. These limitations impede the ability to evaluate how the potential health risks posed
 8 by MSAT exposure should be factored into project-level decision-making within the context of the NEPA.
 9 The FHWA, EPA, the Health Effects Institute (HEI), and others have funded and conducted research
 10 studies to try to more clearly define potential risks from MSAT emissions associated with highway
 11 projects. The FHWA will continue to monitor the developing research in this emerging field.

12
 13 **Figure 1: Projected National MSAT Emission Trends 2010-2050 for Vehicles Operating on Roadways**
 14 **Using EPA's MOVES2010b Model**
 15



16
 17 Source: **Table 8** below.
 18 Note: Trends for specific locations may be different, depending on locally derived
 19 information representing VMT, vehicle speeds, vehicle mix, fuels, emission control
 20 programs, meteorology, and other factors.
 21
 22

Table 8: Projected National MSAT Emission Trends 2010-2050 for Vehicles Operating on Roadways Using EPA's MOVES2010b Model

Pollutant / VMT	Pollutant Emissions (tons) and VMT by Calendar Year									Change 2010 to 2050
	2010	2015	2020	2025	2030	2035	2040	2045	2050	
Acrolein	1,244	805	476	318	258	247	264	292	322	-74%
Benzene	18,995	10,195	6,765	5,669	5,386	5,696	6,216	6,840	7,525	-60%
Butadiene	3,157	1,783	1,163	951	890	934	1,017	1,119	1,231	-61%
Diesel PM	128,847	79,158	40,694	21,155	12,667	10,027	9,978	10,942	11,992	-91%
Formaldehyde	17,848	11,943	7,778	5,938	5,329	5,407	5,847	6,463	7,141	-60%
Naphthalene	2,366	1,502	939	693	607	611	659	727	802	-66%
Polycyclics	1,102	705	414	274	218	207	219	240	262	-76%
Trillions VMT	2.96	3.19	3.5	3.85	4.16	4.58	5.01	5.49	6.0	102%

23 Source: EPA MOVES2010b model runs conducted during May – June 2012 by FHWA

1 Project Specific MSAT Assessment

2 A qualitative analysis provides a basis for identifying and comparing the potential differences among
3 MSAT emissions, if any, from the various alternatives. The qualitative assessment presented below is
4 derived in part from a study conducted by the FHWA entitled A Methodology for Evaluating Mobile
5 Source Air Toxic Emissions Among Transportation Project Alternatives, found at:
6 [http://www.fhwa.dot.gov/environment/air_quality/air_toxics/research_and_analysis/mobil](http://www.fhwa.dot.gov/environment/air_quality/air_toxics/research_and_analysis/mobile_source_air_toxics/msatemissions.pdf)
7 [e_source_air_toxics/msatemissions.pdf](http://www.fhwa.dot.gov/environment/air_quality/air_toxics/research_and_analysis/mobile_source_air_toxics/msatemissions.pdf)
8

9 For the alternatives considered for the proposed project, the amount of MSAT emitted would be
10 proportional to the VMT, assuming that other variables such as fleet mix are the same for each
11 alternative. The VMT estimated for the Build Alternative is slightly higher than that for the No-Build
12 Alternative because the additional capacity increases the efficiency of the roadway and attracts
13 rerouted trips from elsewhere in the transportation network. This increase in VMT would lead to higher
14 MSAT emissions for the Build Alternative along the highway corridor, along with a corresponding
15 decrease in MSAT emissions along the parallel routes. The emissions increase is offset somewhat by
16 lower MSAT emission rates due to increased speeds; according to the EPA's MOVES2010b emissions
17 model, emissions of all of the priority MSAT decrease as speed increases. Because the estimated VMT
18 under each of the Alternatives are nearly the same, it is expected there would be no appreciable
19 difference in overall MSAT emissions among the various alternatives. Also, regardless of the
20 alternative chosen, emissions will likely be lower than present levels in the design year as a result of
21 the EPA's national control programs that are projected to reduce annual MSAT emissions by over 80
22 percent between 2010 and 2050. Local conditions may differ from these national projections in terms
23 of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of
24 the EPA-projected reductions is so great (even after accounting for VMT growth) that MSAT emissions
25 in the study area are likely to be lower in the future in nearly all cases.
26

27 The additional travel lanes contemplated as part of the Build Alternative will have the effect of moving
28 some traffic closer to nearby homes, schools, and businesses; therefore, under each alternative there
29 may be localized areas where ambient concentrations of MSAT could be higher under the Build
30 Alternative than the No-Build Alternative. The localized increases in MSAT concentrations would likely
31 be most pronounced along the entire project limits under the Build Alternative because capacity would
32 be added which would move travel lanes closer to populated areas. However, the magnitude and the
33 duration of these potential increases compared to the No-Build Alternative cannot be reliably
34 quantified due to incomplete or unavailable information in forecasting project-specific MSAT health
35 impacts. In sum, when a highway is widened, the localized level of MSAT emissions for the Build
36 Alternative could be higher relative to the No-Build Alternative, but this could be offset due to increases
37 in speeds and reductions in congestion (which are associated with lower MSAT emissions). Also, MSAT
38 will be lower in other locations when traffic shifts away from them. However, on a regional basis, the
39 EPA's vehicle and fuel regulations, coupled with fleet turnover, will over time cause substantial
40 reductions that, in almost all cases, will cause region-wide MSAT levels to be lower than today.
41

42 *Incomplete or Unavailable Information for Project-Specific MSAT Health Impacts Analysis*

43 In FHWA's view, information is incomplete or unavailable to credibly predict the project-specific health
44 impacts due to changes in MSAT emissions associated with a proposed set of highway alternatives.
45 The outcome of such an assessment, adverse or not, would be influenced more by the uncertainty
46 introduced into the process through assumption and speculation rather than any genuine insight into
47 the actual health impacts directly attributable to MSAT exposure associated with a proposed action.
48

49 EPA is responsible for protecting the public health and welfare from any known or anticipated effect
50 of an air pollutant. They are the lead authority for administering the CAA and its amendments and have
51 specific statutory obligations with respect to hazardous air pollutants and MSAT. The EPA is in the

1 continual process of assessing human health effects, exposures, and risks posed by air pollutants.
2 They maintain the IRIS, which is “a compilation of electronic reports on specific substances found in
3 the environment and their potential to cause human health effects” (EPA, <http://www.epa.gov/iris/>).
4 Each report contains assessments of non-cancerous and cancerous effects for individual compounds
5 and quantitative estimates of risk levels from lifetime oral and inhalation exposures with uncertainty
6 spanning perhaps an order of magnitude.

7
8 Other organizations are also active in the research and analyses of the human health effects of MSAT,
9 including the HEI. Two HEI studies are summarized in Appendix D of FHWA’s Interim Guidance Update
10 on Mobile source Air Toxic Analysis in NEPA Documents. Among the adverse health effects linked to
11 MSAT compounds at high exposures are; cancer in humans in occupational settings; cancer in
12 animals; and irritation to the respiratory tract, including the exacerbation of asthma. Less obvious is
13 the adverse human health effects of MSAT compounds at current environmental concentrations (HEI,
14 <http://pubs.healtheffects.org/view.php?id=282>) or in the future as vehicle emissions substantially
15 decrease (HEI, <http://pubs.healtheffects.org/view.php?id=306>).
16

17 The methodologies for forecasting health impacts include emissions modeling; dispersion modeling;
18 exposure modeling; and then final determination of health impacts – each step in the process building
19 on the model predictions obtained in the previous step. All are encumbered by technical shortcomings
20 or uncertain science that prevents a more complete differentiation of the MSAT health impacts among
21 a set of project alternatives. These difficulties are magnified for lifetime (i.e., 70 year) assessments,
22 particularly because unsupportable assumptions would have to be made regarding changes in travel
23 patterns and vehicle technology (which affects emissions rates) over that time frame, since such
24 information is unavailable.
25

26 It is particularly difficult to reliably forecast 70-year lifetime MSAT concentrations and exposure near
27 roadways; to determine the portion of time that people are actually exposed at a specific location; and
28 to establish the extent attributable to a proposed action, especially given that some of the information
29 needed is unavailable.
30

31 There are considerable uncertainties associated with the existing estimates of toxicity of the various
32 MSAT, because of factors such as low-dose extrapolation and translation of occupational exposure
33 data to the general population, a concern expressed by HEI
34 (<http://pubs.healtheffects.org/view.php?id=282>). As a result, there is no national consensus on air
35 dose-response values assumed to protect the public health and welfare for MSAT compounds, and in
36 particular for diesel PM. The EPA (<http://www.epa.gov/risk/basicinformation.htm#g>) and the HEI
37 (<http://pubs.healtheffects.org/getfile.php?u=395>) have not established a basis for quantitative risk
38 assessment of diesel PM in ambient settings.
39

40 There is also the lack of a national consensus on an acceptable level of risk. The current context is the
41 process used by the EPA as provided by the CAA to determine whether more stringent controls are
42 required in order to provide an ample margin of safety to protect public health or to prevent an adverse
43 environmental effect for industrial sources subject to the maximum achievable control technology
44 standards, such as benzene emissions from refineries. The decision framework is a two-step process.
45 The first step requires EPA to determine an “acceptable” level of risk due to emissions from a source,
46 which is generally no greater than approximately 100 in a million. Additional factors are considered in
47 the second step, the goal of which is to maximize the number of people with risks less than 1 in a
48 million due to emissions from a source. The results of this statutory two-step process do not guarantee
49 that cancer risks from exposure to air toxics are less than 1 in a million; in some cases, the residual
50 risk determination could result in maximum individual cancer risks that are as high as approximately

1 100 in a million. In a June 2008 decision, the U.S. Court of Appeals for the District of Columbia Circuit
2 upheld EPA's approach to addressing risk in its two-step decision framework.
3

4 Information is incomplete or unavailable to establish that even the largest of highway projects would
5 result in levels of risk greater than deemed acceptable. Because of the limitations in the
6 methodologies for forecasting health impacts described, any predicted difference in health impacts
7 between alternatives is likely to be much smaller than the uncertainties associated with predicting the
8 impacts. Consequently, the results of such assessments would not be useful to decision makers, who
9 would need to weigh this information against project benefits, such as reducing traffic congestion,
10 accident rates, and fatalities plus improved access for emergency response, that are better suited for
11 quantitative analysis.
12

13 Conclusion

14 A qualitative MSAT assessment has been provided for the proposed project relative to the various
15 alternatives of MSAT emissions and has acknowledged that the Build Alternative may result in
16 increased exposure to MSAT emissions in certain locations, although the concentrations and duration
17 of exposures are uncertain, and because of this uncertainty, the health effects from these emissions
18 cannot be estimated.
19

20 During the construction phase of this project, temporary increases in air pollutant emissions may occur
21 from construction activities. The primary construction-related emissions are particulate matter
22 (fugitive dust) from site preparation. These emissions are temporary in nature (only occurring during
23 actual construction); it is not possible to reasonably estimate impacts from this emissions due to
24 limitations of the existing models. However, the potential impacts of particulate matter emissions will
25 be minimized by using fugitive dust control measures such as covering or treating disturbed areas with
26 dust suppression techniques, sprinkling, covering loaded trucks, and other dust abatement controls,
27 as appropriate.
28

29 The construction activity phase of this project may generate a temporary increase in MSAT emissions
30 from construction activities, equipment and related vehicles. The primary MSAT construction related
31 emissions are particulate matter from site preparation and diesel particulate matter from diesel
32 powered construction equipment and vehicles. The Texas Emissions Reduction Plan (TERP) includes
33 incentive programs to encourage the development of multi-pollutant approaches to ensure that the air
34 in Texas is both safe to breathe and meets minimum federal standards. TxDOT encourages
35 construction contractors to utilize this program to the fullest extent possible to minimize diesel
36 emissions. Information about the TERP program can be found at:
37 <http://www.tceq.state.tx.us/implementation/air/terp/>.
38

39 Considering the temporary and transient nature of construction-related emissions, as well as the
40 mitigation actions to be utilized, it is not anticipated that emissions from construction of this project
41 will have any significant impact on air quality in the area.

42 5.13 Hazardous Materials

43 *No-Build Alternative*

44 Under the No-Build Alternative, there would be no impacts from hazardous materials.
45

46 *Build Alternative*

47 An assessment of hazardous materials revealed contamination concerns relating to oil and gas
48 production and transmission activities, as well as demolition of existing bridge structures and an
49 abandoned house within the proposed ROW. A site survey was conducted on November 10 and 11,

1 2016 and a hazardous materials initial site assessment (HazMat ISA) for this project was completed
2 in January 2017.

3
4 There are two active oil wells, two plugged oil wells, and one gas well within the existing ROW. There
5 are six active oil wells and four plugged oil wells in the proposed ROW. Many pipelines and slush pits
6 are also located within existing or proposed ROW.

7
8 One Emergency Response Notification System (ERNS) site (Site ID#184877) was found within the
9 proposed ROW. An unknown quantity of crude oil from an 8" oil pipeline located on the north side of
10 the existing ROW at FM 2275 and Brent Road was reported on July 7, 1993. Remedial actions were
11 taken (booms were deployed). The environmental database review and a review of TCEQ online
12 records, does not indicate an unresolved environmental issue for this site. No visible evidence of the
13 spill was observed during the site survey. Therefore, impacts to the project are not anticipated. Any
14 unanticipated contamination related to the spill site would be addressed promptly using TxDOT
15 standing remediation contracts.

16
17 One superfund site was identified within 1 mile of the project. Site ID #TXD061287918 is
18 approximately 0.94 miles west of the proposed project at Voda Petroleum, INC. (Ultra Oil). All remedial
19 actions were completed on August 31, 2010. An interview was conducted with Aimee Beveridge, the
20 Operator Cleanup Program Team Lead in June 2015. Based on distance from the project area and
21 regulatory status, as well as the interview, this facility is not considered an environmental concern.

22
23 Records of leaking petroleum storage tanks (LPST) were found at three sites approximately 0.2 miles
24 southeast of the project at the intersection of SH 300 and Fenton Rd. This location, Site ID #116918,
25 is the former Driggers Grocery Market located in the northwest quadrant of the intersection. The
26 reported incident received final concurrence in 2006 and the property is now occupied by a donut
27 shop, Site ID #100766 and Site ID #117894 are located at the Spring Hill Pit Stop in the northeast
28 quadrant of the intersection. This gas station was previously a Fina station and a Goodman's Shell
29 station and final concurrence for these incidents were received in 1991 and 2008, respectively. Based
30 on the distances from the project area and their regulatory status, these sites are not considered an
31 environmental concern.

32
33 One petroleum storage tank (PST) record was found adjacent to the project area (Site ID #49585).
34 This site is located at the North Oak Grocery, which is southeast of the intersection of FM 2275 and
35 White Oak Road. This facility houses three active underground gasoline storage tanks currently in use.
36 Two of the tanks were installed on January 1, 1982 and have an 8,000-gallon capacity. The third was
37 installed on June 17, 1998 and has a 24,000-gallon capacity. The tank hold is approximately 95 feet
38 south of the proposed ROW. No releases have been reported for this facility so there is no known
39 environmental concern at this location.

40
41 In summary, vertical and horizontal realignment of utilities and pipelines, demolition of existing
42 structures, oil and gas extraction activities, and resulting potential for contaminated soils within the
43 ROW constitute the primary hazardous material concerns for this project. If a hazardous materials site
44 cannot be avoided, the project should be designed to minimize hazardous materials impacts. Any
45 additional, unanticipated hazardous materials encountered during construction will be addressed in
46 accordance with regulatory requirements.

1 5.14 Traffic Noise

2 *No-Build Alternative*

3 Highway traffic is the dominant source of noise in developed areas adjacent to the proposed project.
4 Under the No-Build Alternative, additional noise impacts as a result of construction activities or
5 increased traffic volumes would not occur because no facility would be constructed. Traffic noise
6 levels would be expected to increase with an associated increase in traffic volumes over time.

8 *Build Alternative*

9 A traffic noise analysis using the latest TNM version (version 2.5), was completed in accordance with
10 FHWA approved 2011 *Guidelines for Analysis and Abatement of Roadway Traffic Noise*.

11
12 Sound from highway traffic is generated primarily from a vehicle's tires, engine, and exhaust. It is
13 commonly measured in decibels and is expressed as "dB."

14
15 Sound occurs over a wide range of frequencies. However, not all frequencies are detectable by the
16 human ear; therefore, an adjustment is made to the high and low frequencies to approximate the way
17 an average person hears traffic sounds. This adjustment is called A-weighting and is expressed as
18 "dB(A)."

19
20 Also, because traffic sound levels are never constant due to the changing number, type, and speed of
21 vehicles, a single value is used to represent the average or equivalent sound level and is expressed
22 as "Leq."

23
24 The traffic noise analysis typically includes the following elements:

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

30
31
32 The FHWA has established the following Noise Abatement Criteria (NAC) for various land use activity
33 areas that are used as one of two means to determine when a traffic noise impact would occur
34 (Table 9).

35

Table 9: Noise Abatement Criteria

Activity Category	FHWA dB(A) Leq	Description of Land Use Activity Areas
A	57 (exterior)	Lands on which serenity and quiet are of extraordinary 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.
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: FHWA Highway Traffic Noise: Analysis and Abatement Guidance, December 2011

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

Absolute criterion: the predicted noise level at a receiver approaches, equals, or exceeds the NAC. “Approach” is defined as 1 dB(A) below the FHWA 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 receiver 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) [11 dB(A) increase].

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.

FHWA traffic noise modeling software was used to calculate existing and 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.

Existing and predicted traffic noise levels were modeled at receiver locations 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. **Table 10** presents a list of modeled representative receivers and results of the number of impacted representative receivers. **Appendix F, F-5: Noise Receiver Locations** includes the representative receiver locations and impacts.

Table 10: Traffic Noise Levels [dB(A) Leq]

Receiver	NAC Category	NAC dB(A) Leq	Existing	Predicted (2045)	Change (+/-)	Noise Impact
R01_House	B	67	52	56	+4	No
R02_House	B	67	62	64	+2	No
R03_Church Playground	C	67	63	68	+5	Yes
R04_House	B	67	61	65	+4	No
R05_House	B	67	55	56	+1	No
R06_House	B	67	66	68	+2	Yes
R07_House	B	67	48	53	+5	No
R08_House	B	67	58	61	+3	No
R09_House	B	67	59	65	+6	No
R10_House	B	67	53	56	+3	No
R11_House	B	67	56	N/A	N/A	N/A
R12_House	B	67	54	56	+2	No
R13_House	B	67	49	50	+1	No
R14_House	B	67	52	57	+5	No
R16_House	B	67	58	64	+6	No

Table 10: Traffic Noise Levels [dB(A) Leq]

Receiver	NAC Category	NAC dB(A) Leq	Existing	Predicted (2045)	Change (+/-)	Noise Impact
R17_House	B	67	59	N/A	N/A	N/A
R18_Church	C	67	48	52	+4	No
R19_House	B	67	60	62	+2	No
R20_House	B	67	54	58	+4	No
R21_House	B	67	64	N/A	N/A	N/A
R22_Spring Hill Park	C	67	48	51	+3	No
R23_Panther Park	C	67	57	59	+2	No
R24_House	B	67	66	N/A	N/A	N/A
R25_House	B	67	55	N/A	N/A	N/A

Source: Study Team, November 2018.

Note: N/A Represents receiver displacement

As indicated in **Table 10**, the proposed project would result in traffic noise impacts and the following noise abatement measures were considered: traffic management, alternative of horizontal and/or vertical alignments, acquisition of undeveloped property to act as a buffer zone and the construction of noise walls.

Since potential noise impacts have been identified for this project, the feasibility and reasonableness of potential noise abatement measures must be evaluated per the 2011 TxDOT guidelines. Specific abatement measures including traffic management measures, alteration of horizontal and vertical alignments, acquisition of undeveloped property to provide noise buffers, and the construction of noise barriers were evaluated for feasibility and reasonableness. Abatement measures determined to be feasible and reasonable per TxDOT criteria can be recommended as effective measures to reduce adverse noise impacts associated with the proposed project.

Before any abatement measure can be proposed for incorporation into the project, it must be both feasible and reasonable under TxDOT guidelines. In order to be "feasible," the abatement measure must be able to reduce the noise level at greater than 50 percent of impacted, first row receivers by at least 5 dBA. TxDOT considers noise abatement to be "reasonable," if the following criteria are met:

1. The noise reduction design goal is met – a minimum of one first row benefited receiver must receive a noise reduction of at least 7 dBA; and
2. The cost-effectiveness goal is met – the cost of the abatement measure should be equal to or less than \$25,000 per benefited receiver (noise impact reduced by at least 5 dBA).

The specific, potential noise abatement measures that were evaluated for this project to reduce or eliminate adverse noise impacts are discussed for the build alternative below along with a determination of feasibility and reasonableness. Barriers that meet criteria 1 and 2 above are considered acoustically feasible and reasonable under TxDOT guidelines.

Traffic Management Measures: Control devices could be used to reduce the speed of the traffic; however, the minor benefit of 1 dBA per 5 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. Based on these considerations, traffic management measures were determined to be infeasible as a noise abatement measure.

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

1 or reasonable. Typical engineering estimates indicate that changes in alignment must incorporate at
 2 least eight times the distance between the roadway and the receiver to produce a benefit (considered
 3 a reduction of at least 5 dBA). Because of increased cost and the potential for increasing the number
 4 of noise level impacts, altering the horizontal or vertical alignment of any of the proposed alternatives
 5 was determined to be infeasible.

6
 7 *Buffer Zone:* The acquisition of undeveloped property to act as a buffer zone is designed to avoid rather
 8 than abate traffic noise impacts and, therefore, is not feasible.

9
 10 *Noise Walls:* Noise walls are the most commonly used noise abatement measure. Noise walls were
 11 evaluated for reasonableness and feasibility at each of the impacted receiver locations for each
 12 alternative as described in the following section.

13
 14 R03: this receiver represents a separate, individual receiver, representative of the Olde Tyme Baptist
 15 Church. A noise barrier that would achieve the minimum, feasible reduction of 5 dBA and the noise
 16 reduction design goal of 7 dBA at this receiver would exceed the reasonable, cost-effectiveness
 17 criterion of \$25,000.

18
 19 R06: this receiver represents 3 residential units, two with a driveway facing FM2275 and two with
 20 access from Alexander Road. A continuous noise barrier would restrict access to these residences.
 21 Gaps in a noise barrier would satisfy access requirements but the resulting non-continuous barrier
 22 segments would not be sufficient to achieve the minimum, feasible reduction of 5 dBA or the noise
 23 reduction design goal of 7 dBA.

24
 25 None of the above abatement measures would be both feasible and reasonable; therefore, no noise
 26 abatement measures are proposed for this project.

27
 28 As indicated in Table 10, the proposed project would result in a traffic noise impact. To avoid noise
 29 impacts that may result from future development of properties adjacent to the project, local officials
 30 responsible for land use control programs must ensure, to the maximum extent possible, no new
 31 activities are planned or constructed along or within the following predicted (2045) noise impact
 32 contours shown in **Table 11**.

33
Table 11: Traffic Noise Contours [dB(A) Leq]

Location	Land Use	Impact Contour	Distance from ROW
South of FM 2275 between FM 3272 and FM 1845	NAC Categories B&C	66	25 ft
	NAC Category E	71	Within proposed ROW
North of FM 2275 between FM 3272 and FM 1845	NAC Categories B&C	66	Within proposed ROW
	NAC Category E	71	Within proposed ROW
South of FM 2275 between FM 1845 and SH 300	NAC Categories B&C	66	Within proposed ROW
	NAC Category E	71	Within proposed ROW
North of FM 2275 between FM 1845 and SH 300	NAC Categories B&C	66	Within proposed ROW
	NAC Category E	71	Within proposed ROW

34 Source: Study Team, November 2018.

1 Direct Impacts

2 The proposed project is anticipated to cause traffic noise levels to be exceeded at four receivers. Noise
3 abatement measures were not deemed to be reasonable and feasible for these locations. Noise
4 associated with the construction of the project is difficult to predict. Heavy machinery, the major
5 source of noise in construction, is constantly moving in unpredictable patterns. However, construction
6 normally occurs during daylight hours when occasional loud noises are more tolerable. None of the
7 receivers is expected to be exposed to construction noise for a long duration; therefore, any extended
8 disruption of normal activities is not expected. Provisions will be included in the plans and
9 specifications that require the contractor to make every reasonable effort to minimize construction
10 noise through abatement measures such as work-hour controls and proper maintenance of muffler
11 systems.

12
13 Although the proposed project is anticipated to cause increases in traffic noise levels at some
14 locations, noise abatement measures were not deemed to be reasonable and feasible. The proposed
15 project, therefore, is not anticipated to cause substantial impacts and is not anticipated to cause
16 indirect encroachment impacts.

17
18 A copy of this traffic noise analysis will be made available to local officials. On the date of approval of
19 this document (Date of Public Knowledge), FHWA and TxDOT are no longer responsible for providing
20 noise abatement for new development adjacent to the project.

21 5.15 Induced Growth

22 The preceding sections of this document have described the proposed project and its direct effects on
23 the environment. The Council on Environmental Quality (CEQ) defines direct effects as those effects
24 that are “*caused by the action and occur at the same time and place*” (40 CFR 1508.8, emphasis
25 added). Direct effects are predictable and are a direct result of the project.

26
27 In addition to direct effects, major transportation projects may also have indirect effects on land use
28 and the environment. As defined by the CEQ, indirect effects are “caused by an action and occur later
29 in time or farther removed in distance but are still reasonably foreseeable. Indirect effects may include
30 growth-inducing effects and other effects related to induced changes in the pattern of land use,
31 population density or growth rate, and related effects on air and water and other natural systems,
32 including ecosystems” (40 CFR 1508.8). This section describes the potential indirect induced growth
33 caused by the proposed project, utilizing guidance from TxDOT’s 2015 *Environmental Handbook:*
34 *Indirect Impacts Analysis*.

35 *No-Build Alternative*

36 The No-Build Alternative would not result in changes to the existing facility; therefore, no induced
37 growth impacts are anticipated.

38 *Build Alternative*

39
40 The *Induced Growth Indirect Impacts Decision Tree* provided in TxDOT’s Environmental Compliance
41 Toolkit was used to determine if indirect induced growth impacts analysis is required for the proposed
42 project. The following discussion presents information for the rationale that confirms that an indirect
43 induced growth analysis is not needed for the proposed project; therefore, no further indirect impacts
44 analysis is required.

45
46
47 *Question 1: Does the Purpose and Need include economic development, or is the project proposed to*
48 *serve a specific development:*

49
50 No. The purpose and need deals with safety, travel demand, and connectivity.

1 *Question 2: Are economic development or new opportunities for growth/development cited as*
2 *benefits of the project?*

3
4 No. There are no statements in technical reports associated with the project that connect the
5 project to the potential for economic development or growth. The need for the project is to
6 upgrade the current facility to meet future travel demand, to increase connectivity between
7 the cities of Longview and White Oak, and to increase safety by meeting current roadway
8 design standards and by enhancing pedestrian and bicycle facilities. The purpose of the project
9 is to provide improved connectivity by being able to satisfy increasing demand; improve safety;
10 and upgrade the facility to current design standards. Economic development and growth are
11 not mentioned as outcomes of the proposed project. The proposed project also does not serve
12 a particular development, and it aims at connecting two cities.

13
14 *Question 3: Is land in the project area available for development and/or redevelopment?*

15
16 Yes. The existing land use is largely comprised of single family homes (50 percent) and
17 vacant or agricultural land (29 percent) according to 2010 Longview MPO data. The majority
18 of vacant land adjacent to the proposed project is located west of Hawkins Creek. Based on
19 aerial imagery from ESRI dated 2017, there appear to be both single and multi-family
20 residential properties adjacent to the proposed project that were previously identified as
21 vacant or agricultural in the 2010 data. There are some vacant areas that could be developed
22 into other land uses adjacent to the proposed project.

23
24 *Question 4: Does the project add capacity?*

25
26 Yes. The project will widen the existing road from a two-lane facility to a four-lane facility with
27 a center turning lane.

28
29 *Question 5: Is the project located in a rural area outside of the MPO boundary?*

30
31 No. The project is fully located within the boundaries of the Longview MPO.

32
33 *Question 6: Does the project substantially increase access or mobility in the project area?*

34
35 No. An additional lane in each direction provides additional mobility to the project area. Access
36 will not be permanently impacted. The proposed project would not permanently change access
37 from the existing conditions. Access may temporarily change during construction, but it would
38 be restored after completing construction. The proposed project would add capacity, but the
39 added capacity is not considered a substantial increase in mobility because all 12
40 intersections along FM 2275 currently operate at an acceptable LOS, and only one intersection
41 is anticipated to operate in an unacceptable LOS (E or below) in the No Build scenario.

42 43 5.16 Cumulative Impacts

44 *No-Build Alternative*

45 The No-Build Alternative would not result in changes to the existing facility; therefore, no cumulative
46 impacts are anticipated.

1 *Build Alternative*

2 The following discussion summarizes the guidance questions and answers from TxDOT's 2014
3 *Cumulative Impacts Risk Assessment* to determine whether a cumulative impacts analysis is
4 warranted.

5

6 *Question 1: Will the project have substantial direct or indirect impacts on any resource?*

7 No. Substantial direct or indirect impacts are not anticipated. Technical analyses have been
8 conducted for the following environmental resources/issues: biological resources, water
9 resources, air quality, traffic noise, community impacts, cultural resources, and hazardous
10 materials.

11 Based on the outcome of the indirect impacts analysis, potential induced development is not
12 anticipated as a result of the proposed project.

13

14 *Question 2: Are any resources in the project area in poor or declining health?*

15 Yes. State-listed threatened species and SGCN may occur within the project area due to the
16 existence of potentially suitable habitat. No effects to federally-listed species are anticipated.
17 Refer to the **Biological Evaluation Form** and **Section 5.11.3** for detailed information regarding
18 state-listed species and habitat.

19

20 *Question 3: Will the project have any impact on a resource that is in poor or declining health?*

21 No. Impacts to state-listed threatened species or SGCNs would be a result of incidental
22 occurrence of individuals within the project area. Although no individuals were observed during
23 site visits of areas directly impacted by the proposed roadway improvements, the project area
24 contains potentially suitable habitat for nine state-listed species. Species-specific BMPs, in
25 accordance with the 2013 TxDOT-TPWD MOU, would be implemented and included in the EPIC
26 sheet. If any individuals of state-listed species are observed within the project area during
27 construction, care would be taken to avoid harming them. With the implementation of these
28 measures, the proposed project is anticipated to have no direct adverse impacts to state-listed
29 species.

30

31 The proposed project is expected to directly impact approximately 0.21 acre of riparian
32 vegetation; approximately 6.86 acres of disturbed prairie vegetation; approximately 18.57 acres
33 of mixed woodlands and forest vegetation; and approximately 53.12 acres of urban vegetation
34 within the proposed project area. None of these vegetation types are considered rare or
35 "important remnant vegetation" as mapped by the TCAP and these vegetation types are not
36 considered in poor or declining health due to the presence of adjacent undeveloped tracts of land
37 and due to the proximity of similar habitats within Gregg County. The impacts to riparian
38 vegetation are located at existing stream crossing where culverts would be extended and
39 drainage improvements would occur. These improvements would help stabilize the streams and
40 reduce downstream erosion. Furthermore, FM 2275 is classified as an urban minor arterial
41 roadway and lies within an already fragmented landscape caused by urbanization.

42

43 Summary and Conclusion

44 **Table 12** below provides additional information about the direct and indirect impacts on each resource
45 and the health of each resource. Based on the results of the risk assessment, supported by the
46 information presented in **Table 12** and in the technical reports prepared for the proposed project,
47 further cumulative impacts analysis is not required.

Table 12: Resource/Issues Considered for Cumulative Impacts Analysis

Subject Considered for Direct and Indirect Impacts	TxDOT/CEQ Criteria *			Is Resource Included in Cumulative Impacts Analysis?	Reason for Including or Excluding for Cumulative Impacts Analysis
	Would there be Direct and/or Indirect Impacts?	Would the Impacts be Considered Substantial?	Is Resource/ Issue at Risk or in Poor or Declining Health?		
ROW Displacements	Yes	No	No	No	No substantial direct and indirect impacts are anticipated; therefore, a cumulative analysis is not warranted.
Land Use	Yes	No	No	No	No substantial direct and indirect impacts are anticipated; therefore, a cumulative analysis is not warranted.
Prime Farmlands	Yes	No	No	No	No substantial direct and indirect impacts to prime farmlands are anticipated; therefore, a cumulative analysis is not warranted.
Socioeconomic Resources	Yes	No	No	No	No disproportionately high and adverse impacts to minority and/or low-income populations would result from the proposed project. No substantial direct and indirect impacts are anticipated; therefore, a cumulative analysis is not warranted.
Visual and Aesthetics	Yes	No	No	No	No substantial direct and indirect impacts are anticipated; therefore, a cumulative analysis is not warranted.
EJ/LEP Populations	No	No	No	No	No direct and indirect impacts are anticipated; therefore, a cumulative analysis is not warranted.
Historic Resources	No	No	No	No	No direct and indirect impacts are anticipated; therefore, a cumulative analysis is not warranted.
Archeological Resources	No	No	No	No	No direct and indirect impacts are anticipated; therefore, a cumulative analysis is not warranted.
Section 4(f)/ Section 6(f)	No	No	No	No	No direct and indirect impacts are anticipated; therefore, a cumulative analysis is not warranted.
Waters of the U.S., including Wetlands	Yes	No	No	No	It is anticipated that less than 0.10 acre of permanent fill impacts would occur at each single and complete crossing and the proposed design is anticipated to avoid the two-identified wetland features due to bridging of these areas; therefore, no significant impacts are anticipated and no cumulative impacts analysis is warranted.

Table 12: Resource/Issues Considered for Cumulative Impacts Analysis

Subject Considered for Direct and Indirect Impacts	TxDOT/CEQ Criteria *			Is Resource Included in Cumulative Impacts Analysis?	Reason for Including or Excluding for Cumulative Impacts Analysis
	Would there be Direct and/or Indirect Impacts?	Would the Impacts be Considered Substantial?	Is Resource/ Issue at Risk or in Poor or Declining Health?		
Floodplains	Yes	No	No	No	The proposed project would replace existing bridges and drainage structures to widen an existing roadway facility. Part of the Build Alternative would be constructed within the 100-year floodplain; however, the proposed project would not increase the base flood elevation nor violate applicable floodplain regulations; therefore, no significant impacts are anticipated and no cumulative impacts analysis is warranted.
Groundwater and Surface Waters	Yes	No	No	No	One water well would be directly impacted by the proposed project; however, it would need to be properly plugged in accordance with state statutes; therefore, no substantial impacts are anticipated and no cumulative impacts analysis is warranted.
Vegetation	Yes	No	No	No	Impacts to vegetation is anticipated and the project is being coordinated with TPWD; however, the impacts are considered not substantial and the resource is not in poor and declining health; therefore, no cumulative analysis is warranted.
Wildlife	Yes	No	No	No	Minor, temporary direct impacts are anticipated during construction of the proposed project, but wildlife would be expected to return to adjacent areas after construction is complete. Therefore, no substantial impacts are anticipated and a cumulative analysis is not warranted.
Threatened and Endangered Species	No	No	Yes	No	No direct impacts to federally-listed and state-listed species are anticipated from the proposed project; therefore, no cumulative impacts analysis is warranted.
Air Quality	Yes	No	No	No	The direct impacts to air quality are not anticipated to be substantial, the resource is not in poor and declining health, and the project area is within Gregg County which is in an area in attainment for all NAAQs; therefore, no cumulative impacts analysis is warranted.

Table 12: Resource/Issues Considered for Cumulative Impacts Analysis

Subject Considered for Direct and Indirect Impacts	TxDOT/CEQ Criteria *			Is Resource Included in Cumulative Impacts Analysis?	Reason for Including or Excluding for Cumulative Impacts Analysis
	Would there be Direct and/or Indirect Impacts?	Would the Impacts be Considered Substantial?	Is Resource/ Issue at Risk or in Poor or Declining Health?		
Noise and Vibration	Yes	No	No	No	Traffic noise impacts are anticipated at one church and three residential receivers; however, the impacts are not considered substantial and traffic noise is not considered a poor and in declining health resource; therefore, a cumulative impacts analysis is not warranted.
Hazardous Materials	No	No	No	No	No direct and indirect impacts are anticipated; therefore, a cumulative analysis is not warranted.

1 Source: Project team, April 2018.

2 * In accordance with TxDOT and CEQ selection criteria for limiting the scope of cumulative impacts analyses.

1 5.17 Construction Phase Impacts

2 *No-Build Alternative*

3 The No-Build Alternative would not result in any construction phase impacts.

4

5 *Build Alternative*

6 Temporary congestion may occur as a result of project construction, phasing and traffic control.

7 Access to parcels in the project vicinity would be maintained during all phases of construction. All

8 practicable steps would be taken to minimize the inconvenience to drivers using the intersecting

9 roadways during the construction phase(s). People living and working in the immediate area of the
10 proposed project may experience noise and dust due to the construction activities.

11

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

20

21 **6.0 AGENCY COORDINATION**

22 TxDOT has initiated early coordination with TPWD due to the exceedance of habitat type acreage
23 thresholds in the Programmatic Agreement. Other agency coordination (e.g. USFWS, USACE, NRCS,
24 TCEQ, THC/SHPO or federally recognized tribes) is not required at this time.

25

26 This EA will be made available to the local MPO and for public review following approval for further
27 circulation from TxDOT- ENV Affairs Division.

28 **7.0 PUBLIC INVOLVEMENT**

29 Two open house style public meetings were held throughout the planning process for the proposed
30 reconstruction of FM 2275.

31

32 The first public meeting was held on Tuesday, June 28, 2016 from 5:00 to 7:00 pm at the Spring Hill
33 Junior High gymnasium. Property and business owners, who potentially would be affected by the
34 project, and the general public were invited to evaluate the three build alternatives and no-build
35 alternative and respond with comments and concerns. The meeting was attended by 47 public
36 participants or stakeholders and 28 comments were received. Additionally, 6 TxDOT employees, 4
37 consultant staff, one representative from the Longview MPO and three representatives from the City
38 of Longview were in attendance.

39

40 The second public meeting was on Thursday, November 17, 2016 from 5:00 to 7:00 pm at the Spring
41 Hill Junior High gymnasium. Property and business owners, who potentially would be affected by the
42 project, and the general public were invited to evaluate the Preferred Alternative, a revised build
43 alternative (combination of two previous build alternatives) and respond with comments and concerns.

44

45 The two public meetings were conducted in an open-house format; no formal presentations were given.
46 The meetings were intended to provide attendees with an opportunity to view detailed plans and

1 environmental constraints, discuss the project with TxDOT staff and to receive updates on the project
2 status and schedule. The meetings were also intended to gather public comment and input on the
3 project. No requests for special accommodations were received by the District in advance of the
4 meeting. Notices providing information on the project and the date and time of the meeting were sent
5 to land owners with property adjacent to the project area. Letters were sent to the relevant elected
6 officials and representatives for the project area. After each public meeting persons who made written
7 comments and/or had questions about the project received a letter from the Tyler District that either
8 addressed their comment or answered their question(s) about the project.
9

10 Comments received following the first public meeting generally stated the property owner's preference
11 of alternative and also expressed concerns over right-of-way (ROW) impacts related to the three build
12 alternatives. Alternative 2 received the most support from the public. These comments prompted
13 TxDOT to create a fourth build alternative that became a hybrid of Alternatives 2 and 3 as described
14 in Section 4.1.
15

16 The revised preferred alternative was presented to the public at the second public meeting held on
17 November 17, 2016. Seventeen comments were received with half in support of the project and most
18 concerns being related to ROW impacts. Further evaluation of the preferred alternative presented at
19 the second public meeting determined that these proposed revisions would have required extensive
20 ROW impacts on both the north and south side of the proposed roadway to tie the driveways to the
21 new pavement edges while meeting driveway grade requirements. Using the required driveway grades
22 removed access from seven (7) homes on both sides of the proposed roadway.
23

24 To reduce impacts, several design options were evaluated including the removal of the on-street
25 bicycle lanes. Based on several meetings with the City of Longview, it was decided that the proposed
26 bicycle lanes, off-street shared use path, and sidewalks from Fenton Road east to SH 300 were all
27 necessary to serve the nearby schools and park facilities and meet the purpose and need. The
28 sidewalks and bike lanes provide a way to access these destinations safely without direct interaction
29 with vehicular traffic.
30

31 It was determined that shifting the proposed ROW to the south would meet the purpose and need and
32 reduce overall displacements from 34 to 31. Additionally, shifting the ROW south also allowed for the
33 removal of reverse curves to further improve safety on the roadway.
34

35 This revised alternative was presented on September 18, 2018 at a meeting of affected property
36 owners (MAPO) for those impacted by the changes. Twenty-five property owners attended, and two
37 formal comments were received at this MAPO in support of the proposed project.
38

39 The opportunity to request for language accommodations and translation was provided and published
40 in legal notices and property owner notifications. The November 2016 public meeting included notices
41 in both English and Spanish. No translating requests were made for the public meeting held in
42 November 2016 or the MAPO's held on September 18, 2018. Public hearing translation services
43 would be provided for requests made within seven days of the hearing. Copies of the public
44 involvement materials are available in TxDOT's Public Involvement section and available at the TxDOT
45 Tyler District Office. A public hearing would be held following approval of the draft EA.

46 **8.0 ENVIRONMENTAL PERMITS, ISSUES AND COMMITMENTS**

47 All project-specific commitments and conditions of approval, including resource agency permitting
48 compliance and monitoring requirements, would be incorporated in the project plan for the proposed
49 project. These project-specific commitments and conditions for approval, as further described below,

1 may vary depending on the project's final design and construction. If required, mitigation monitoring
2 would be conducted by TxDOT and other Federal, state, and local agencies to ensure compliance.
3

4 This section summarizes the elements that constitute the Environmental Permits, Impacts and
5 Commitments (EPIC) sheet. The EPIC sheet, found in the Environmental Compliance Oversight System,
6 documents and communicates permit issues and environmental commitments that must be
7 incorporated into the Plans, Specifications, and Estimates design for the proposed project. The
8 permits, impacts and commitments relevant to the proposed project are as follows:
9

- 10 • It is currently anticipated that less than 0.10 acre of permanent fill impacts would occur at
11 each single and complete crossing, so permanent and temporary impacts would be authorized
12 by a NWP 14, likely with no mitigation requirements. A PCN may be required because there are
13 potential wetland impacts.
- 14 • TxDOT would comply with TCEQ's TPDES CGP. A SW3P would be implemented and a
15 construction site notice would be posted on the construction site. A NOI would be required.
- 16 • Permanent soil erosion control features would be constructed as soon as feasible during the
17 early stages of construction through proper sodding and/or seeding techniques. Disturbed
18 areas would be restored and stabilized as soon as the construction schedule permits and
19 temporary sodding would be considered where large areas of disturbed ground would be left
20 bare for a considerable length of time.
- 21 • The Section 401 Certification requirements for NWP 14 would be met by implementing
22 approved erosion control, sedimentation control, and post-construction TSS control BMPs from
23 the TCEQ's 401 Water Quality Certification Conditions for NWPs. The implementation of BMPs
24 would minimize water quality impacts during and after construction.
- 25 • In the *Best Management Practices Programmatic Agreement between TxDOT and TPWD*
26 *Under the 2013 MOU*, BMPs have been defined and relevant BMPs will be implemented by
27 TxDOT in order to minimize impacts to state-listed species and SGCNs (TPWD 2013).
28 **Table 13** lists those BMPs specific to species potentially impacted by the proposed project.
- 29 • In accordance with EO 13112 on Invasive Species and the Executive Memorandum on
30 Beneficial Landscaping, seeding and replanting with TxDOT-approved seeding specifications
31 would be done where possible. Moreover, abutting turf grasses within the ROW are expected
32 to re-establish throughout the project length. Soil disturbance would be minimized to ensure
33 that invasive species would not become established in the ROW.
- 34 • In the event that migratory birds are encountered on-site during project construction, TxDOT
35 will take all appropriate actions to prevent the take of migratory birds, their active nests, eggs,
36 or young by the use of proper phasing of the project or other appropriate actions to include:
 - 37 ○ No active migratory bird nests (nests containing eggs and/or young) will be removed
38 or destroyed at any time of the year.
 - 39 ○ No colonial nests (swallows, for example) on or in structures will be removed until all
40 nests in the colony become inactive.
 - 41 ○ Measures, to the extent practicable, will be used to prevent or discourage migratory
42 birds from building nests within portions of the project area planned for construction.
 - 43 ○ Inactive nests will be removed from the project area to minimize the potential for reuse
44 by migratory birds.
 - 45 ○ Construction or demolition activities will be scheduled outside the typical nesting
46 season (February 15 to October 1), and will comply with the previously listed prohibitive
47 provisions of the MBTA, which apply year-round.

48 A survey would be conducted prior to construction.

- 49 • In the event that unanticipated archeological deposits are encountered during construction,
50 work in the immediate area will cease, and TxDOT archeological staff will be contacted to
51 initiate post-review discovery procedures.

- 1 • Any unanticipated hazardous materials and/or petroleum contamination encountered during
- 2 construction would be handled according to applicable Federal and state regulations per
- 3 TxDOT Standard Specifications. No unresolved hazardous materials situations for which TxDOT
- 4 would be responsible are anticipated with respect to the project. Any adjustments to pipelines
- 5 or potential utilities would use standard techniques. The contractor would take appropriate
- 6 measures to prevent, minimize, and control the spill of hazardous materials in the construction
- 7 staging area. The use of construction equipment within sensitive areas would be minimized or
- 8 eliminated entirely. All construction materials used for this project would be removed as soon
- 9 as work schedules permit.
- 10 • Coordination with the city of Longview for MS4 permit requirements will occur during
- 11 construction of the project.
- 12 • Notify the local Floodplain Administrator as necessary to comply with all applicable rules and
- 13 regulations regarding the hydraulic design of the project.
- 14

Table 13: Species-Specific BMPs to be Implemented

TARGET SPECIES	BMP TYPE	BMP
All Avian Species (Wood Stork)	Bird BMPs	<ul style="list-style-type: none"> - Not disturbing, destroying, or removing active nests, including ground nesting birds, during the nesting season; - Avoiding the removal of unoccupied, inactive nests, as practicable; - Preventing the establishment of active nests during the nesting season on TxDOT owned and operated facilities and structures proposed for replacement or repair; - Not collecting, capturing, relocating, or transporting birds, eggs, young, or active nests without a permit.
Southeastern Myotis Bat	Bridge Bat BMPs:	<ul style="list-style-type: none"> - Habitat assessment by a qualified biologist to determine if bats are present; - If bats are present take appropriate measures as practicable to ensure that bats are not harmed such as exclusion or timing activities. For maternity colonies, exclusion activities should be timed to avoid separating lactating females from nursing pups; - If structures used by bats are removed as a result of construction, replacement structures should incorporate bat-friendly design, or artificial roosts should be constructed to replace these features as practicable.
Rafinesque's Big-eared Bat	Tree Bat BMPs:	<ul style="list-style-type: none"> - Large hollow trees should be surveyed for maternity colonies and, if found, should not be disturbed until after the pups fledge.
Creek Chubsucker	Fish BMPs:	<ul style="list-style-type: none"> - For projects within the range of a SGCN or State-listed fish, and work is in the water, TPWD coordination is required.
Northern Scarlet Snake, Timber Rattlesnake		<ul style="list-style-type: none"> - Contractors will be advised of potential occurrence in the project area, and to avoid harming the species if encountered.

Table 13: Species-Specific BMPs to be Implemented

TARGET SPECIES	BMP TYPE	BMP
Plains Spotted Skunk		- Contractors will be advised of potential occurrence in the project area, and to avoid harming the species if encountered, and to avoid unnecessary impacts to dens.
Louisiana pigtoe, Southern hickorynut, Texas heelsplitter	Mussel BMPs	- When work is in the water, survey project footprints for state listed species where appropriate habitat exists; - When work is in the water and mussels are discovered during surveys, relocate state listed and SGCN mussels under TPWD permit and implement Water Quality BMPs; - When work is adjacent to the water, Water Quality BMPs implemented as part of the SWPPP for a construction permit or any conditions of the 401 water quality certification for the project will be implemented.

1 Source: FM 2275 Biological Evaluation, TxDOT Form 320.01.FRM

2 **9.0 CONCLUSION**

3 The No-Build Alternative would avoid the direct impacts associated with the Build Alternative;
 4 however, it would not address the purpose and need for the proposed project. The Build Alternative is
 5 the Recommended Alternative, as it is responsive to the needs for the improved connectivity between
 6 the cities of Longview and White Oak by providing a highway that will adequately satisfy increase traffic
 7 demand based on projected increases in population and traffic, Additionally, upgrades FM 2275 to
 8 current design standards to improve safety on the roadway and provides satisfactory accommodations
 9 for vehicles, pedestrians, and cyclists.

10
 11 The construction of the proposed transportation improvements would improve mobility by providing
 12 additional capacity along FM 2275. The proposed Build Alternative is compatible with local and
 13 regional planning. The Build Alternative has been incorporated into the regional planning documents
 14 of the project area.

15
 16 The Build Alternative design described herein is the result of efforts to avoid or minimize social,
 17 economic, and environmental impacts. The Build Alternative incorporates results from consultation
 18 and coordination with public officials and citizens regarding potential impacts and efforts to avoid or
 19 minimize such impacts where practicable.

20
 21 The engineering, social, economic, and environmental investigations conducted thus far indicate that
 22 the proposed project would result in no significant impacts to the quality of the human or natural
 23 environment. Therefore, a Finding of No Significant Impact is anticipated for this project.

24

1 10.0 REFERENCES

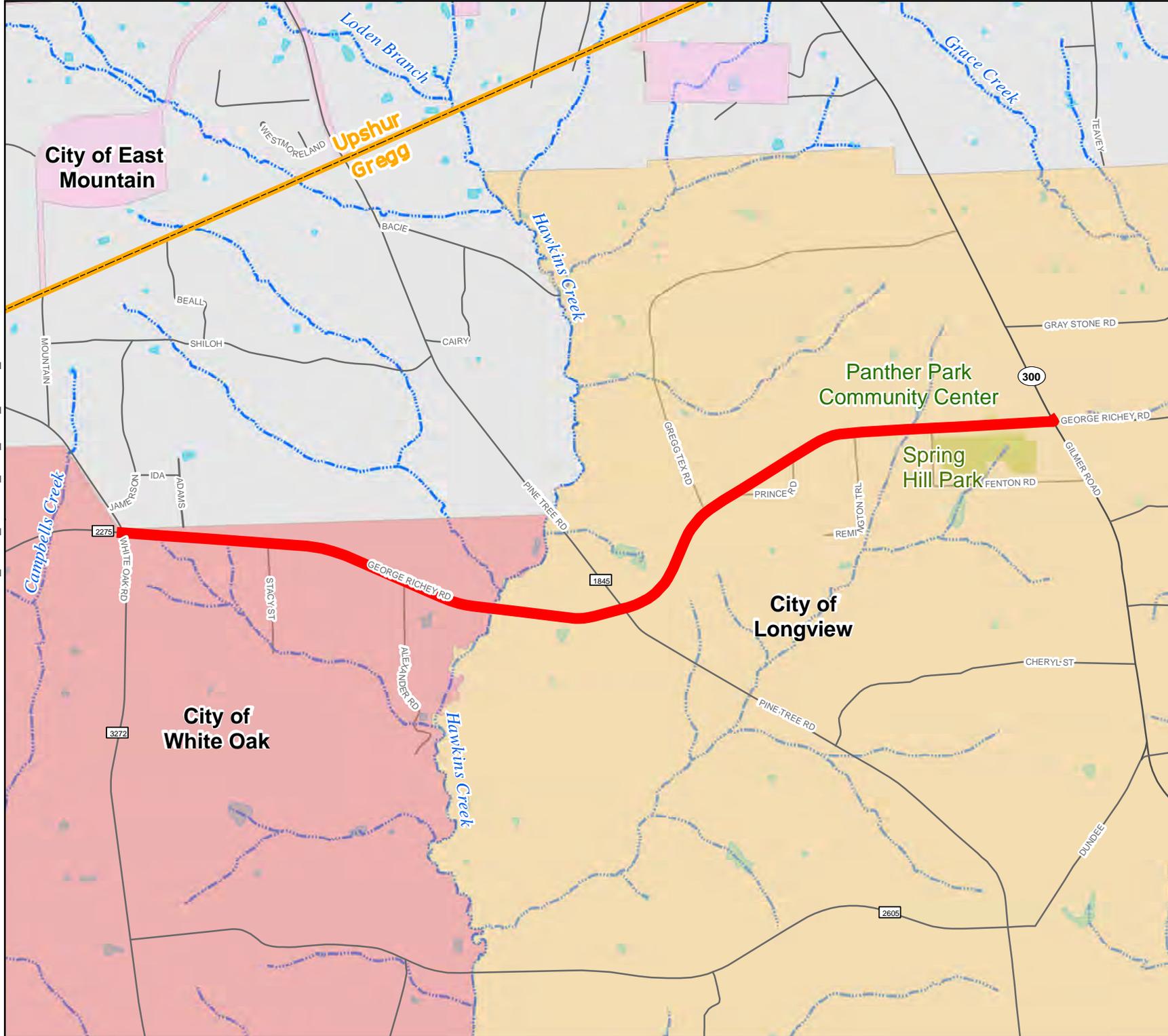
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Appendix A

Project Location Maps

- A-1: Project Location Map
- A-2: USGS Topographic Maps
- A-3: FEMA Floodplain, Soils and NWI Maps
- A-4: Regional Transportation Network
- A-5: Land Use Map



Legend

- Project Limits

Roadway Network

- State Highway
- FM
- Local

Boundaries

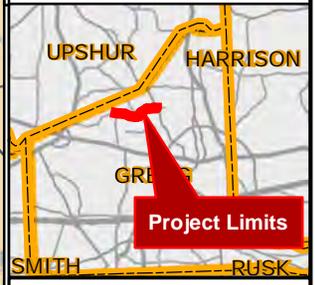
- Parks
- City of East Mountain
- City of Longview
- City White Oak
- County

Water

- River or Stream
- Waterbody

N

0 0.125 0.25 0.5 Miles



FM 2275
From FM 3272 to SH 300
CSJ's: 2158-01-019 & 2158-01-020

A-1:
Project Location
Map

November 2018

Legend

— Proposed ROW



0 0.05 0.1 0.2 Miles

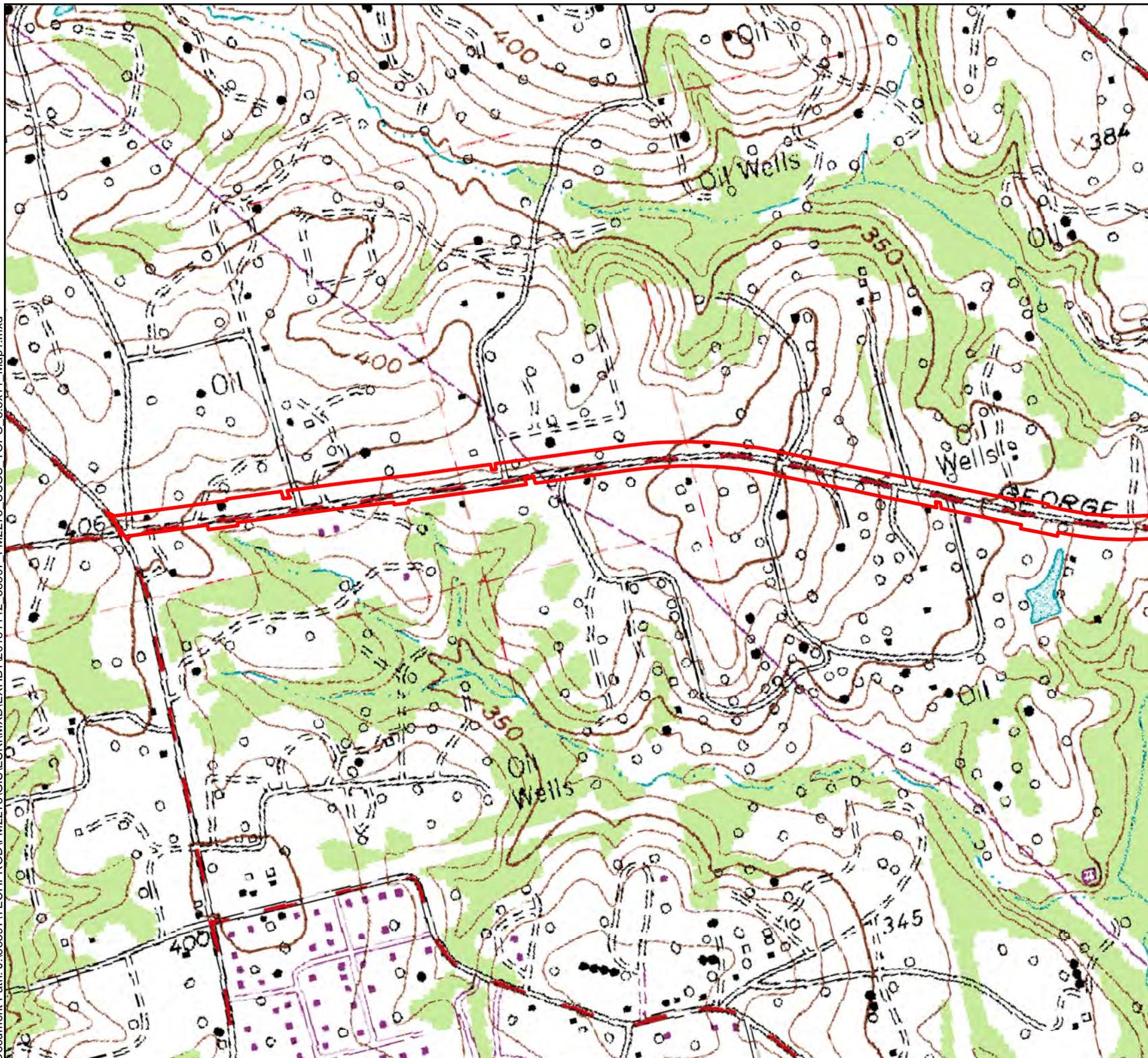


FM 2275
From FM 3272 to SH 300
CSJ's: 2158-01-019 & 2158-01-020

A-2: Topographic Map

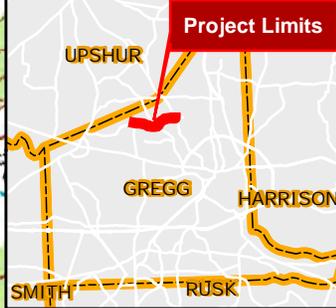
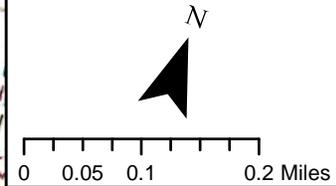
Sheet 1 of 3
November 2018

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Legend

— Proposed ROW

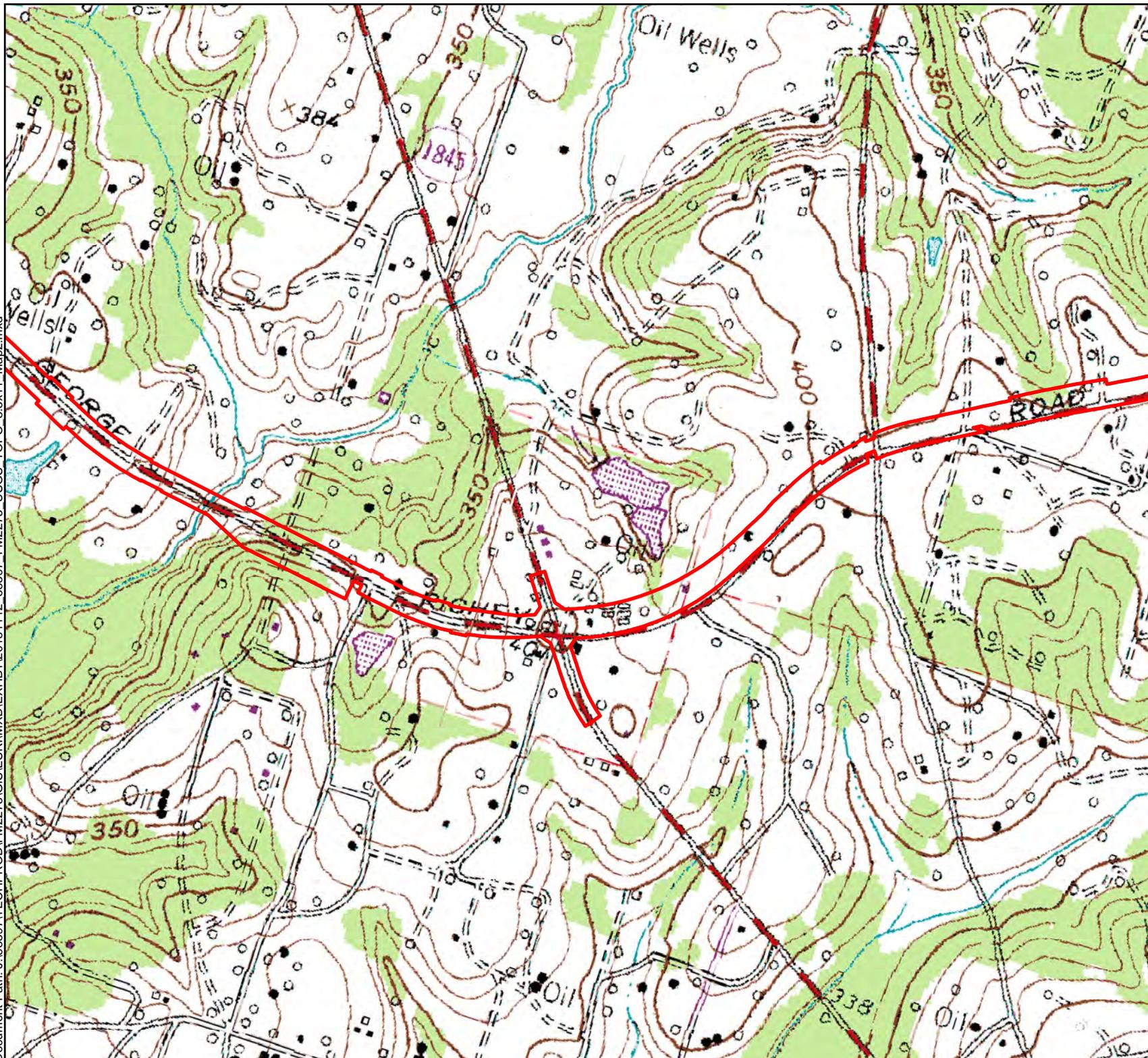


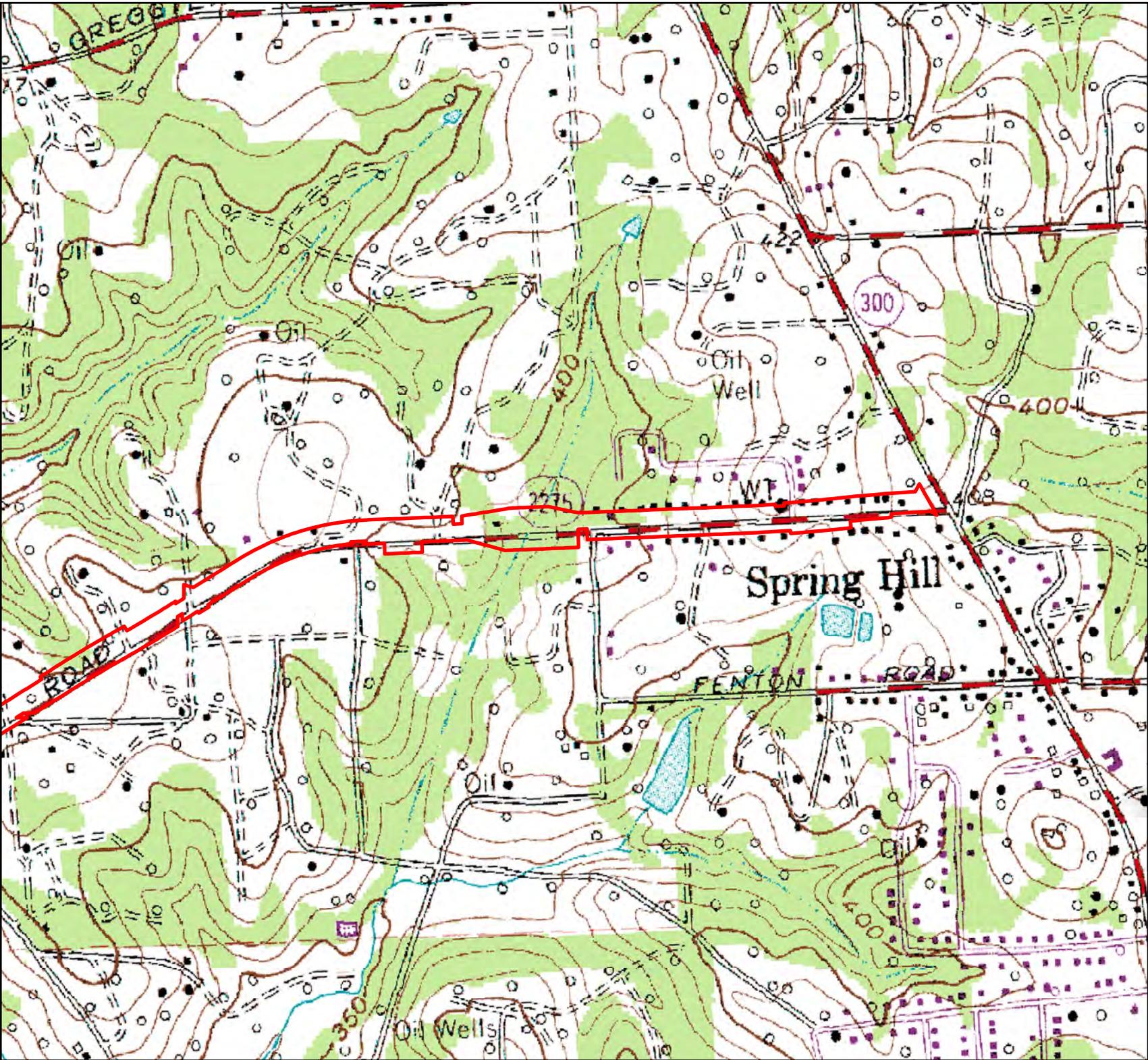
FM 2275
From FM 3272 to SH 300
CSJ's: 2158-01-019 & 2158-01-020

A-2: Topographic Map

Sheet 2 of 3
November 2018

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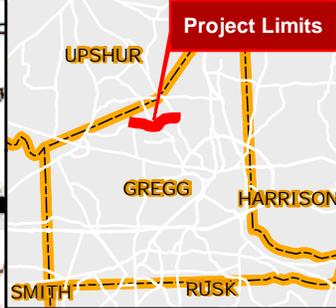
Legend

— Proposed ROW

N



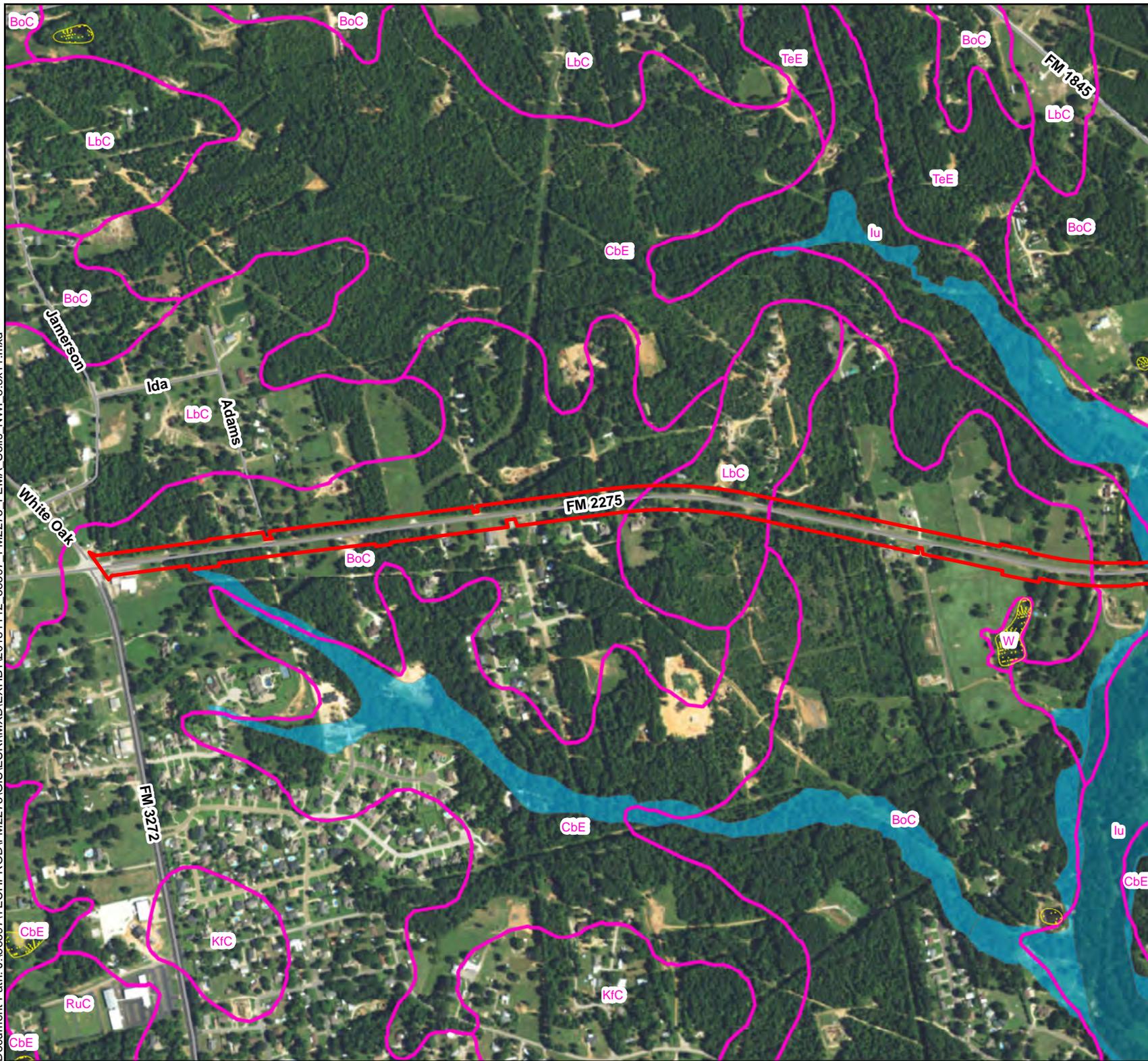
0 0.05 0.1 0.2 Miles



FM 2275
 From FM 3272 to SH 300
 CSJ's: 2158-01-019 & 2158-01-020

A-2: Topographic Map

Sheet 3 of 3
 November 2018



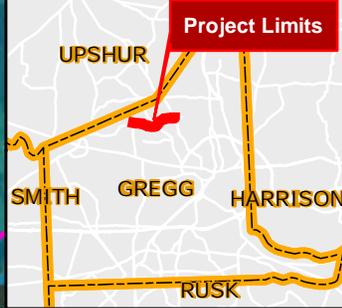
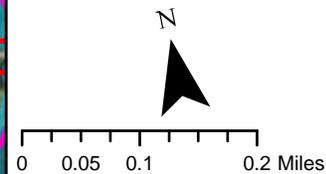
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FEMA Floodzone

- Floodway
- 100 Year
- 500 Year

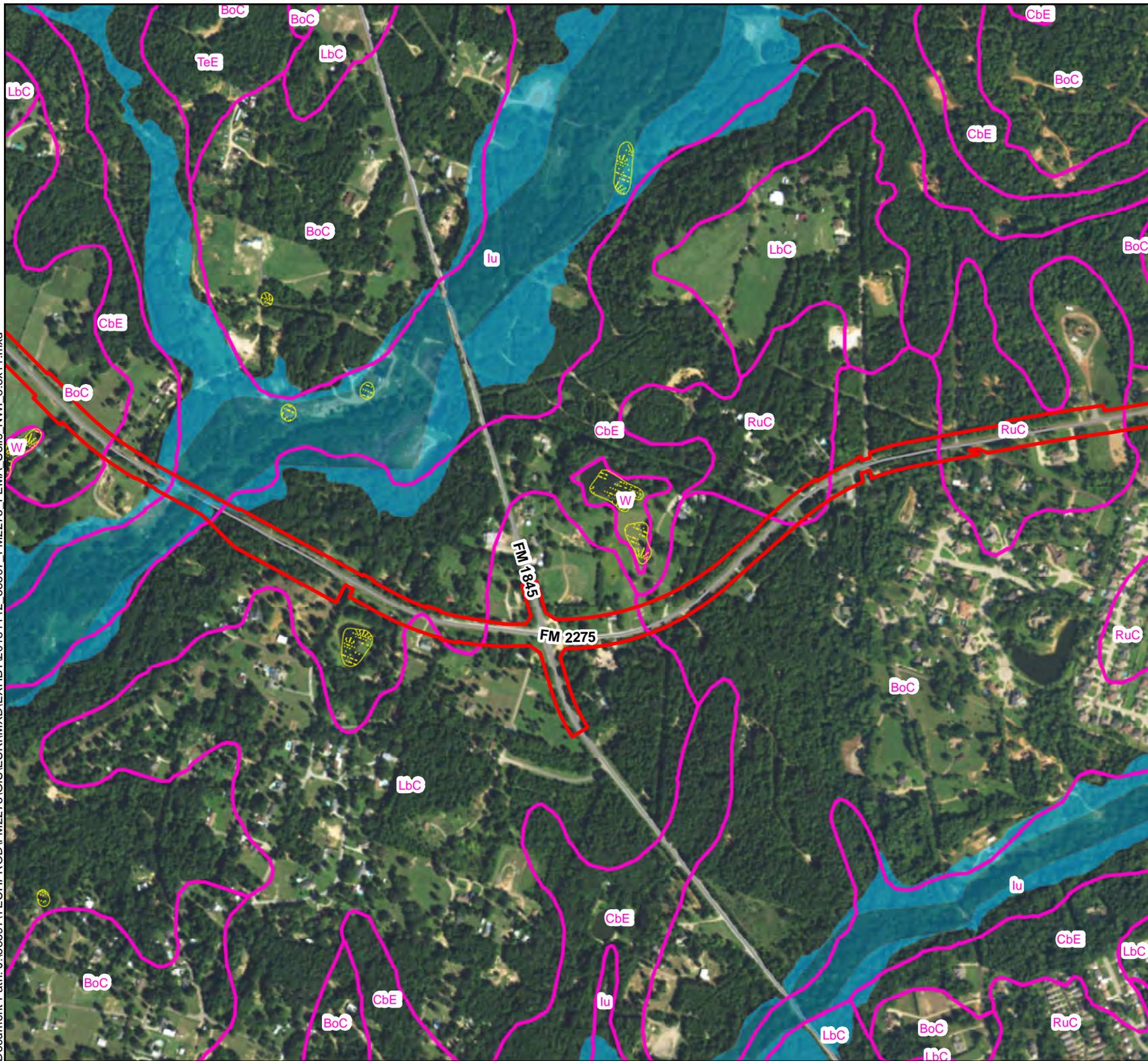
- Soils
- NWI

- Proposed ROW
- Roads



FM 2275
From FM 3272 to SH 300
CSJ's: 2158-01-019 & 2158-01-020

A-3: FEMA Floodplain, Soils and NWI



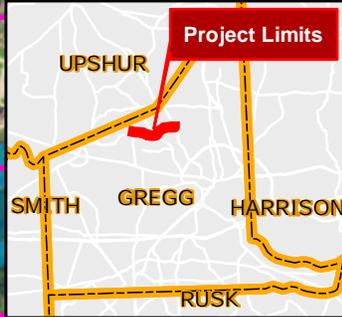
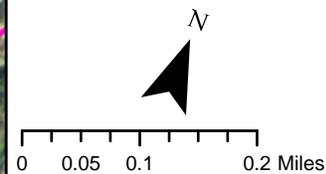
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FEMA Floodzone

- Floodway
- 100 Year
- 500 Year

- Soils
- NWI

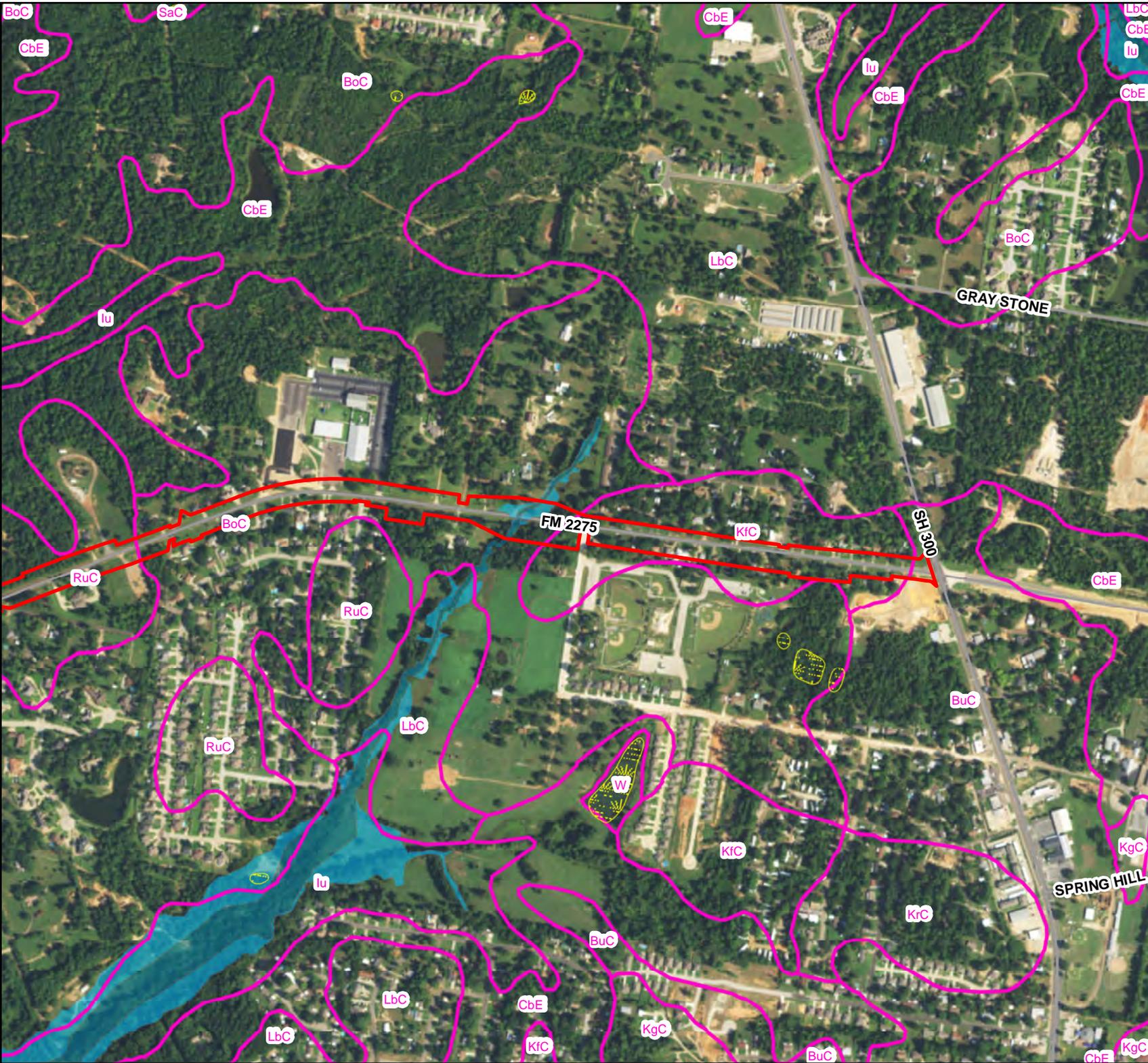
- Proposed ROW
- Roads



FM 2275
From FM 3272 to SH 300
CSJ's: 2158-01-019 & 2158-01-020

A-3: FEMA Floodplain, Soils and NWI

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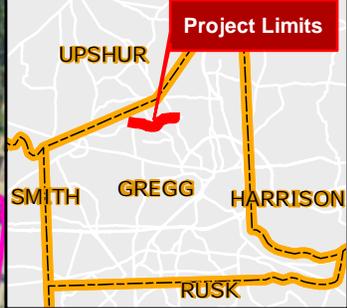
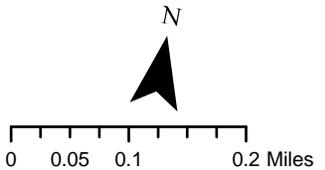
Legend

FEMA Floodzone

-  Floodway
-  100 Year
-  500 Year

-  Soils
-  NWI

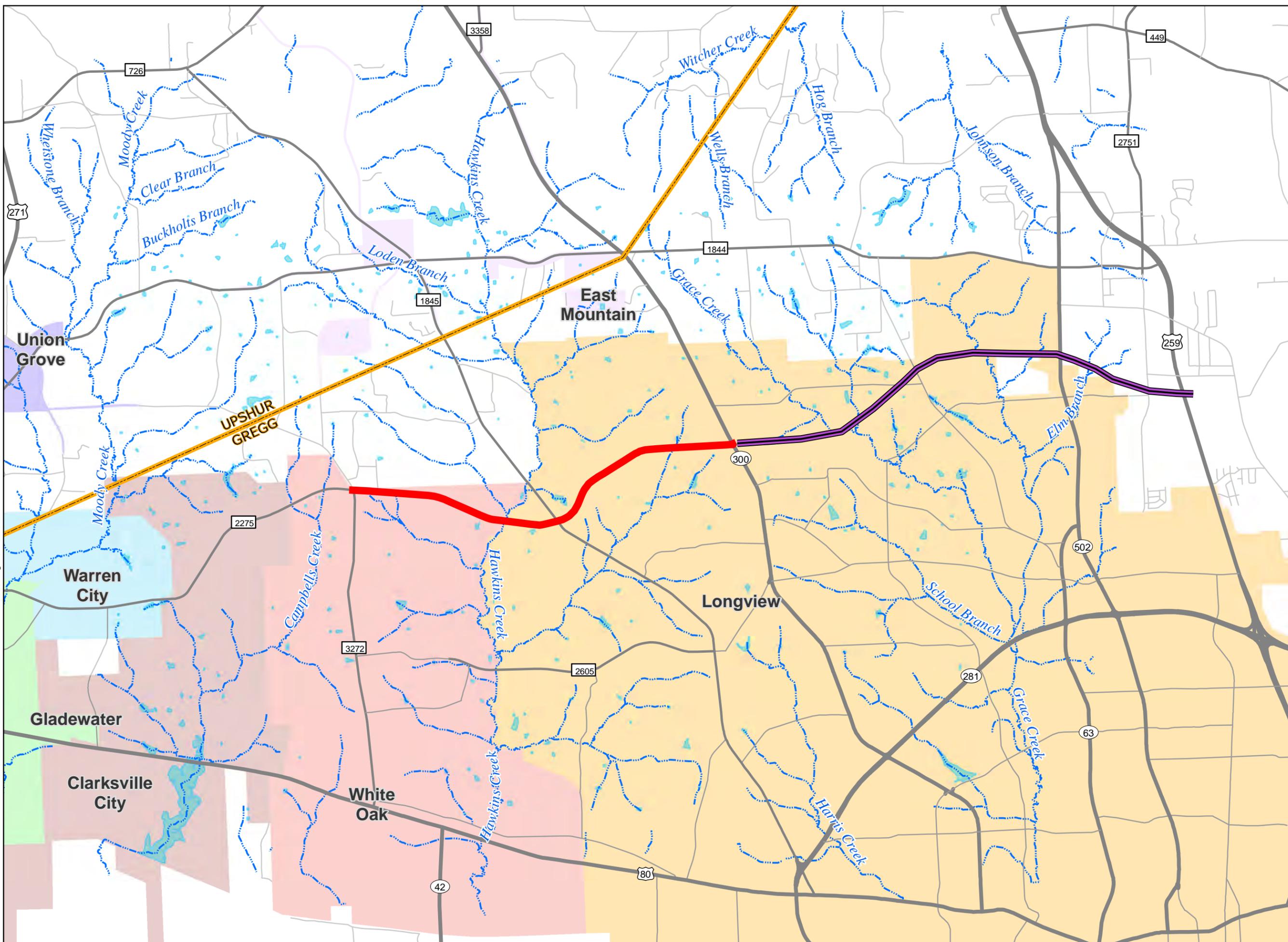
-  Proposed ROW
-  Roads



FM 2275
 From FM 3272 to SH 300
 CSJ's: 2158-01-019 & 2158-01-020

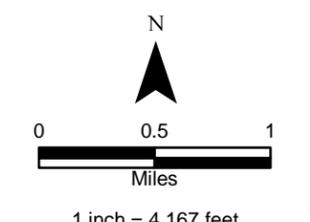
A-3: FEMA Floodplain, Soils and NWI

Document Path: J:\58597\TECH\PROD\FM2275\GIS\ESRIMXD\EXHBT\58597_FM2275_SAB_Regional_11x17.mxd



Legend

- Project Limits
- Roadway Network**
 - Proposed George Richey Road Extension
 - US Highway
 - State Highway
 - FM
 - Local
- Boundaries**
 - Clarksville City
 - City of Gladewater
 - City of Union Grove
 - Warren City
 - City of East Mountain
 - City of Longview
 - City of White Oak
 - County Boundary
- Water**
 - River or Stream
 - Waterbody



FM 2275:
FM 3272 to SH 300
CSJ: 2158-01-019 & 2158-01-020

A-4

**Regional
Transportation Network**

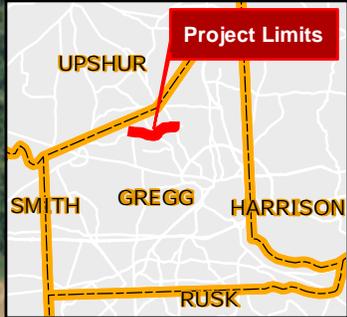
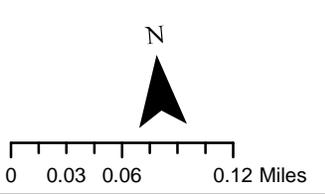
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Legend

Land Use 2010

- Other
- Commercial
- Multi-Family
- Office
- Park
- General Retail
- Residential - Low
- Single Family
- Vacant/Agriculture
- Proposed ROW
- Roads



FM 2275
 From FM 3272 to SH 300
 CSJ's: 2158-01-019 & 2158-01-020

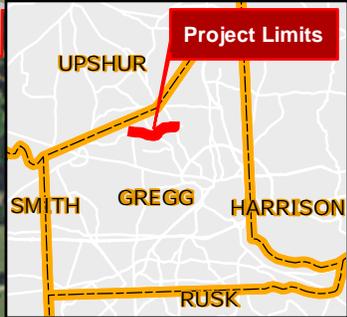
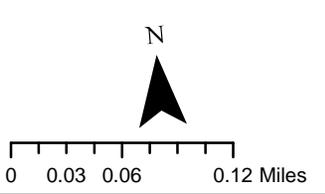
**Exhibit A-5:
 Land Use**



Legend

Land Use 2010

- Other
- Commercial
- Multi-Family
- Office
- Park
- General Retail
- Residential - Low
- Single Family
- Vacant/Agriculture
- Proposed ROW
- Roads



FM 2275
From FM 3272 to SH 300
CSJ's: 2158-01-019 & 2158-01-020

**Exhibit A-5:
Land Use**



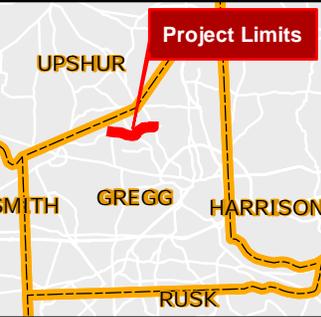
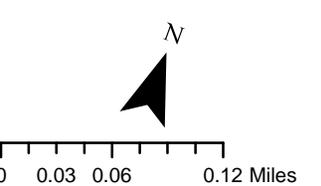
Legend

Land Use 2010

- Other
- Commercial
- Multi-Family
- Office
- Park
- General Retail
- Residential - Low
- Single Family
- Vacant/Agriculture

Proposed ROW

Roads



FM 2275
From FM 3272 to SH 300
CSJ's: 2158-01-019 & 2158-01-020

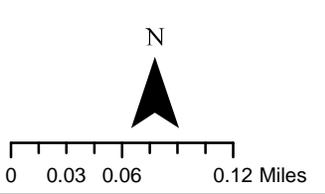
Exhibit A-5: Land Use



Legend

Land Use 2010

- Other
- Commercial
- Multi-Family
- Office
- Park
- General Retail
- Residential - Low
- Single Family
- Vacant/Agriculture
- Proposed ROW
- Roads



FM 2275
From FM 3272 to SH 300
CSJ's: 2158-01-019 & 2158-01-020

Exhibit A-5: Land Use



GRAYSTONE

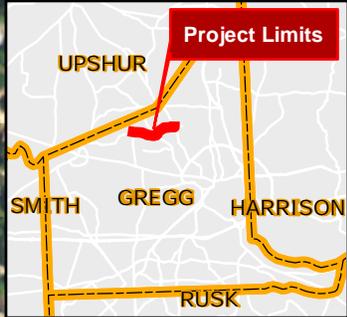
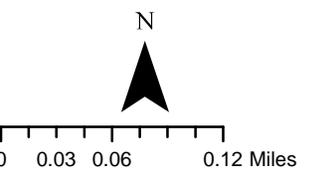
SH 300

FM 2275

Legend

Land Use 2010

- Other
- Commercial
- Multi-Family
- Office
- Park
- General Retail
- Residential - Low
- Single Family
- Vacant/Agriculture
- Proposed ROW
- Roads



FM 2275
From FM 3272 to SH 300
CSJ's: 2158-01-019 & 2158-01-020

**Exhibit A-5:
Land Use**

Appendix B

Project Photographs



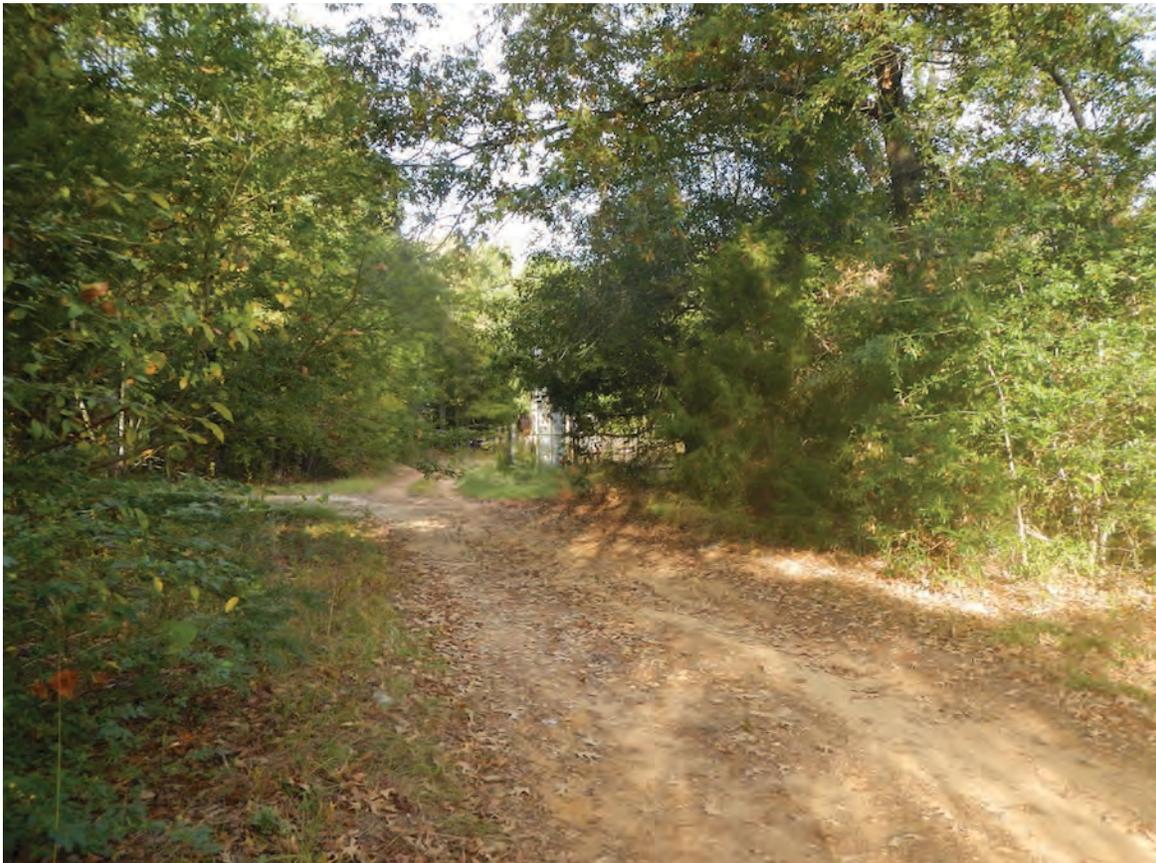
1. FRSTX, PST. Facing East.



2. Plugged Oil Well. Facing Northeast.



3. Abandoned Structure. Facing Northwest.



4. Oil Tank. Facing North.



5. Tank Farm. Facing North.



6. Pipeline and Damaged Culvert. Facing West.



7. Gas Pipeline and Warning Sign. Facing North.



8. Valve Assembly and Warning Sign. Facing South.



9. Gas Pipeline and Warning Sign. Facing North.



10. Gas Well and Warning Sign. Facing North.



11. Easement Adams Rd. Facing North.



12. Gas Well. Facing South.



13. Valve Assembly. Facing Southeast.



14. Tank Farm. Facing North.



15. Pump Jack. Facing Northeast.



16. Oil Well. Facing South.



17. Pump Jack. Facing North.



18. Oil Well. Facing North.



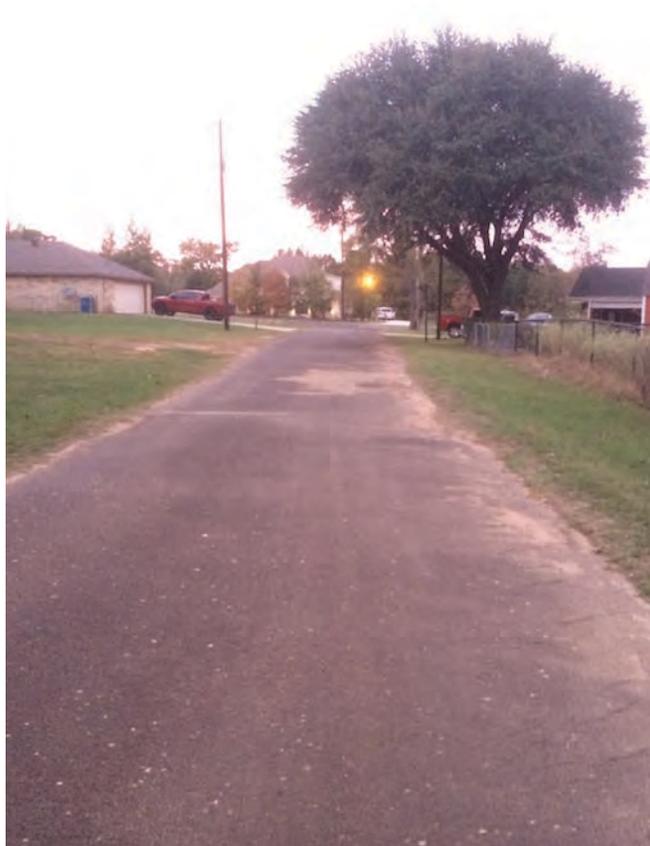
19. Plugged Oil Well. Facing South.



20. Plugged Oil Well. Facing South.



21. Oil Well. Facing South.



22. Easement Alexander Rd. Facing Northwest.



23. Tank Farm. Facing Southeast.



24. Hawkins Creek Bridge. Facing East.



25. Oil Well. Facing Southeast.



26. Valve Assembly and Warning Sign. Facing South.



27. Tank Farm. Facing Northeast.



28. Gas Pipeline and Warning Sign. Facing West.



29. Valve Assembly, Gas Pipeline and Warning Sign. Facing North.



30. Easement Pine Tree Rd North. Facing South.



31. Abandoned House. Facing South.



32. Oil Well. Facing West.



33. Gas Pipeline and Warning Sign. Facing South.



34. Tank Farm. Facing Northwest.



35. Easement Greggtx Rd South. Facing North.



36. Easement Greggtx Rd North. Facing South.



37. Easement Jackson Rd. Facing North.



38. Gas Pipeline and Warning Sign. Facing North.



39. Gas Well. Facing Southeast.



40. Easement Remington Trail. Facing North.



41. New Beginnings Baptist Church Entrance. Facing Northwest.



42. Oil Sheen and Pilelines Hawkins Green Tributary. Facing Southwest.



43. Easement Fenton Rd. Facing North.



44. Easement Lansford St. Facing North.



45. Service Station (under construction). Facing North.



46. ERNSTX. Facing Northwest.

Appendix C

Preferred Alternative Schematic

SCHEMATIC LAYOUT
GREGG COUNTY
FM 2275
FROM: FM 3272 (W)
TO: SH 300 (E)

Texas Department of Transportation
TYLER DISTRICT
DISTRICT ENGINEER: GLENN H. GREEN, P.E.

DESIGN SPEED: 55 MPH
FUNCTIONAL CLASSIFICATION: RURAL MINOR ARTERIAL ROAD
ROADWAY: FM2275 FROM FM 3272 TO FM 1845, FM1845 FROM FM 1845 TO SH 300

DATE: 11/28/2018
REVISIONS: APPROVED

PLAN LEGEND

PROPOSED CENTERLINE
MAIN LANE BRIDGES
PROPOSED WALLS
DRIVEWAYS
PROPOSED CROSS CULVERT
PROPOSED ROW
PROPERTY LINE
EXISTING CENTERLINE
EXISTING ROW
EXISTING GAS LINE
EXISTING WATER LINE
EXISTING WASTEWATER LINE
EXISTING FORCE MAIN
EXISTING OVERHEAD UTILITY
EXISTING TELEPHONE LINE
EXISTING FIBER OPTIC LINE
EXISTING CABLE TELEVISION LINE

ACTIVE WELL
INACTIVE WELL
WATER FLOW DIRECTION
PLANIMETRIC
EXISTING LANE DIRECTIONAL INDICATOR
PROPOSED LANE DIRECTIONAL INDICATOR

PROPOSED ROADWAY
PROPOSED BRIDGE
PROPOSED DRIVEWAY
PROPOSED SIDEWALK/SHARED USE PATH
IMPACTED STRUCTURES

PROP. POL. & MAINLANE
EXISTING GROUND & POL
100' W.P.A.S.E.

VICINITY MAP

0 50 100 200
HORIZ. SCALE 1" = 100'
0 5 10 20
VERT. SCALE 1" = 10'

NOT A BIDDING DOCUMENT
DATE: 11/28/2018
HNTB FIRM NO. 422

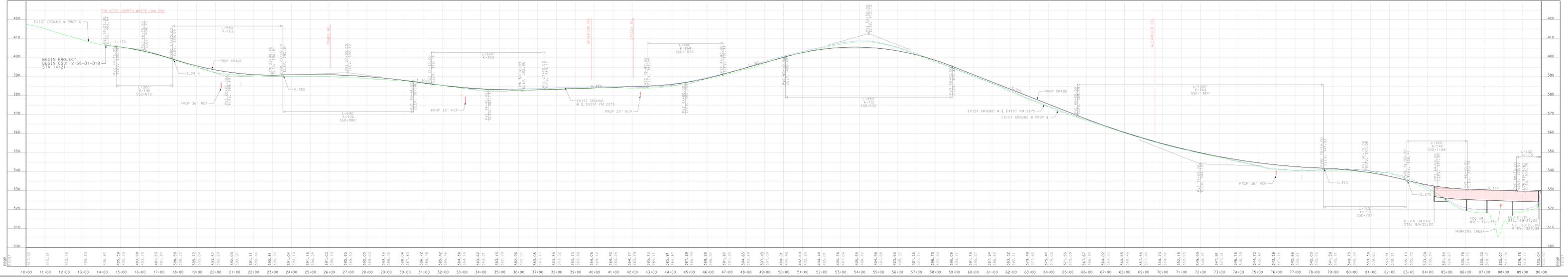
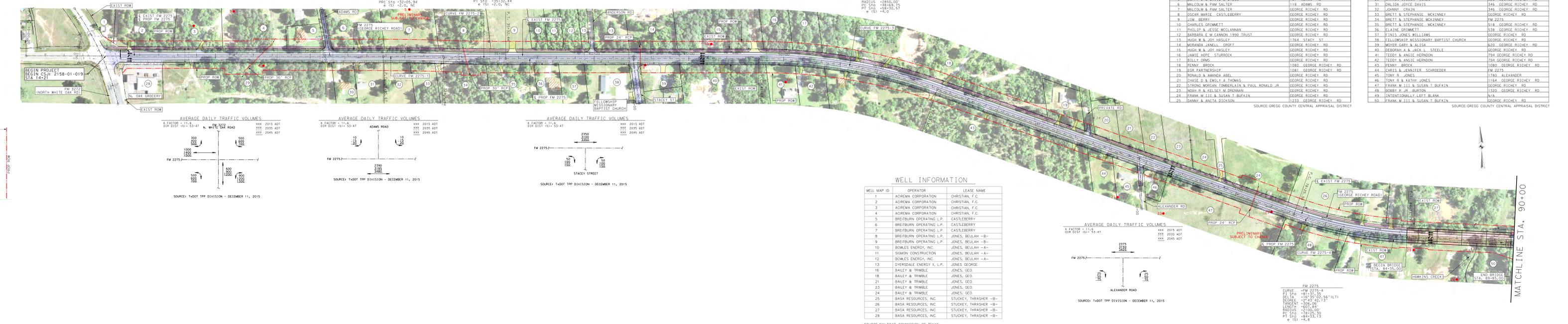
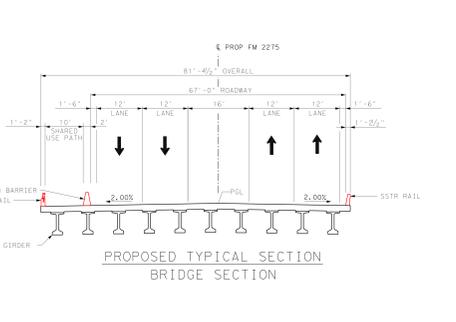
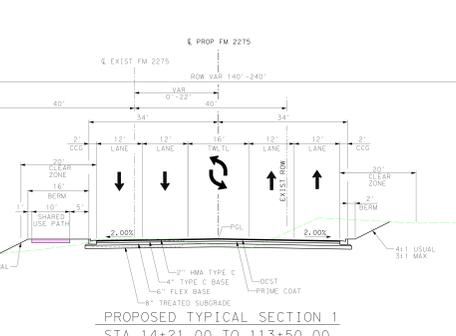
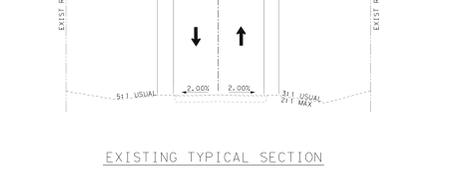
PRELIMINARY
THIS PRINT IS FOR INFORMATION ONLY. THE PLAN INFORMATION ON THESE SHEETS MAY NOT BE CONTROLLED AS FINAL.

HNTB HNTB Corporation
The HNTB Companies
Engineers & Architects Planners
TBP Firm Registration No. 422

FM 2275
SCHEMATIC LAYOUT
FM 3272 TO SH 300

CSJ: 2158-01-019, etc. SHEET: 1 OF 3
DATE: 11/28/2018 FILE: MA_F2275_R01_PP_01.dgn

PREFERRED ALTERNATIVE PAGE 1 OF 3



SCHEMATIC LAYOUT
GREGG COUNTY
FM 2275
FROM: FM 3272 (W)
TO: SH 300 (E)

Texas Department of Transportation
TYLER DISTRICT
DISTRICT ENGINEER: GLENN H. GREEN, P.E.

DESIGN SPEED: 55 MPH
FUNCTIONAL CLASSIFICATION: RURAL MINOR ARTERIAL ROAD
ROADWAY: FM2275 FROM FM 1845 TO SH 300

DATE: 11/28/2018
REVISIONS: APPROVED

PLAN LEGEND

PROPOSED CENTERLINE
MAIN LANE BRIDGES
PROPOSED WALLS
DRIVEWAYS
PROPOSED CROSS CULVERT
PROPOSED ROW
PROPERTY LINE
EXISTING CENTERLINE
EXISTING ROW
EXISTING GAS LINE
EXISTING WATER LINE
EXISTING WASTEWATER LINE
EXISTING FORCE MAIN
EXISTING OVERHEAD UTILITY
EXISTING TELEPHONE LINE
EXISTING FIBER OPTIC LINE
EXISTING CABLE TELEVISION LINE

ACTIVE WELL
INACTIVE WELL
WATER FLOW DIRECTION
PLANIMETRIC
EXISTING LANE DIRECTIONAL INDICATOR
PROPOSED LANE DIRECTIONAL INDICATOR

PROPOSED ROADWAY
PROPOSED BRIDGE
PROPOSED DRIVEWAY
PROPOSED SIDEWALK/SHARED USE PATH
IMPACTED STRUCTURES

PROP. POL. & MAINLANE
EXISTING GROUND & POL
100' W.P.A.S.E.

VICINITY MAP

0 50 100 200
HORIZ. SCALE 1" = 100'
0 5 10 20
VERT. SCALE 1" = 10'

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FM 2275
SCHEMATIC LAYOUT
FM 3272 TO SH 300

CSJ: 2158-01-019, etc. SHEET: 1 OF 3
DATE: 11/28/2018 FILE: MA_F2275_R01_PP_01.dgn

SCHEMATIC LAYOUT
GREGG COUNTY
FM 2275
FROM: FM 3272 (W)
TO: SH 300 (E)

Texas Department of Transportation
DISTRICT ENGINEER: GLENN H. GREEN, P.E.

FUNCTIONAL CLASSIFICATION: ROADWAY
DESIGN SPEED: 55 MPH

PROPOSED CENTERLINE
MAIN LANE BRIDGES
PROPOSED WALLS
PROPOSED CROSS CULVERT
PROPOSED ROW
PROPERTY LINE
EXISTING CENTERLINE
EXISTING ROW
EXISTING WATER LINE
EXISTING WASTEWATER LINE
EXISTING FORCE MAIN
EXISTING OVERHEAD UTILITY
EXISTING TELEPHONE LINE
EXISTING FIBER OPTIC LINE
EXISTING CABLE TELEVISION LINE
PARCEL NUMBER
ACTIVE WELL
INACTIVE WELL
WATER FLOW DIRECTION
PLANIMETRIC
EXISTING LANE DIRECTIONAL INDICATOR
PROPOSED LANE DIRECTIONAL INDICATOR

PROPOSED ROADWAY
PROPOSED BRIDGE
PROPOSED DRIVEWAY
PROPOSED SIDEWALK/SHARED USE PATH
IMPACTED STRUCTURES

PROF. POL. & MAINLINE
EXISTING GROUND & POL
100' W.P. & S.E.

FILE NAME: FM2275_R01_PP_02.dgn

PLAN LEGEND

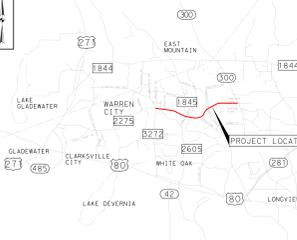
SYMBOLIC

PROPOSED CENTERLINE
MAIN LANE BRIDGES
PROPOSED WALLS
PROPOSED CROSS CULVERT
PROPOSED ROW
PROPERTY LINE
EXISTING CENTERLINE
EXISTING ROW
EXISTING WATER LINE
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EXISTING OVERHEAD UTILITY
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EXISTING FIBER OPTIC LINE
EXISTING CABLE TELEVISION LINE
PARCEL NUMBER
ACTIVE WELL
INACTIVE WELL
WATER FLOW DIRECTION
PLANIMETRIC
EXISTING LANE DIRECTIONAL INDICATOR
PROPOSED LANE DIRECTIONAL INDICATOR

PROFILE LEGEND

PROPOSED ROADWAY
PROPOSED BRIDGE
PROPOSED DRIVEWAY
PROPOSED SIDEWALK/SHARED USE PATH
IMPACTED STRUCTURES

PROF. POL. & MAINLINE
EXISTING GROUND & POL
100' W.P. & S.E.



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GLENN H. GREEN, P.E.
TEXAS REGISTRATION NUMBER
DATE
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T&E Firm Registration No. 422

FM 2275
SCHEMATIC LAYOUT
FM 3272 TO SH 300

PREFERRED ALTERNATIVE PAGE 2 OF 3

PARCEL INFORMATION

MAP ID	PROPERTY OWNER	PROPERTY ADDRESS
27	BOWEN SPENCER	GEORGE RICHEY RD
50	FRANK M III & SUSAN T BUEKIN	GEORGE RICHEY RD
51	LILLION E LIPPLE	1544 GEORGE RICHEY RD
52	GERALD D & SHEILA CAMPBELL	1623 GEORGE RICHEY RD
53	LODIE ETUX MORROW	1615 GEORGE RICHEY RD
54	DEBRA SUE WILLIAMS	1623 GEORGE RICHEY RD
55	B J FARMS	1645 GEORGE RICHEY RD
56	JAMES MARK & DEBBIE POWELL	GEORGE RICHEY RD
56A	INTERNATIONALLY LECT IN BANK	N/A
57	FRANK M III & SUSAN T BUEKIN	5004 TANGLEWOOD RD
58	WICKI ODEL	2100 BRENT RD
59	MISSELINE JAVIS	1622 GEORGE RICHEY RD
60	MINNIS & OKEY SHELBY	4613 GRAMM RD
61	FRANK BUEKIN III	1774 GRAMM RD
61A	FRANK BUEKIN III	1613 GRAMM RD
62	TERRY & DIANN PICKARD	GEORGE RICHEY RD
63	DEBRAH & BILLY STEELE	GEORGE RICHEY RD
63A	JACK STEELE	4700 JANE TREE RD

SOURCE: GREGG COUNTY CENTRAL APPRAISAL DISTRICT

WELL INFORMATION

WELL MAP ID	OPERATOR	LEASE NAME
28	BASA RESOURCES, INC.	STUCKEY, THRASHER -B-
30	BASA RESOURCES, INC.	STUCKEY, THRASHER -B-
31	BASA RESOURCES, INC.	HARRISON -B-
32	BASA RESOURCES, INC.	HARRISON -B-
33	BASA RESOURCES, INC.	HARRISON -B-
34	BASA RESOURCES, INC.	HARRISON -B-
35	BREITBURM OPERATING L.P.	HARLEY, M.B. -A-
36	BREITBURM OPERATING L.P.	HARLEY, M.B. -A-
37	BREITBURM OPERATING L.P.	HARLEY, M.B. -A-

SOURCE: RAILROAD COMMISSION OF TEXAS

WELL INFORMATION

WELL MAP ID	OPERATOR	LEASE NAME
38	BREITBURM OPERATING L.P.	DAVIS, J.D./GAS UNIT
39	BREITBURM OPERATING L.P.	HARLEY, M.B. -A-
40	BASA RESOURCES, INC.	HARLEY, M.B. -A-
41	ADAMSON EXPLORATION	MONNLEY
42	DANMARK ENERGY SERVICES, INC.	MONNLEY
43	ADAMSON EXPLORATION	MONNLEY
44	DANMARK ENERGY SERVICES, INC.	MONNLEY
45	DANMARK ENERGY SERVICES, INC.	MONNLEY
46	JOHN P. BOGDANICH	MONNLEY -A-
47	RUSK CO. WELL SERVICE CO., INC.	ALEXANDER-MCCUTCHEON
48	JOHN P. BOGDANICH	MONNLEY -A-
49	BREITBURM OPERATING L.P.	MCGRIDE, J.C., ZB
55	AAA OIL TRUST	MCGRIDE, G.E.
56	PETROLEUM SYSTEMS, INC.	MCGRIDE, G.E.
57	AAA OIL TRUST	MCGRIDE, G.E.
58	CADDO ENERGY CO., INC.	MONNLEY, J.C. & R.S. -B-
59	PETROLEUM SYSTEMS, INC.	MCGRIDE, G.E.
60	CADDO ENERGY CO., INC.	MONNLEY, J.C. & R.S. -B-

SOURCE: RAILROAD COMMISSION OF TEXAS

WELL INFORMATION

WELL MAP ID	OPERATOR	LEASE NAME
78	ASHLEY B	2929 GEORGE RICHEY RD
81	VIRGINIA SAVON MALONE	2107 GEORGE RICHEY RD
82	CARLOS & MADON	1200 GEORGE RICHEY RD
83	MENY & TONYA PAE	2111 GEORGE RICHEY RD
84	LAMARNE R CARRERA	2102 GEORGE RICHEY RD
85	SHERRILL ALICE LUTHERBURN COLLES	2119 GEORGE RICHEY RD
86	JOHN BILL ETUX PICKENBAUGH	2123 GEORGE RICHEY RD
87	BRAND CHRISTOPHER & LISA L CORDEIRO	1845 GEORGE RICHEY RD
88	TRUETT & CAROL PHILLIPICK	1833 GEORGE RICHEY RD
89	PATRICIA HARRISON	GEORGE RICHEY RD
90	PATRICIA HARRISON	GEORGE RICHEY RD
91	RICK ETUX THOMAS	1844 GEORGE RICHEY RD
92	RICK ETUX THOMAS	1844 GEORGE RICHEY RD
93	LOU, INC.	GEORGE RICHEY RD

SOURCE: GREGG COUNTY CENTRAL APPRAISAL DISTRICT

WELL INFORMATION

WELL MAP ID	OPERATOR	LEASE NAME
94	CRH, INC.	2929 GEORGE RICHEY RD
95	C W RESOURCES	GEORGE RICHEY RD
96	JOHN PAULETTI MAYFIELD	2130 PRINCE RD
97	JUSTIN B & CASEY M PICKARD	2118 PRINCE RD
98	CITIL OF LONGVIEW	GEORGE RICHEY RD
99	C W RESOURCES	GEORGE RICHEY RD
100	MARSHALL MITCHELL	2102 GEORGE RICHEY RD
101	MARSHALL MITCHELL	2102 GEORGE RICHEY RD
102	RAZA ALI & SADDAT SHAUKAT	2106 GEORGE RICHEY RD
103	RAZA ALI & SADDAT SHAUKAT	2110 GEORGE RICHEY RD
104	ROBERT & JANETTE BONNER	2110 GEORGE RICHEY RD
105	ROBERT & JANETTE BONNER	2110 GEORGE RICHEY RD
106	KENNETH L & ROBBIE CASIDA	GEORGE RICHEY RD
107	KENNETH L & ROBBIE CASIDA	GEORGE RICHEY RD
108	KENNETH L & ROBBIE CASIDA	2122 GEORGE RICHEY RD

SOURCE: GREGG COUNTY CENTRAL APPRAISAL DISTRICT

WELL INFORMATION

WELL MAP ID	OPERATOR	LEASE NAME
56	JAMES MARK & DEBBIE POWELL	GEORGE RICHEY RD
63	DEBRAH & BILLY STEELE	GEORGE RICHEY RD
64	J.R. & JIM	GEORGE RICHEY RD
65	MARK & DEBBIE POWELL	1717 GEORGE RICHEY RD
66	MARK & DEBBIE POWELL	1200 GEORGE RICHEY RD
67	MARK & DEBBIE POWELL	1200 GEORGE RICHEY RD
68	MARK & DEBBIE POWELL	1200 GEORGE RICHEY RD
69	MARSHALL MITCHELL	FM 1845
70	ADAMSON PROPERTIES, LLC	GEORGE RICHEY RD
71	BRAND CHRISTOPHER & LISA L CORDEIRO	1845 GEORGE RICHEY RD
72	TRUETT & CAROL PHILLIPICK	1833 GEORGE RICHEY RD
73	BRADLEY E & SHARNA R MCKELVEY	1839 GEORGE RICHEY RD
74	BARBARA G. THERRS	8015 RICHY TEX RD
75	DAVID & ANNELANE HASTIE	GEORGE RICHEY RD
76	EVA JO MCGRIDE	8900 GEORGE TEX RD
77	GEORGE L MCGRIDE	GEORGE RICHEY RD

SOURCE: GREGG COUNTY CENTRAL APPRAISAL DISTRICT

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SOURCE: RAILROAD COMMISSION OF TEXAS

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99	C W RESOURCES	GEORGE RICHEY RD
100	MARSHALL MITCHELL	2102 GEORGE RICHEY RD
101	MARSHALL MITCHELL	2102 GEORGE RICHEY RD
102	RAZA ALI & SADDAT SHAUKAT	2106 GEORGE RICHEY RD
103	RAZA ALI & SADDAT SHAUKAT	2110 GEORGE RICHEY RD
104	ROBERT & JANETTE BONNER	2110 GEORGE RICHEY RD
105	ROBERT & JANETTE BONNER	2110 GEORGE RICHEY RD
106	KENNETH L & ROBBIE CASIDA	GEORGE RICHEY RD
107	KENNETH L & ROBBIE CASIDA	GEORGE RICHEY RD
108	KENNETH L & ROBBIE CASIDA	2122 GEORGE RICHEY RD

SOURCE: GREGG COUNTY CENTRAL APPRAISAL DISTRICT

WELL INFORMATION

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74	BARBARA G. THERRS	8015 RICHY TEX RD
75	DAVID & ANNELANE HASTIE	GEORGE RICHEY RD
76	EVA JO MCGRIDE	8900 GEORGE TEX RD
77	GEORGE L MCGRIDE	GEORGE RICHEY RD

SOURCE: GREGG COUNTY CENTRAL APPRAISAL DISTRICT

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SOURCE: RAILROAD COMMISSION OF TEXAS

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104	ROBERT & JANETTE BONNER	2110 GEORGE RICHEY RD
105	ROBERT & JANETTE BONNER	2110 GEORGE RICHEY RD
106	KENNETH L & ROBBIE CASIDA	GEORGE RICHEY RD
107	KENNETH L & ROBBIE CASIDA	GEORGE RICHEY RD
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SOURCE: GREGG COUNTY CENTRAL APPRAISAL DISTRICT

WELL INFORMATION

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75	DAVID & ANNELANE HASTIE	GEORGE RICHEY RD
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SOURCE: GREGG COUNTY CENTRAL APPRAISAL DISTRICT

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75	DAVID & ANNELANE HASTIE	GEORGE RICHEY RD
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WELL MAP ID	OPERATOR	LEASE NAME
94	CRH, INC.	2929 GEORGE RICHEY RD
95	C W RESOURCES	GEORGE RICHEY RD
96	JOHN PAULETTI MAYFIELD	2130 PRINCE RD
97	JUSTIN B & CASEY M PICKARD	2118 PRINCE RD
98	CITIL OF LONGVIEW	GEORGE RICHEY RD
99	C W RESOURCES	GEORGE RICHEY RD
100	MARSHALL MITCHELL	2102 GEORGE RICHEY RD
101	MARSHALL MITCHELL	2102 GEORGE RICHEY RD
102	RAZA ALI & SADDAT SHAUKAT	2106 GEORGE RICHEY RD
103	RAZA ALI & SADDAT SHAUKAT	2110 GEORGE RICHEY RD
104	ROBERT & JANETTE BONNER	2110 GEORGE RICHEY RD
105	ROBERT & JANETTE BONNER	2110 GEORGE RICHEY RD
106	KENNETH L & ROBBIE CASIDA	GEORGE RICHEY RD
107	KENNETH L & ROBBIE CASIDA	GEORGE RICHEY RD
108	KENNETH L & ROBBIE CASIDA	2122 GEORGE RICHEY RD

SOURCE: GREGG COUNTY CENTRAL APPRAISAL DISTRICT

WELL INFORMATION

WELL MAP ID	OPERATOR	LEASE NAME
56	JAMES MARK & DEBBIE POWELL	GEORGE RICHEY RD
63	DEBRAH & BILLY STEELE	GEORGE RICHEY RD
64	J.R. & JIM	GEORGE RICHEY RD
65	MARK & DEBBIE POWELL	1717 GEORGE RICHEY RD

SCHEMATIC LAYOUT
GREGG COUNTY
FM 2275
FROM: FM 3272 (W)
TO: SH 300 (E)

CSJ: 2158-01-019, etc.
SHEET: 3 OF 3
DATE: 11/28/2018

FUNCTIONAL CLASSIFICATION
ROADWAY: FM 2275 FROM FM 3272 TO FM 1845 55 MPH
FM 1845 FROM FM 1845 TO SH 300 55 MPH
CROSS STREETS: 55 MPH
30 MPH

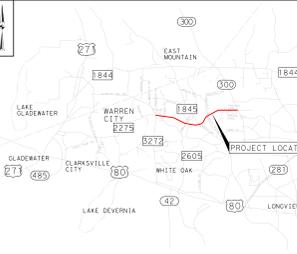
PLAN LEGEND

PROPOSED CENTERLINE
MAIN LANE
MAIN LANE BRIDGES
PROPOSED WALLS
DRIVEWAYS
PROPOSED CROSS CULVERT
PROPOSED ROW
PROPOSED PROPERTY LINE
EXISTING CENTERLINE
EXISTING ROW
EXISTING GAS LINE
EXISTING WATER LINE
EXISTING WASTEWATER LINE
EXISTING FORCE MAIN
EXISTING OVERHEAD UTILITY
EXISTING TELEPHONE LINE
EXISTING FIBER OPTIC LINE
EXISTING CABLE TELEVISION LINE
PARCEL NUMBER
ACTIVE WELL
INACTIVE WELL
WATER FLOW DIRECTION
PLANIMETRIC
EXISTING LANE DIRECTIONAL INDICATOR
PROPOSED LANE DIRECTIONAL INDICATOR

PROFILE LEGEND

PROPOSED ROADWAY
PROPOSED BRIDGE
PROPOSED DRIVEWAY
PROPOSED SIDEWALK/SHARED USE PATH
IMPACTED STRUCTURES

PROP. POL. & MAINLINE
EXISTING GROUND @ POL
100' VOL. W. S.E.



NOT A BIDDING DOCUMENT

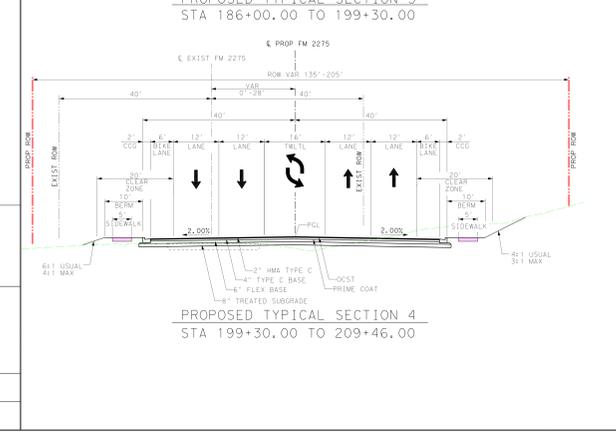
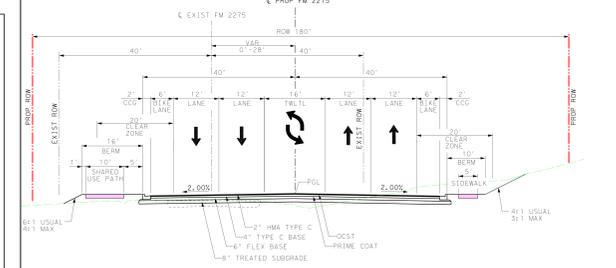
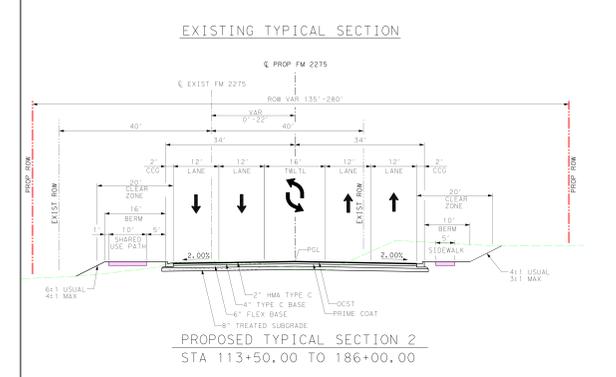
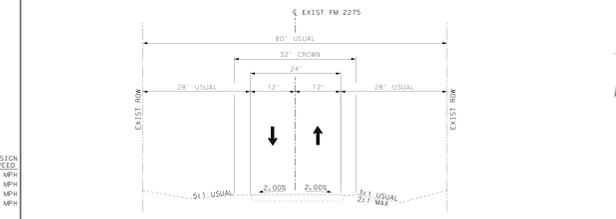
GREGG COUNTY ENGINEER
DATE: 11/28/2018
FILE NAME: FM2275_PP_03.dgn

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HNTB HNTB Corporation
The HNTB Companies
Engineers, Architects, Planners
TBE Firm Registration No. 420

FM 2275 SCHEMATIC LAYOUT
FM 3272 TO SH 300

CSJ: 2158-01-019, etc. SHEET: 3 OF 3
DATE: 11/28/2018 FILE NAME: FM2275_PP_03.dgn



PARCEL INFORMATION

MP	PROPERTY OWNER	PROPERTY ADDRESS
106	JOHN BILL ETUX PICKENHAWK	2123 GEORGE RICHEY RD
108	KENNETH L & ROBBIE CASIDA	2122 GEORGE RICHEY RD
109	NEW BEGINNINGS BAPTIST CHURCH	2129 GEORGE RICHEY RD
110	NEW BEGINNINGS BAPTIST CHURCH	GEORGE RICHEY RD
111	NEW BEGINNINGS BAPTIST CHURCH	2137 GEORGE RICHEY RD
112	H. BEAL & MELINDA MCQUINNEY	2221 GEORGE RICHEY RD
113	MICHAEL E ETUX CARLISLE	2303 GEORGE RICHEY RD
114	ROGER LAB ETUX WELTON	2309 GEORGE RICHEY RD
115	JOSEPH P & WYLLIE P. FLELLER	2315 GEORGE RICHEY RD
116	LINDA LESLIE	2403 GEORGE RICHEY RD
117	SNOOKIES LLC	2405 GEORGE RICHEY RD
118	J. LINDSEY & LISA GATHERIGHT	2411 GEORGE RICHEY RD
119	BENNIE RICHARDSON	2409 GEORGE RICHEY RD
120	VICTA SUE SIMPSON JOHNSON	2411 GEORGE RICHEY RD
121	STURKIE ENTERPRISES LTD.	2413 GEORGE RICHEY RD
122	SNOOKIES FAMILY LTD PARTNERSHIP	2415 GEORGE RICHEY RD
123	WYLES T PARTNERSHIP	2501 GEORGE RICHEY RD
124	CARLA Y & HOWARD ALEXANDER	2503 GEORGE RICHEY RD
125	1001 APARTMENTS LLC	2505 GEORGE RICHEY RD
126	CITY OF LONGVIEW	2511 GEORGE RICHEY RD

PARCEL INFORMATION

MP	PROPERTY OWNER	PROPERTY ADDRESS
127	CITY OF LONGVIEW	2511 GEORGE RICHEY RD
128	CITY OF LONGVIEW	2511 GEORGE RICHEY RD
129	DEAN C. GROTHMAN	2601 GEORGE RICHEY RD
129A	DEAN C. GROTHMAN	2601 GEORGE RICHEY RD
130	FISHER, CARRIE BRICE	2603 GEORGE RICHEY RD
131	KITTSY R. BOBARK	2605 GEORGE RICHEY RD
132	KITTSY R. BOBARK	110A GEORGE RICHEY RD
133	MONA CLOMER	2609 GEORGE RICHEY RD
133A	MONA CLOMER	2609 GEORGE RICHEY RD
134	MONA CLOMER	2611 GEORGE RICHEY RD
135	HELENA GRANT SR & MARGO HAZELAND WHITE	2613 GEORGE RICHEY RD
136	KERRY O. BOLDEN	2615 GEORGE RICHEY RD
137	JESS S & EULA PINNSTON	2617 GEORGE RICHEY RD
138	CHRISTINE DRYMAK HOOKER	2619 GEORGE RICHEY RD
139	JOHN S & JALA T. BUNNELS	2611 GEORGE RICHEY RD
140	MICHAEL L & CINDY ANN DICKMORSE	2126 GEORGE RICHEY RD
141	MICHAEL S & KELLY E DAVIS	2128 GEORGE RICHEY RD
142	LEONARD LUYE	2130 GEORGE RICHEY RD
143	WILLIAM R ETUX FLEMING	2134 GEORGE RICHEY RD
144	JOHN WILLIAMSON	2616 GEORGE RICHEY RD

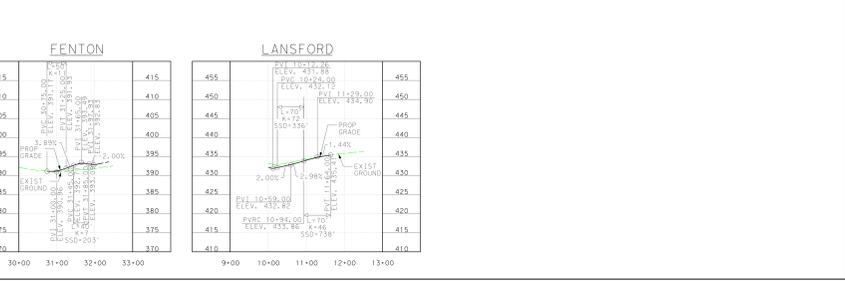
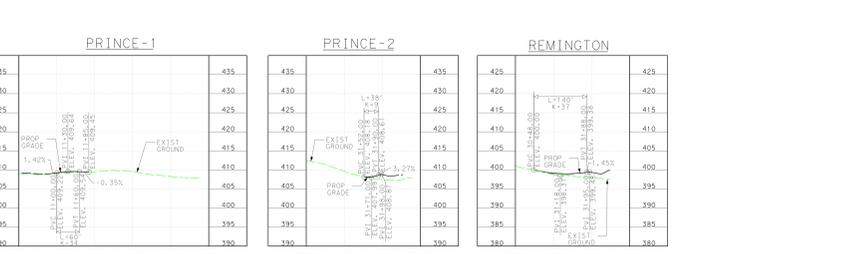
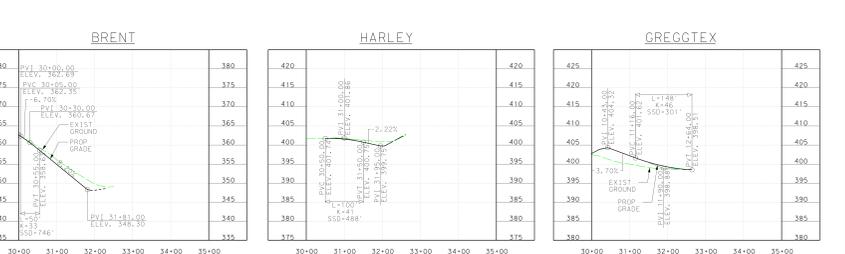
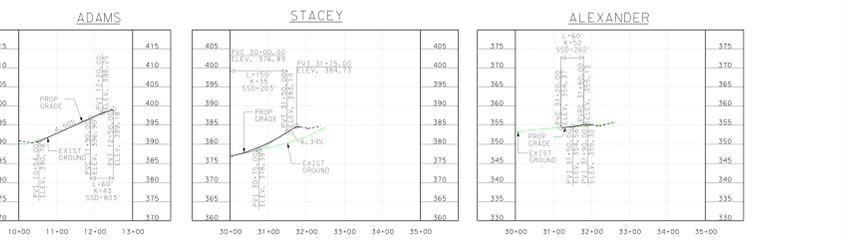
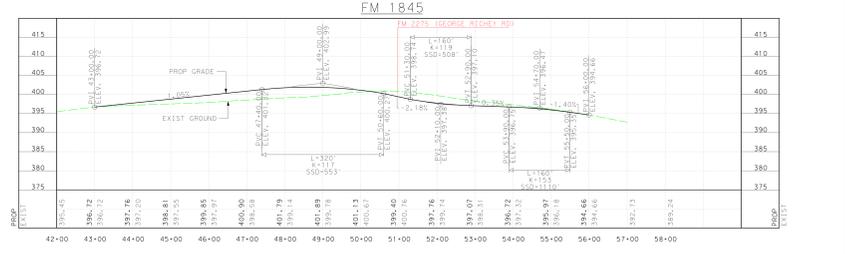
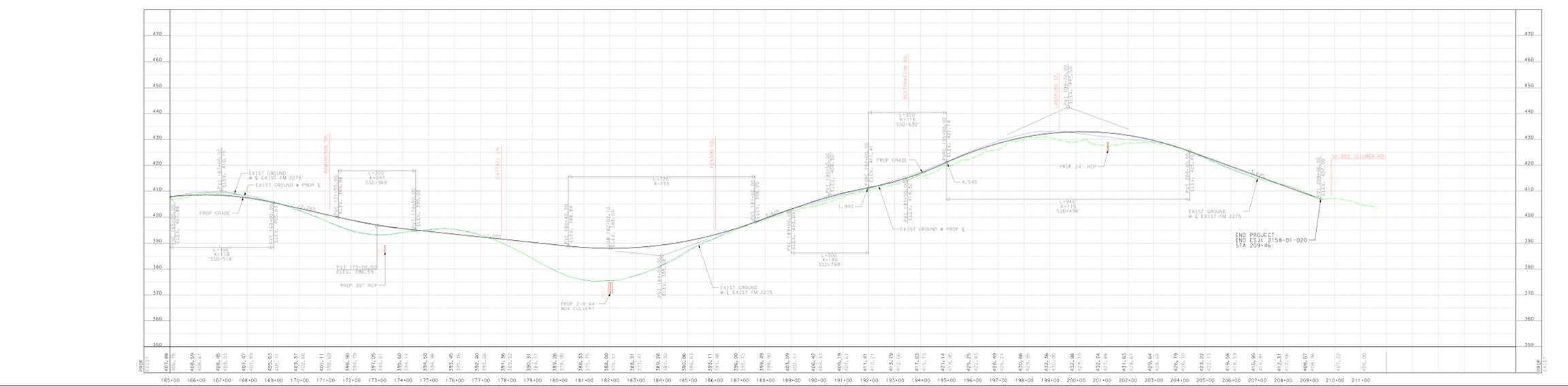
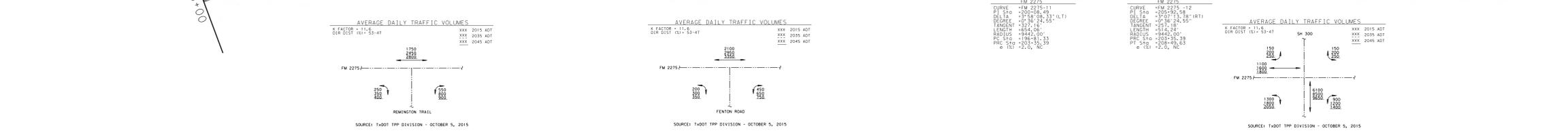
PREFERRED ALTERNATIVE
PAGE 3 OF 3

PARCEL INFORMATION

MP	PROPERTY OWNER	PROPERTY ADDRESS
145	MARK A & KATE ELLISHAN	100 BENNINGTON TRL
146	ROBERT EARL PATTERSON	2300 GEORGE RICHEY RD
147	BRUNDA W & GERRISH ANN ROBERTS	2400 GEORGE RICHEY RD
148	DAVID A & LAVADA SANDERS	2406 GEORGE RICHEY RD
149	DAVID A & LAVADA SANDERS	2406 GEORGE RICHEY RD
150	JARON WILLIAMS	2408 GEORGE RICHEY RD
151	JASON P. MCCOY JR.	2410 GEORGE RICHEY RD
152	VISAN MANAGEMENT LLC	2412 GEORGE RICHEY ROAD
153	SHIRLEY MAYWOOD	2414 GEORGE RICHEY RD
154	BENJAMIN H & ISAAC J AVERY	2500 GEORGE RICHEY RD
155	MONA CLOMER	2502 GEORGE RICHEY RD
156	TRISHA MOORE	2504 GEORGE RICHEY RD
157	JAMES E & CHRISTINE L TRAMEL	2508 GEORGE RICHEY RD
158	JAMES E & CHRISTINE L TRAMEL	2508 GEORGE RICHEY RD
160	SHOWEN FAMILY LTD PARTNERSHIP	2602 GEORGE RICHEY RD
161	SHOWEN APARTMENTS	2604 GEORGE RICHEY RD
162	JACKEN LANGFORD	2610 GEORGE RICHEY RD
163	MONICA BETH MANNEN	2612 GEORGE RICHEY RD
164	SHOWEN FAMILY LTD PARTNERSHIP	2614 GEORGE RICHEY RD
165	STURKIE ENTERPRISES LTD	2616 GEORGE RICHEY RD
166	MIKE & FELD INVESTMENTS LLC	2620 GEORGE RICHEY RD

WELL INFORMATION

WELL MAP ID	OPERATOR	LEASE NAME
62	SHELL WESTERN EXP INC	MCKINLEY, J.C.
63	4-SIGHT OPERATING COMPANY, LTD	MCKINLEY
64	BRITBURN OPERATING L.P.	MAGRELL, D.L.



SCHEMATIC LAYOUT
GREGG COUNTY
FM 2275
FROM: FM 3272 (W)
TO: SH 300 (E)

CSJ: 2158-01-019, etc.
SHEET: 3 OF 3
DATE: 11/28/2018

FUNCTIONAL CLASSIFICATION
ROADWAY: FM 2275 FROM FM 3272 TO FM 1845 55 MPH
FM 1845 FROM FM 1845 TO SH 300 55 MPH
CROSS STREETS: 55 MPH
30 MPH

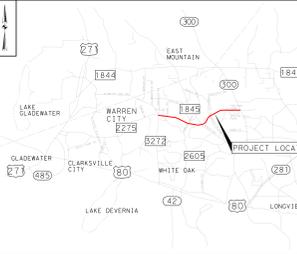
PLAN LEGEND

PROPOSED CENTERLINE
MAIN LANE
MAIN LANE BRIDGES
PROPOSED WALLS
DRIVEWAYS
PROPOSED CROSS CULVERT
PROPOSED ROW
PROPOSED PROPERTY LINE
EXISTING CENTERLINE
EXISTING ROW
EXISTING GAS LINE
EXISTING WATER LINE
EXISTING WASTEWATER LINE
EXISTING FORCE MAIN
EXISTING OVERHEAD UTILITY
EXISTING TELEPHONE LINE
EXISTING FIBER OPTIC LINE
EXISTING CABLE TELEVISION LINE
PARCEL NUMBER
ACTIVE WELL
INACTIVE WELL
WATER FLOW DIRECTION
PLANIMETRIC
EXISTING LANE DIRECTIONAL INDICATOR
PROPOSED LANE DIRECTIONAL INDICATOR

PROFILE LEGEND

PROPOSED ROADWAY
PROPOSED BRIDGE
PROPOSED DRIVEWAY
PROPOSED SIDEWALK/SHARED USE PATH
IMPACTED STRUCTURES

PROP. POL. & MAINLINE
EXISTING GROUND @ POL
100' VOL. W. S.E.



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GREGG COUNTY ENGINEER
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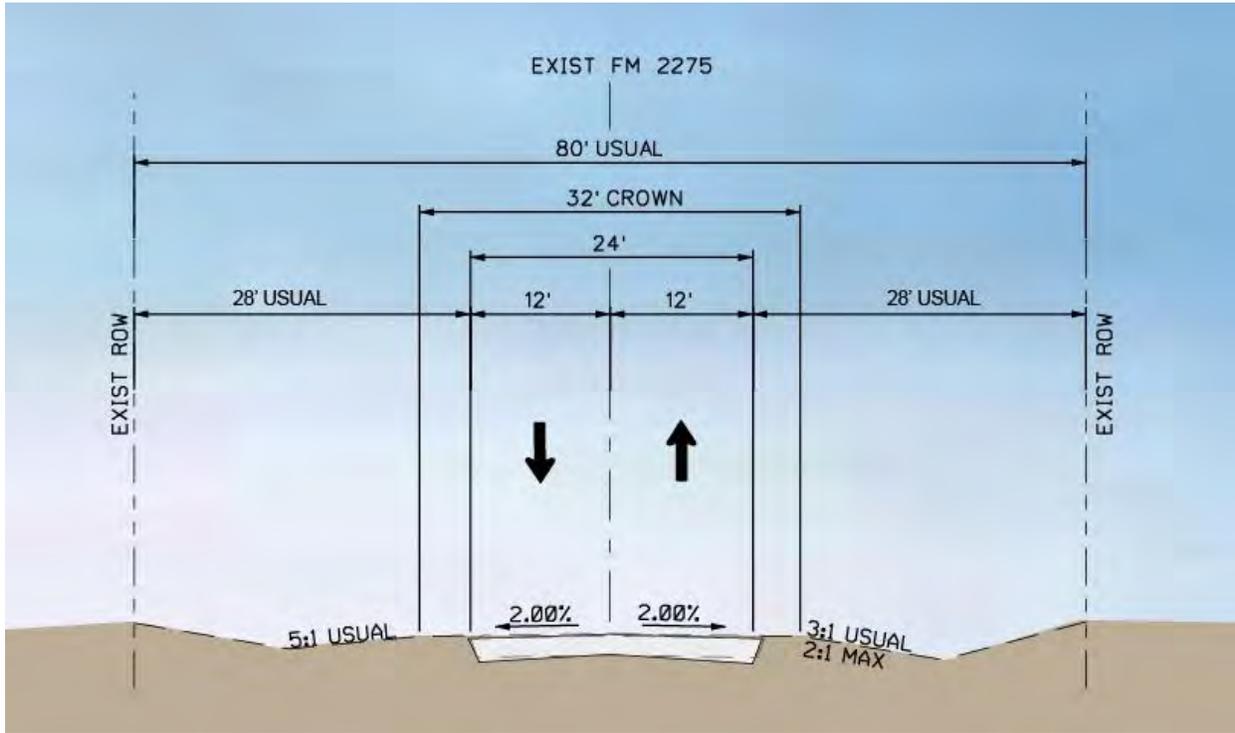
FM 2275 SCHEMATIC LAYOUT
FM 3272 TO SH 300

CSJ: 2158-01-019, etc. SHEET: 3 OF 3
DATE: 11/28/2018 FILE NAME: FM2275_PP_03.dgn

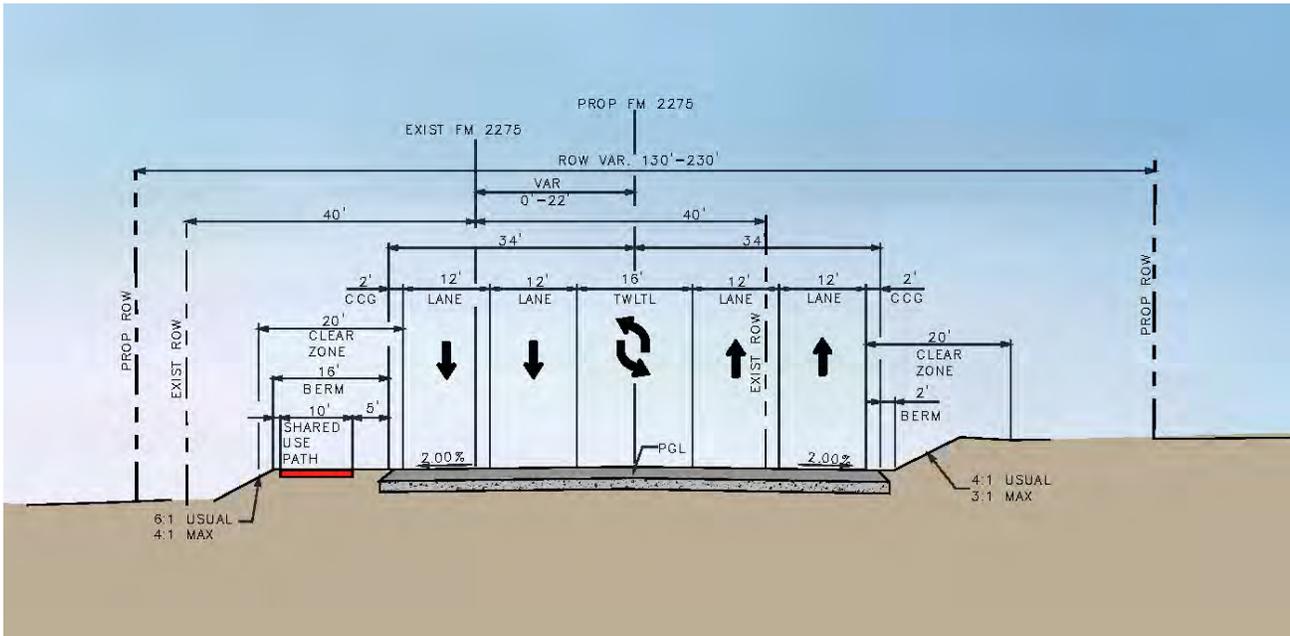
Appendix D

Typical Sections

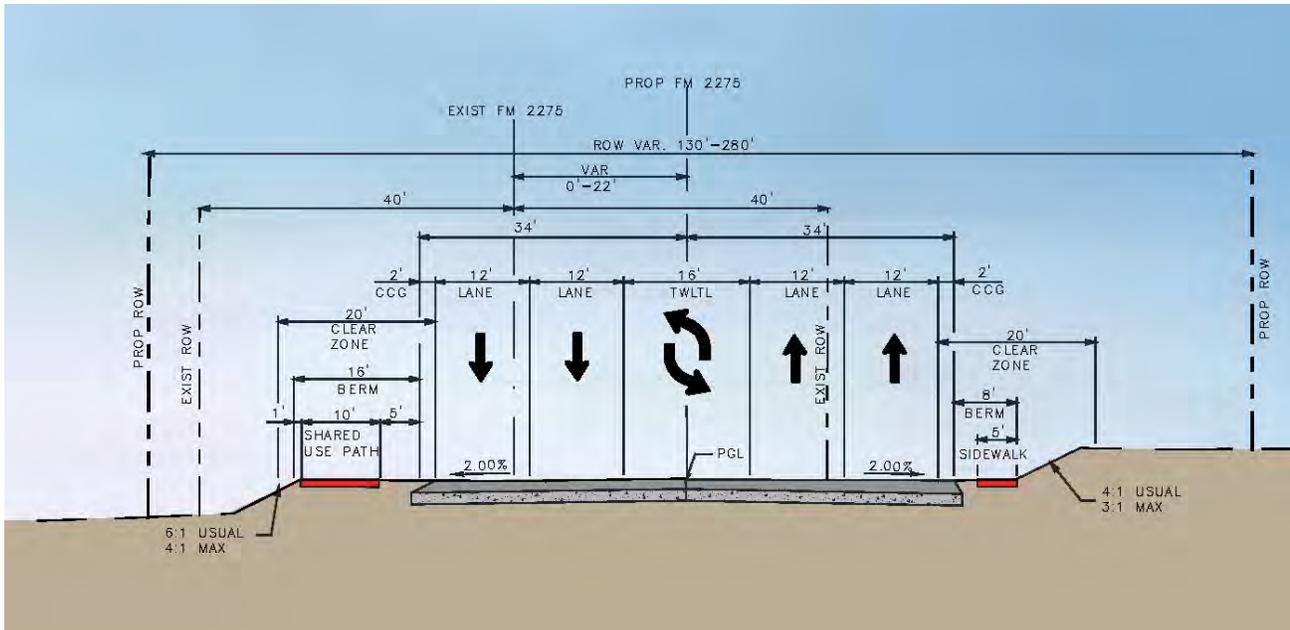
Existing Typical Section



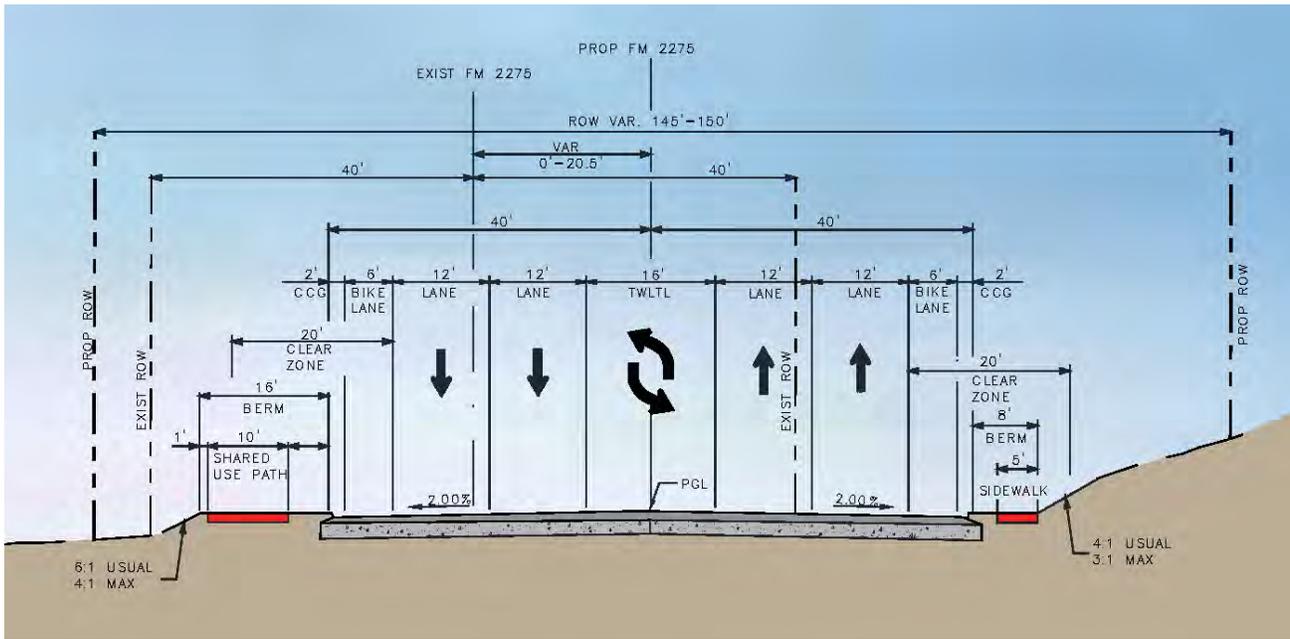
Suburban Section
FM 3272 (North White Oak Road) to FM 1845 (Pine Tree Road)



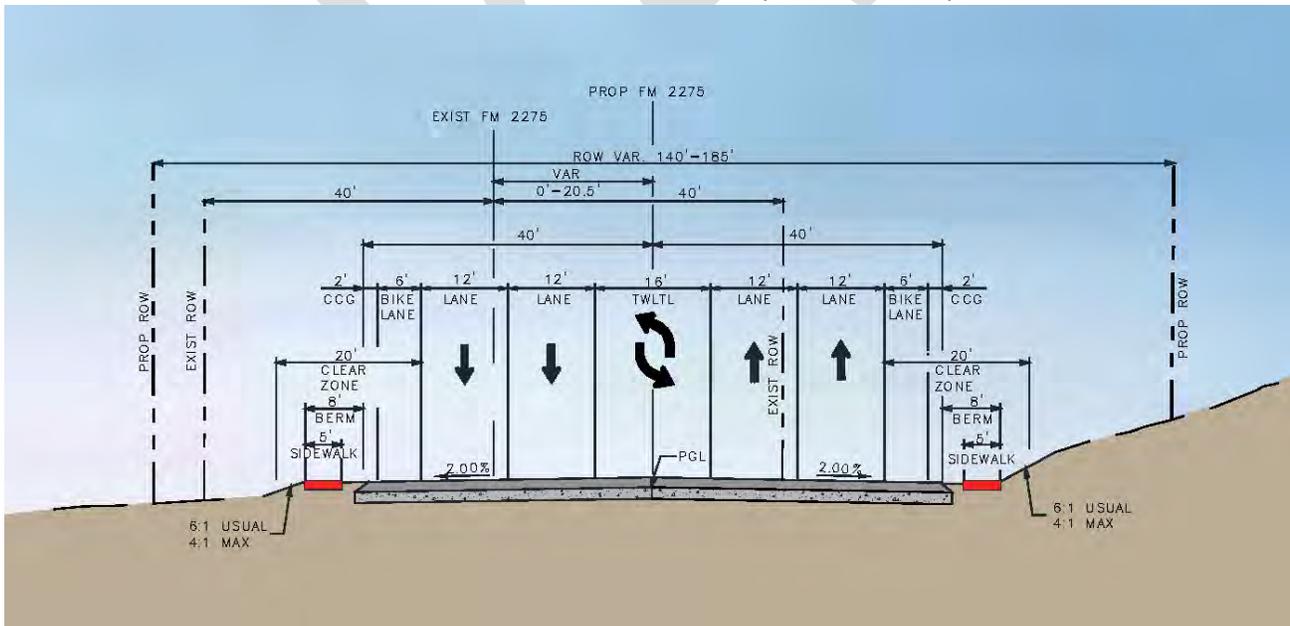
Urban Section
FM 1845 (Pine Tree Road) to Fenton Road



Urban Section Fenton Road to Lansford Road



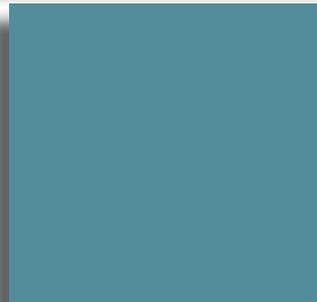
Urban Section Lansford Road to SH 300 (Gilmer Road)



Appendix E

Plan and Program Excerpts

Longview Metropolitan Planning Organization Metropolitan Transportation Plan 2040



Adopted - November 10, 2014
Revised - January 25, 2017

FINANCIAL PLAN - Street & Highways 2015-2040

ESTIMATES ARE FOR PLANNING PURPOSES ONLY AND ARE BASED UPON AVAILABLE INFORMATION

TOTAL PROJECT COST ESTIMATES

MTP PROJECT ID#	SCORE	TARGET YEAR	PROJECT	LOCATION	DESCRIPTION	CONSTRUCTION			Preliminary Engineering ³ (Footnote #3)	Right of Way	Utility Relocation	Total					
						Federal & State	Federal & State Interstate 20	Toll Road									
2015 - 2024						FEDERAL & STATE PROJECTS:						FIGURES INCLUDE ANNUAL 4% INFLATION					
F 245	N/A	2015	FM 2275 (GEORGE RICHEY RD.)	SH 300 (GILMER RD) TO MCCANN RD	FIVE LANE DIVIDED ROADWAY ON NEW LOCATION	\$12,300,000			\$3,169,100	\$1,000,000	\$1,000,000	\$17,469,100					
F 107	N/A	2017	US 80	LOOP 485 TO LOCKER PLANT RD	RECONSTRUCT ROADWAY WITH CENTER TURN LANE	\$2,849,440			\$618,330	\$0	\$0	\$3,467,770					
F 115	4.0	2019	FM 2206 (HARRISON RD)	LOOP 281 TO FISHER RD	WIDEN FROM 2 TO 4 LANES DIVIDED	\$10,528,730			\$3,454,590	\$2,047,250	\$11,698,590	\$27,729,160					
F 130	4.5	2020	W. LOOP 281	US 80 TO SHOFNER RD	WIDEN FROM 4 TO 6 LANES, DIVIDED	\$2,163,390			\$834,450	\$2,321,370	\$304,160	\$5,623,370					
F 109	6.5	2020	US 80	MUSTANG TO VIRGINIA DR	RECONSTRUCT ROADWAY WITH CENTER TURN LANE	\$3,649,960			\$1,157,040	\$912,490	\$304,160	\$6,023,650					
F 246	6.5	2021	FM 2275 (GEORGE RICHEY RD.)	FM 1845 to SH 300	WIDEN FROM 2 TO 4 LANES, DIVIDED	\$10,758,450			\$3,726,430	\$8,363,760	\$2,846,970	\$25,695,610					
F 247	8.5	2023	FM 2275 (GEORGE RICHEY RD.)	FM 3272 (WHITE OAK RD) TO FM 1845	WIDEN FROM 2 TO 4 LANES, DIVIDED	\$13,175,540			\$4,364,520	\$1,149,600	\$6,842,850	\$25,532,510					
F 110	6.2	2024	SPUR 63 /SH 31	SOUTH ST TO MCCANN RD	WIDEN FROM 4 TO 6 LANES, DIV. & REPLACE RR BRIDGE	\$12,437,610			\$3,552,950	\$15,320,530	\$853,990	\$32,165,080					
2015 to 2024						\$67,863,120			\$20,877,410	\$31,115,000	\$23,850,720	\$143,706,250					

2025 - 2040						FEDERAL & STATE PROJECTS:						FIGURES INCLUDE ANNUAL 4% INFLATION					
F 120	5.0	2027	FM 2208 (ALPINE RD)	LOOP 281 TO US 259	WIDEN FROM 2 TO 4 LANES, DIVIDED	\$9,406,750			\$2,521,580	\$4,220,320	\$960,620	\$17,109,270					
F 140	4.7	2030	E. LOOP 281	FOURTH ST TO FM 2208	WIDEN FROM 4 TO 6 LANES, DIVIDED	\$30,255,850			\$7,105,800	\$5,402,830	\$540,280	\$43,304,760					
F 250	N/A	2030	TOLL 49	US 271 TO US 259	NEW 2 LANE TOLL ROAD OF AN ULTIMATE 4 LANE RD			\$115,260,380	\$6,843,590	\$22,511,790	\$4,322,260	\$148,938,020					
F 141	3.5	2032	E. LOOP 281	FM 2208 TO PAGE RD	WIDEN FROM 4 TO 6 LANES, DIVIDED	\$21,816,490			\$5,318,550	\$1,363,530	\$389,580	\$28,888,150					
F 131	4.5	2035	W. LOOP 281	FM 2206 TO US 80	WIDEN FROM 4 TO 6 LANES, DIV. & REPLACE RR BRIDGE	\$16,681,630			\$4,277,250	\$14,976,330	\$1,205,120	\$37,140,330					
2025 to 2040						\$78,160,720		\$115,260,380	\$26,066,770	\$48,474,800	\$7,417,860	\$275,380,530					
2015 to 2040						\$146,023,840		\$115,260,380	\$46,944,180	\$79,589,800	\$31,268,580	\$419,086,780					

UNFUNDED NEEDS		FEDERAL & STATE PROJECTS:						FIGURES BELOW ARE SHOWN IN 2015 DOLLARS & ARE NOT INFLATED					
F 234	6.1		INTERSTATE 20	VARIOUS LOCATIONS IN MPO AREA	BRIDGES, INTERCHANGES & FRONTAGE RD IMPROVEMENTS	\$78,600,000			FOOTNOTE #2	FOOTNOTE #1	FOOTNOTE #1	\$78,600,000	
F 235	6.1		INTERSTATE 20	VARIOUS LOCATIONS IN MPO AREA	WIDEN FROM 4 TO 6 LANES, DIVIDED	\$121,400,000			FOOTNOTE #2	FOOTNOTE #1	FOOTNOTE #1	\$121,400,000	
F 116	5.0		FM 2206 (HARRISON RD)	SH 42 TO FISHER RD	WIDEN FROM 2 TO 4 LANES DIVIDED	\$17,762,930			\$5,778,870	\$2,960,490	\$29,604,890	\$56,107,180	
F 248	4.9		FM 2275 (GEORGE RICHEY RD.)	TEXAS ST TO FM 3272 (WHITE OAK RD)	WIDEN FROM 2 TO 4 LANES, DIVIDED	\$16,307,040			\$5,166,900	\$6,108,970	\$1,480,240	\$29,063,150	
F 249	6.1		FM 2275 (GEORGE RICHEY RD.)	US 271 TO TEXAS ST	WIDEN FROM 2 TO 4 LANES, DIVIDED	\$14,781,100			\$4,835,770	\$5,124,610	\$1,480,240	\$26,221,720	
F 132	4.1		W. LOOP 281	COTTON TO FM 2206	WIDEN FROM 4 TO 6 LANES, DIVIDED	\$6,430,850			\$2,283,640	\$7,445,630	\$666,110	\$16,826,230	
F 133	5.3		W. LOOP 281	FM 2205 (JAYCEE DR) TO COTTON	WIDEN FROM 4 TO 6 LANES, DIVIDED	\$6,019,200			\$2,194,310	\$3,596,990	\$666,110	\$12,476,610	
F 134	4.7		W. LOOP 281	FM 2087 TO FM 2205 (JAYCEE DR)	WIDEN FROM 4 TO 6 LANES, DIVIDED	\$16,238,150			\$4,411,830	\$7,374,580	\$740,120	\$28,764,680	
F 135	4.9		W. LOOP 281	BIRDSONG TO FM 2087	WIDEN FROM 4 TO 6 LANES, DIVIDED	\$17,518,260			\$5,281,710	\$16,774,130	\$13,668,580	\$53,242,680	
* F 301	3.7		SH 42	US 80 TO INTERSTATE 20	WIDEN FROM 2 TO 4 LANES, DIVIDED	\$40,000,000			FOOTNOTE #2	FOOTNOTE #1	FOOTNOTE #1	\$40,000,000	
* F 302	N/A		US 271	SH 155, S. OF GILMER, TO GREGG/UPSHUR CO. LINE	WIDEN EXISTING 4-LANE UNDIVIDED HIGHWAY TO 4-LANE DIVIDED	\$60,000,000			FOOTNOTE #2	FOOTNOTE #1	FOOTNOTE #1	\$60,000,000	
* F 303	N/A		US 271	GREGG/UPSHUR CO. LINE TO LOOP 485 IN N. GLADEWA	WIDEN FROM 2 TO 4 LANES, DIVIDED	\$3,500,000			FOOTNOTE #2	FOOTNOTE #1	FOOTNOTE #1	\$3,500,000	
* F 304	N/A		US 271	LOOP 485 IN S. GLADEWATER TO FM 16	WIDEN FROM 2 TO 4 LANES, DIVIDED	\$44,000,000			FOOTNOTE #2	FOOTNOTE #1	FOOTNOTE #1	\$44,000,000	
* F 305	3.3		LOOP 485	US 271, IN S. GLADEWATER TO US 80	WIDEN FROM 2 TO 4 LANES, WITH CENTER TURN LANE	\$8,000,000			FOOTNOTE #2	FOOTNOTE #1	FOOTNOTE #1	\$8,000,000	
* F 306	N/A		LOOP 485	US 80, IN E. GLADEWATER TO US 271	WIDEN 4 LANE ROADWAY FOR CENTER TURN LANE	\$5,000,000			FOOTNOTE #2	FOOTNOTE #1	FOOTNOTE #1	\$5,000,000	
UNFUNDED PROJECTS TOTAL						\$255,557,530	\$200,000,000		\$29,953,030	\$49,385,400	\$48,306,290	\$583,202,250	

FOOTNOTES 1 = Right of way and relocation of utilities for this project will not be known until schematic & finalized design is determined.
 2 = Preliminary engineering, right of way and utilities are funded through non-construction funding sources.
 3 = Preliminary engineering also includes construction engineering, contingencies & indirect costs.



T RANSPORTATION
I MPROVEMENT
P ROGRAM

2017 - 2020

**LONGVIEW METROPOLITAN
PLANNING ORGANIZATION**

Adopted June 23, 2016
Revised January 25, 2017 & January 10, 2018

APPENDIX D

PROJECTS UNDERGOING ENVIRONMENTAL ASSESSMENT

Appendix D contains projects that are scheduled for implementation beyond the four years of the TIP time frame, and it in no way implies these projects are programmed in the TIP. Cost estimates are preliminary and do not represent any commitment of construction funding. The costs are expressed in future dollars out to the year they are expected to be implemented.

The purpose of Appendix D is to identify projects that are undergoing preliminary engineering and environmental analysis (PE/EA) consistent with early project development. These projects are referenced in the Transportation Improvement Program in order to facilitate the feasibility and PE/EA phases.

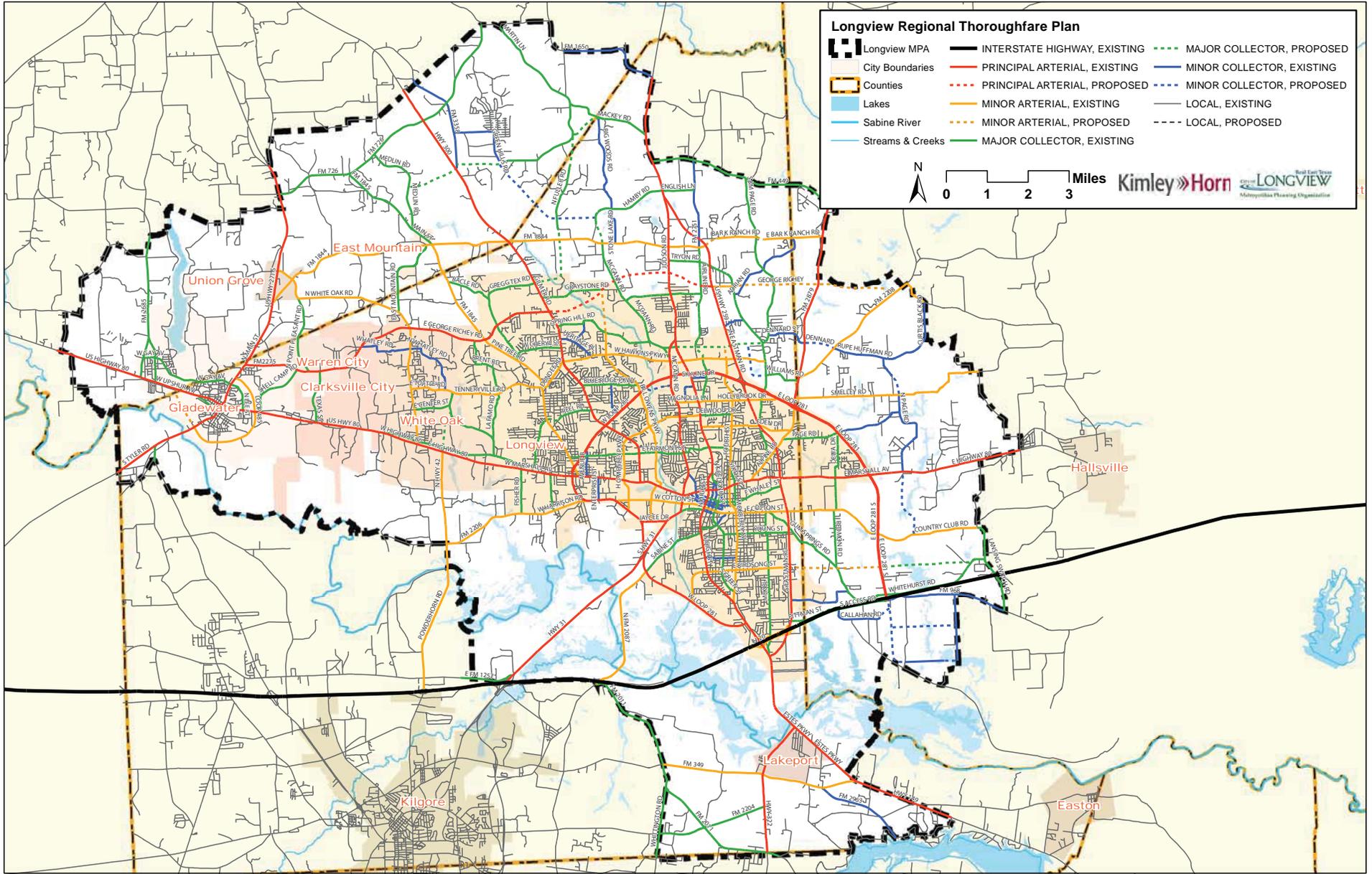
Project Name:	FM 2275 (GEORGE RICHEY RD.)	Fiscal Year	2021
From & To:	FM 3272 TO SH 300	Remarks	
County:	GREGG	Revision Date:	6/2016
CSJ Number	2158-01-013 & 2158-01-020	Funding Category	2U
Description	WIDEN FROM 2 TO 4 LANES, DIVIDED	YOE inflated Total Project Cost:	\$16,529,370
Phase:	E	Revision Date:	7/2016

Longview MPO Regional Thoroughfare Plan



Adopted by MPO Policy Board November 10, 2014



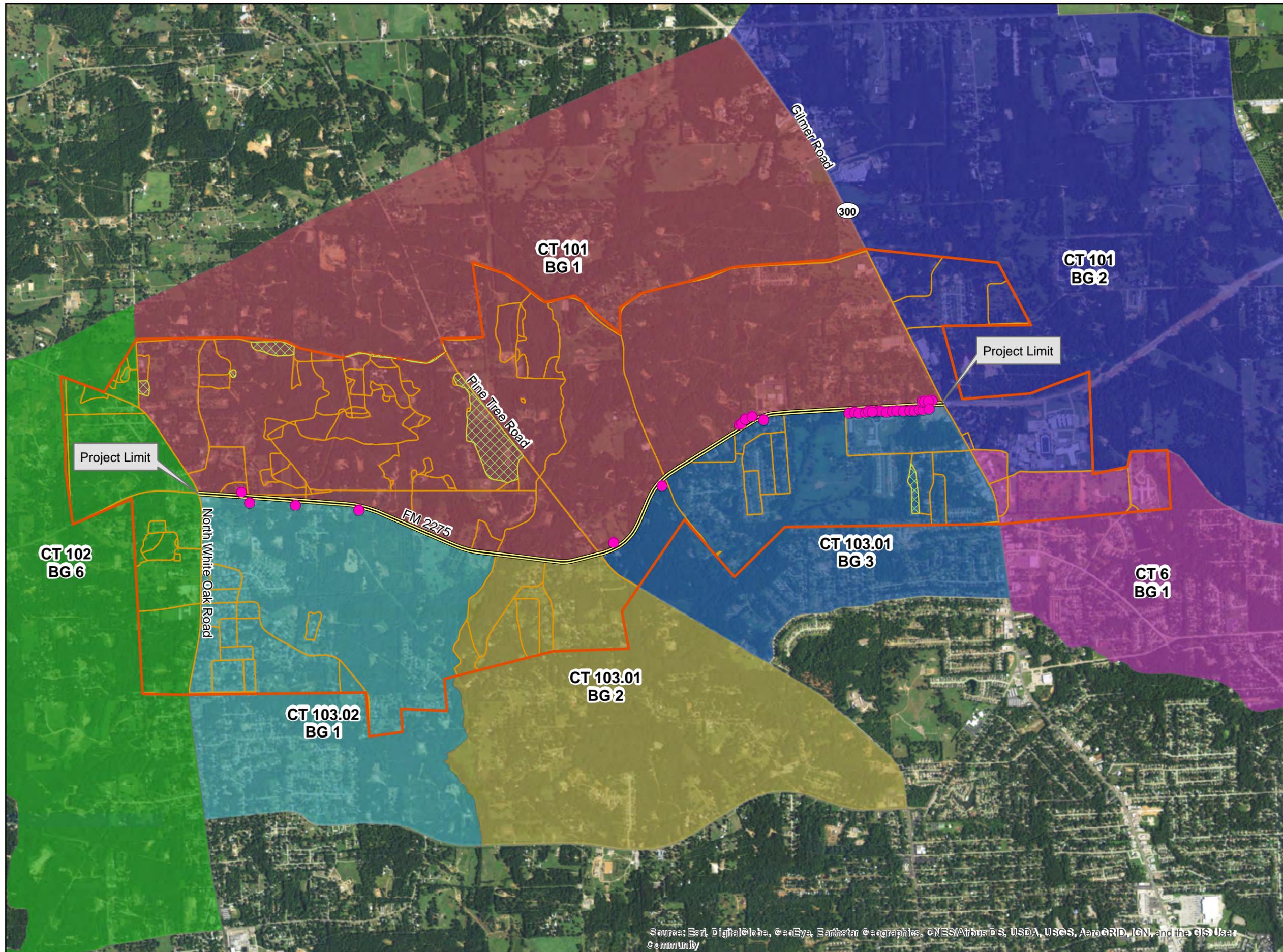


Map of Longview MPO Thoroughfare Plan

Appendix F

Resource Specific Maps

- F-1: Community Impacts Assessment Census Geographies and Displacements
- F-2: Panther Park Community Center Location Map
- F-3: Water Feature Map
- F-4: EMST Mapped and Adjusted Habitat Types
- F-5: Noise Receiver Locations



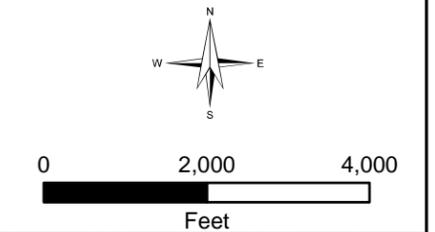
Legend

- Displacements selection
- Project Limits
- High Minority Census Block*
- Study
- Census Blocks

Census Tract (CT) & Block Group (BG)

- CT 101 BG 1
- CT 101 BG 2
- CT 102 BG 6
- CT 103.01 BG 2
- CT 103.01 BG 3
- CT 103.02 BG 1
- CT 6 BG 1

* Census blocks consisting of a minority population equal to or greater than 50 percent of the total population based on the 2010 Census data.



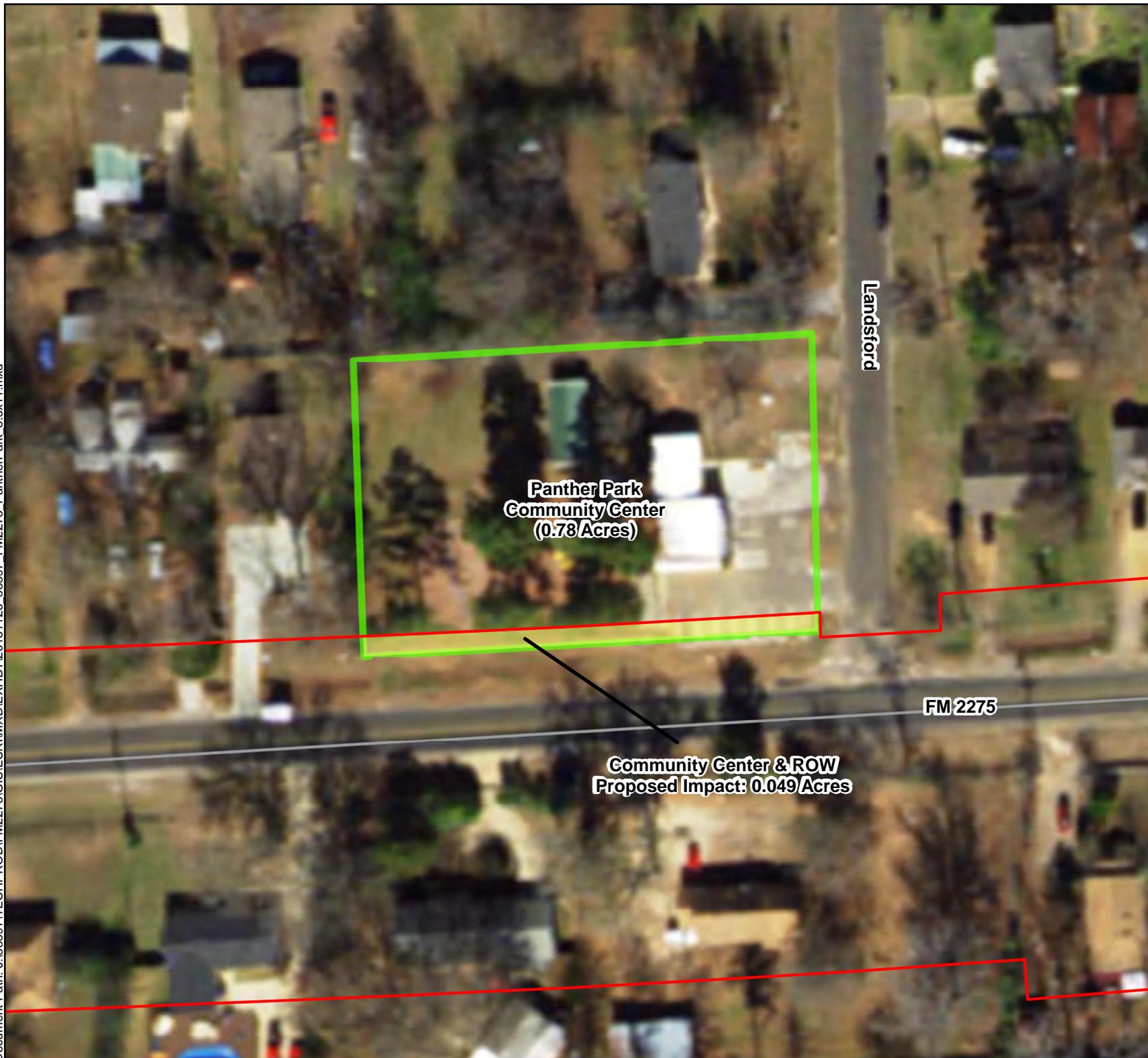
FM 2275
 From FM 3272 to SH 300
 CSJ's: 2158-01-019 & 2158-01-020
F-1: Community Impacts Assessment
Census Geographies & Displacements
 October 2018

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

DISCLAIMER: This map was generated by HNTB Corporation using GIS (Geographic Information Systems) software. No claims are made to the accuracy or completeness of the information shown herein nor to its suitability for a particular use. The scale and location of all mapped data are approximate.

Legend

-  Proposed ROW
-  Property Boundary
-  Proposed Impacts
-  Roads

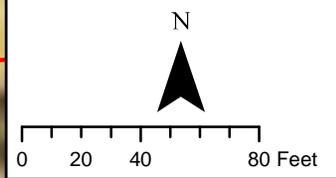


**Panther Park
Community Center
(0.78 Acres)**

Landsford

FM 2275

**Community Center & ROW
Proposed Impact: 0.049 Acres**



**FM 2275
From FM 3272 to SH 300
CSJ's: 2158-01-019 & 2158-01-020**

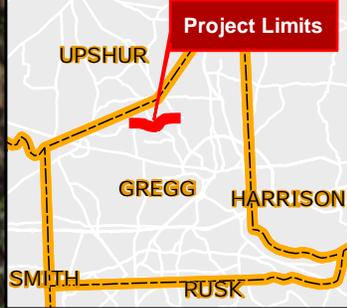
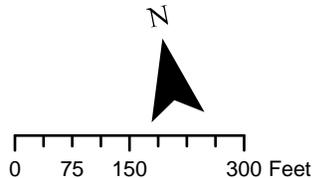
**F-2: Panther Park
Community Center
Location Map**

November 2018



Legend

-  Water Features
-  Wetland Features
-  Data Point
-  Proposed ROW

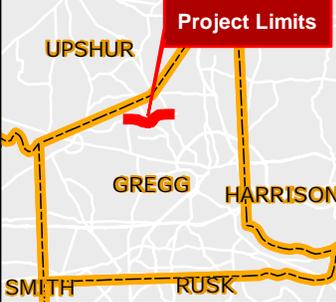
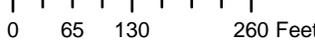


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From FM 3272 to SH 300
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F-3: Water Features Map

Legend

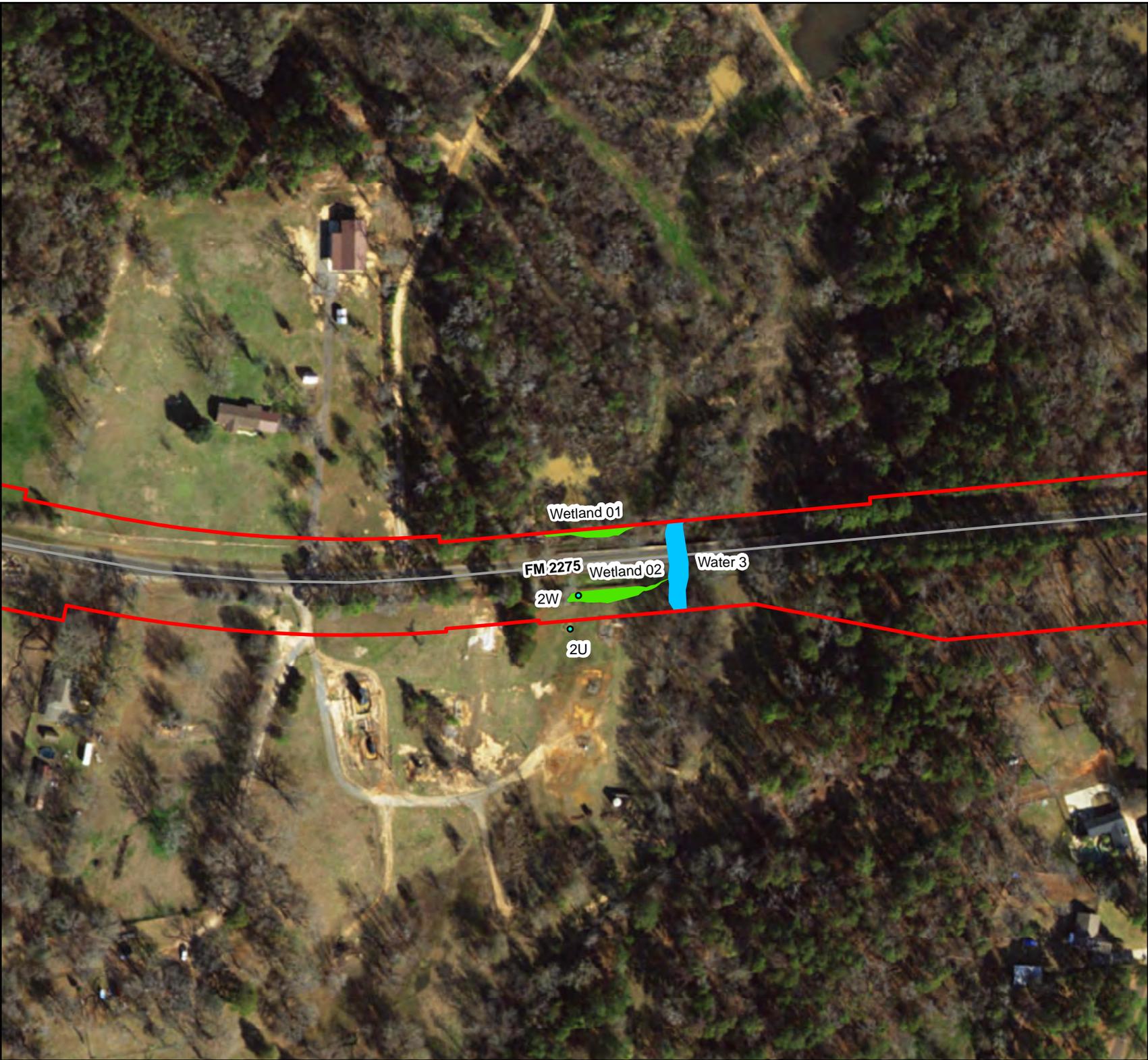
-  Water Features
-  Wetland Features
-  Data Point
-  Proposed ROW

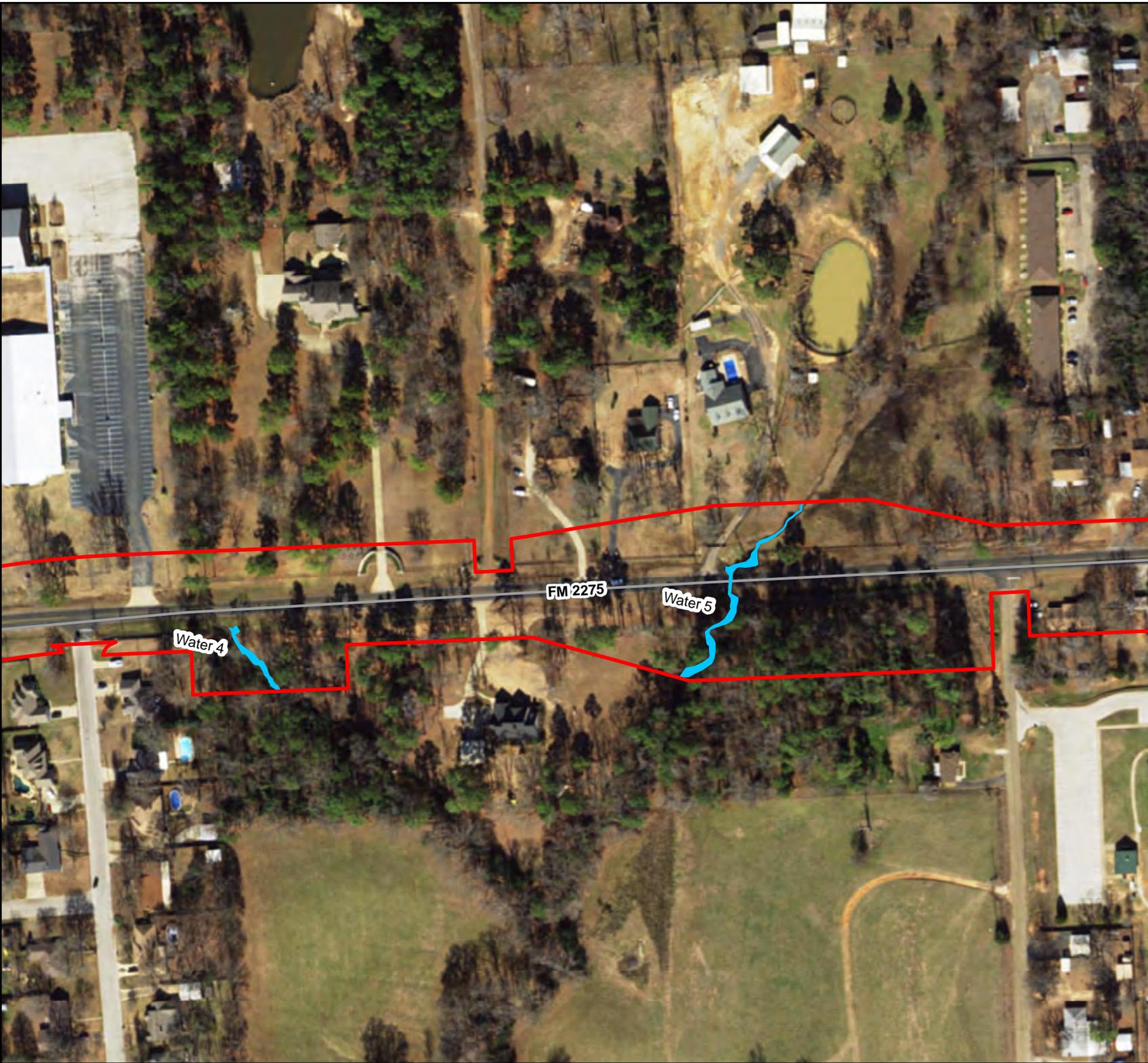


FM 2275
From FM 3272 to SH 300
CSJ's: 2158-01-019 & 2158-01-020

**F-3:
Water Features Map**

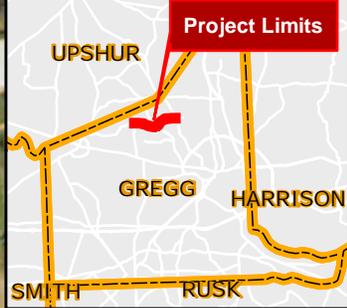
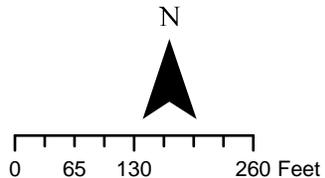
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Legend

-  Water Features
-  Wetland Features
-  Data Point
-  Proposed ROW

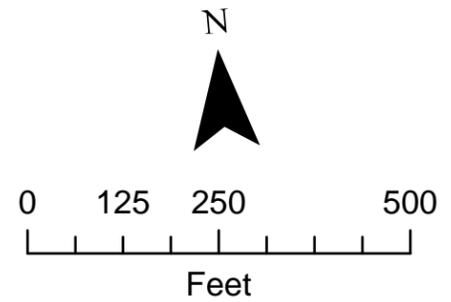


FM 2275
From FM 3272 to SH 300
CSJ's: 2158-01-019 & 2158-01-020

F-3: Water Features Map



- Legend**
- Proposed ROW
 - Existing ROW
- EMST MOU Habitat Types
- Disturbed Prairie
 - Mixed Woodland and Forest
 - Riparian
 - Urban



FM 2275
From FM 3272 to SH 300
CSJ's: 2158-01-019 & 2158-01-020

F-4: EMST Mapped and Adjusted Habitat Types
Sheet 1 of 7

November 2018

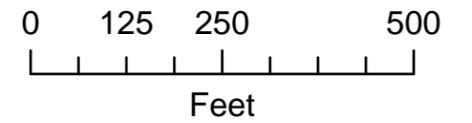
MOU Mapped Habitat



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

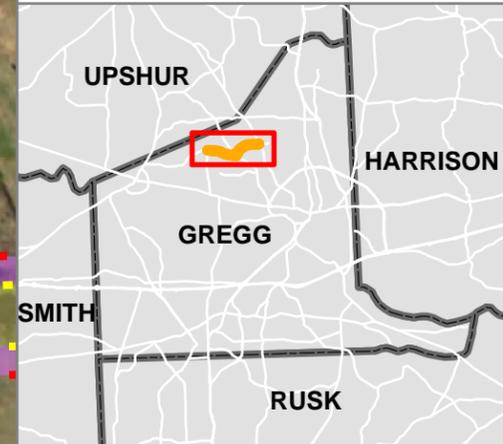
- - - Proposed ROW
- - - Existing ROW
- EMST MOU Habitat Types
- Disturbed Prairie
- Mixed Woodland and Forest
- Riparian
- Urban



Field Adjusted Habitat



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



FM 2275
From FM 3272 to SH 300
CSJ's: 2158-01-019 & 2158-01-020

F-4: EMST Mapped and Adjusted Habitat Types
Sheet 2 of 7

November 2018

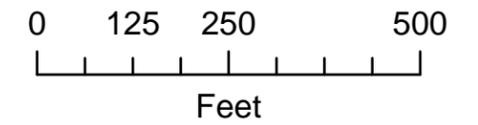
MOU Mapped Habitat



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

- Proposed ROW
- Existing ROW
- EMST MOU Habitat Types
 - Disturbed Prairie
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 - Riparian
 - Urban



Field Adjusted Habitat



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



FM 2275
From FM 3272 to SH 300
CSJ's: 2158-01-019 & 2158-01-020

F-4: EMST Mapped and Adjusted Habitat Types
Sheet 3 of 7

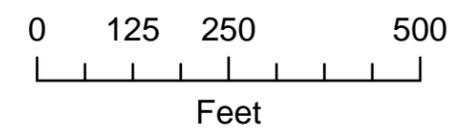
November 2018

MOU Mapped Habitat

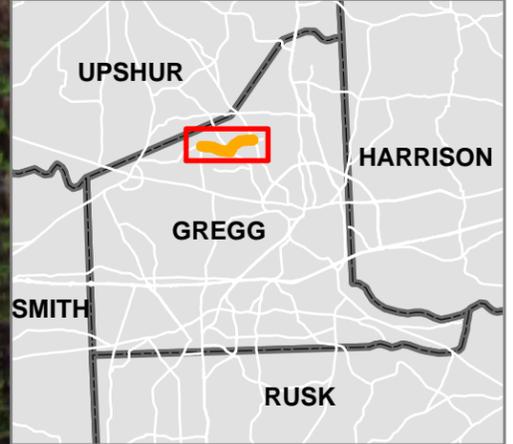


Legend

- - - Proposed ROW
- - - Existing ROW
- EMST MOU Habitat Types
- Disturbed Prairie
- Mixed Woodland and Forest
- Riparian
- Urban



Field Adjusted Habitat



FM 2275
 From FM 3272 to SH 300
 CSJ's: 2158-01-019 & 2158-01-020

F-4: EMST Mapped and Adjusted Habitat Types
Sheet 4 of 7

November 2018

MOU Mapped Habitat

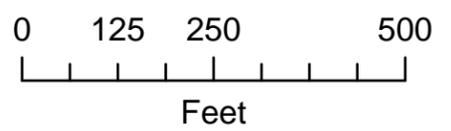


Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

- - - Proposed ROW
- - - Existing ROW
- EMST MOU Habitat Types
- Disturbed Prairie
- Mixed Woodland and Forest
- Riparian
- Urban

N



Field Adjusted Habitat



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



FM 2275
From FM 3272 to SH 300
CSJ's: 2158-01-019 & 2158-01-020

**F-4: EMST Mapped and Adjusted Habitat Types
Sheet 6 of 7**

November 2018

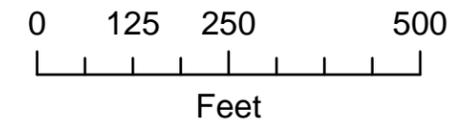
MOU Mapped Habitat



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

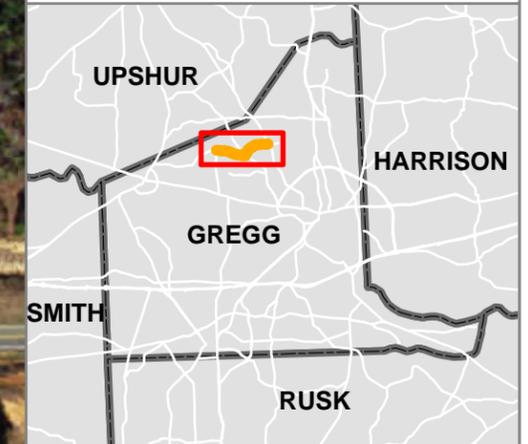
- - - Proposed ROW
- - - Existing ROW
- EMST MOU Habitat Types
- Disturbed Prairie
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- Urban



Field Adjusted Habitat



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



FM 2275
From FM 3272 to SH 300
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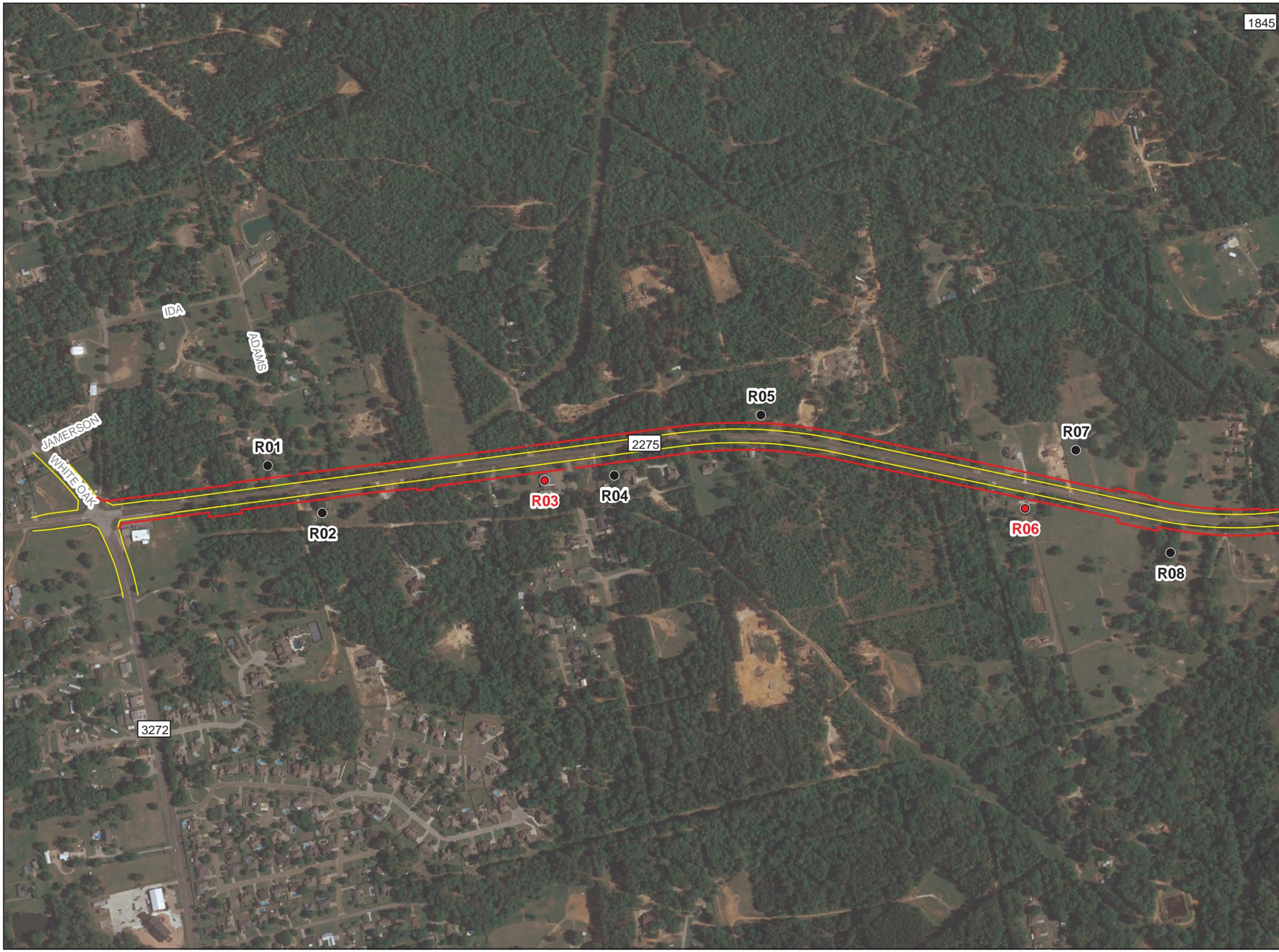
**F-4: EMST Mapped and Adjusted Habitat Types
Sheet 7 of 7**

November 2017

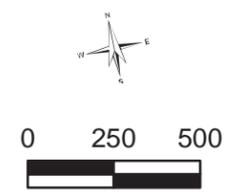
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1845

- Non-Impacted Receivers
- Potential Displacement
- Impacted Receivers
- Proposed ROW
- Existing ROW
- Parks



Aerial Source:Tx Google Imagery 2017



FM 2275
 From FM 3272 to SH 300
 CSJ's: 2158-01-019 & 2158-01-020

**F-5:
 Noise Receiver
 Locations
 Sheet 1 of 3**

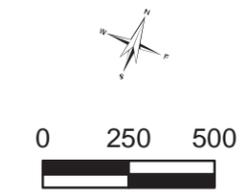
Revised: 11/27/2018

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- Non-Impacted Receivers
- Potential Displacement
- Impacted Receivers
- Proposed ROW
- Existing ROW
- Parks

Aerial Source:Tx Google Imagery 2017



FM 2275
From FM 3272 to SH 300
CSJ's: 2158-01-019 & 2158-01-020

**F-5:
Noise Receiver
Locations
Sheet 2 of 3**

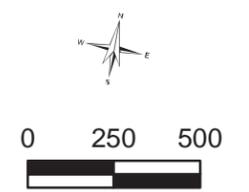
Revised: 11/27/2018

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- Non-Impacted Receivers
- Potential Displacement
- Impacted Receivers
- Proposed ROW
- Existing ROW
- Parks

Aerial Source: Tx Google Imagery 2017



FM 2275
From FM 3272 to SH 300
CSJ's: 2158-01-019 & 2158-01-020

**F-5:
Noise Receiver
Locations
Sheet 3 of 3**

Revised: 11/27/2018

Appendix G
U.S. Department of Agriculture's
Farmland Conversion Impact Rating Form

FARMLAND CONVERSION IMPACT RATING

PART I (To be completed by Federal Agency)		Date Of Land Evaluation Request			
Name of Project		Federal Agency Involved			
Proposed Land Use		County and State			
PART II (To be completed by NRCS)		Date Request Received By NRCS		Person Completing Form:	
Does the site contain Prime, Unique, Statewide or Local Important Farmland? <i>(If no, the FPPA does not apply - do not complete additional parts of this form)</i>		YES <input type="checkbox"/>	NO <input type="checkbox"/>	Acres Irrigated	Average Farm Size
Major Crop(s)	Farmable Land In Govt. Jurisdiction Acres: %		Amount of Farmland As Defined in FPPA Acres: %		
Name of Land Evaluation System Used	Name of State or Local Site Assessment System		Date Land Evaluation Returned by NRCS		
PART III (To be completed by Federal Agency)		Alternative Site Rating			
		Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly					
B. Total Acres To Be Converted Indirectly					
C. Total Acres In Site					
PART IV (To be completed by NRCS) Land Evaluation Information					
A. Total Acres Prime And Unique Farmland					
B. Total Acres Statewide Important or Local Important Farmland					
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted					
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value					
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)					
PART VI (To be completed by Federal Agency) Site Assessment Criteria <i>(Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)</i>		Maximum Points	Site A	Site B	Site C
1. Area In Non-urban Use		(15)			
2. Perimeter In Non-urban Use		(10)			
3. Percent Of Site Being Farmed		(20)			
4. Protection Provided By State and Local Government		(20)			
5. Distance From Urban Built-up Area		(15)			
6. Distance To Urban Support Services		(15)			
7. Size Of Present Farm Unit Compared To Average		(10)			
8. Creation Of Non-farmable Farmland		(10)			
9. Availability Of Farm Support Services		(5)			
10. On-Farm Investments		(20)			
11. Effects Of Conversion On Farm Support Services		(10)			
12. Compatibility With Existing Agricultural Use		(10)			
TOTAL SITE ASSESSMENT POINTS		160			
PART VII (To be completed by Federal Agency)					
Relative Value Of Farmland (From Part V)		100			
Total Site Assessment (From Part VI above or local site assessment)		160			
TOTAL POINTS (Total of above 2 lines)		260			
Site Selected:	Date Of Selection	Was A Local Site Assessment Used? YES <input type="checkbox"/> NO <input type="checkbox"/>			
Reason For Selection:					
Name of Federal agency representative completing this form:					Date:

(See Instructions on reverse side)

STEPS IN THE PROCESSING THE FARMLAND AND CONVERSION IMPACT RATING FORM

- Step 1 - Federal agencies (or Federally funded projects) involved in proposed projects that may convert farmland, as defined in the Farmland Protection Policy Act (FPPA) to nonagricultural uses, will initially complete Parts I and III of the form. For Corridor type projects, the Federal agency shall use form NRCS-CPA-106 in place of form AD-1006. The Land Evaluation and Site Assessment (LESA) process may also be accessed by visiting the FPPA website, <http://fppa.nrcs.usda.gov/lesa/>.
- Step 2 - Originator (Federal Agency) will send one original copy of the form together with appropriate scaled maps indicating location(s) of project site(s), to the Natural Resources Conservation Service (NRCS) local Field Office or USDA Service Center and retain a copy for their files. (NRCS has offices in most counties in the U.S. The USDA Office Information Locator may be found at http://offices.usda.gov/scripts/ndISAPI.dll/oip_public/USA_map, or the offices can usually be found in the Phone Book under U.S. Government, Department of Agriculture. A list of field offices is available from the NRCS State Conservationist and State Office in each State.)
- Step 3 - NRCS will, within 10 working days after receipt of the completed form, make a determination as to whether the site(s) of the proposed project contains prime, unique, statewide or local important farmland. (When a site visit or land evaluation system design is needed, NRCS will respond within 30 working days.
- Step 4 - For sites where farmland covered by the FPPA will be converted by the proposed project, NRCS will complete Parts II, IV and V of the form.
- Step 5 - NRCS will return the original copy of the form to the Federal agency involved in the project, and retain a file copy for NRCS records.
- Step 6 - The Federal agency involved in the proposed project will complete Parts VI and VII of the form and return the form with the final selected site to the servicing NRCS office.
- Step 7 - The Federal agency providing financial or technical assistance to the proposed project will make a determination as to whether the proposed conversion is consistent with the FPPA.

INSTRUCTIONS FOR COMPLETING THE FARMLAND CONVERSION IMPACT RATING FORM

(For Federal Agency)

Part I: When completing the "County and State" questions, list all the local governments that are responsible for local land use controls where site(s) are to be evaluated.

Part III: When completing item B (Total Acres To Be Converted Indirectly), include the following:

1. Acres not being directly converted but that would no longer be capable of being farmed after the conversion, because the conversion would restrict access to them or other major change in the ability to use the land for agriculture.
2. Acres planned to receive services from an infrastructure project as indicated in the project justification (e.g. highways, utilities planned build out capacity) that will cause a direct conversion.

Part VI: Do not complete Part VI using the standard format if a State or Local site assessment is used. With local and NRCS assistance, use the local Land Evaluation and Site Assessment (LESA).

1. Assign the maximum points for each site assessment criterion as shown in § 658.5(b) of CFR. In cases of corridor-type project such as transportation, power line and flood control, criteria #5 and #6 will not apply and will, be weighted zero, however, criterion #8 will be weighed a maximum of 25 points and criterion #11 a maximum of 25 points.
2. Federal agencies may assign relative weights among the 12 site assessment criteria other than those shown on the FPPA rule after submitting individual agency FPPA policy for review and comment to NRCS. In all cases where other weights are assigned, relative adjustments must be made to maintain the maximum total points at 160. For project sites where the total points equal or exceed 160, consider alternative actions, as appropriate, that could reduce adverse impacts (e.g. Alternative Sites, Modifications or Mitigation).

Part VII: In computing the "Total Site Assessment Points" where a State or local site assessment is used and the total maximum number of points is other than 160, convert the site assessment points to a base of 160.

Example: if the Site Assessment maximum is 200 points, and the alternative Site "A" is rated 180 points:

$$\frac{\text{Total points assigned Site A}}{\text{Maximum points possible}} = \frac{180}{200} \times 160 = 144 \text{ points for Site A}$$

For assistance in completing this form or FPPA process, contact the local NRCS Field Office or USDA Service Center.

NRCS employees, consult the FPPA Manual and/or policy for additional instructions to complete the AD-1006 form.

CORRIDOR - TYPE SITE ASSESSMENT CRITERIA

The following criteria are to be used for projects that have a linear or corridor - type site configuration connecting two distant points, and crossing several different tracts of land. These include utility lines, highways, railroads, stream improvements, and flood control systems. Federal agencies are to assess the suitability of each corridor - type site or design alternative for protection as farmland along with the land evaluation information.

(1) How much land is in nonurban use within a radius of 1.0 mile from where the project is intended?

More than 90 percent - 15 points
90 to 20 percent - 14 to 1 point(s)
Less than 20 percent - 0 points

(2) How much of the perimeter of the site borders on land in nonurban use?

More than 90 percent - 10 points
90 to 20 percent - 9 to 1 point(s)
Less than 20 percent - 0 points

(3) How much of the site has been farmed (managed for a scheduled harvest or timber activity) more than five of the last 10 years?

More than 90 percent - 20 points
90 to 20 percent - 19 to 1 point(s)
Less than 20 percent - 0 points

(4) Is the site subject to state or unit of local government policies or programs to protect farmland or covered by private programs to protect farmland?

Site is protected - 20 points
Site is not protected - 0 points

(5) Is the farm unit(s) containing the site (before the project) as large as the average - size farming unit in the County ?

(Average farm sizes in each county are available from the NRCS field offices in each state. Data are from the latest available Census of Agriculture, Acreage or Farm Units in Operation with \$1,000 or more in sales.)
As large or larger - 10 points
Below average - deduct 1 point for each 5 percent below the average, down to 0 points if 50 percent or more below average - 9 to 0 points

(6) If the site is chosen for the project, how much of the remaining land on the farm will become non-farmable because of interference with land patterns?

Acreage equal to more than 25 percent of acres directly converted by the project - 25 points
Acreage equal to between 25 and 5 percent of the acres directly converted by the project - 1 to 24 point(s)
Acreage equal to less than 5 percent of the acres directly converted by the project - 0 points

(7) Does the site have available adequate supply of farm support services and markets, i.e., farm suppliers, equipment dealers, processing and storage facilities and farmer's markets?

All required services are available - 5 points
Some required services are available - 4 to 1 point(s)
No required services are available - 0 points

(8) Does the site have substantial and well-maintained on-farm investments such as barns, other storage building, fruit trees and vines, field terraces, drainage, irrigation, waterways, or other soil and water conservation measures?

High amount of on-farm investment - 20 points
Moderate amount of on-farm investment - 19 to 1 point(s)
No on-farm investment - 0 points

(9) Would the project at this site, by converting farmland to nonagricultural use, reduce the demand for farm support services so as to jeopardize the continued existence of these support services and thus, the viability of the farms remaining in the area?

Substantial reduction in demand for support services if the site is converted - 25 points
Some reduction in demand for support services if the site is converted - 1 to 24 point(s)
No significant reduction in demand for support services if the site is converted - 0 points

(10) Is the kind and intensity of the proposed use of the site sufficiently incompatible with agriculture that it is likely to contribute to the eventual conversion of surrounding farmland to nonagricultural use?

Proposed project is incompatible to existing agricultural use of surrounding farmland - 10 points
Proposed project is tolerable to existing agricultural use of surrounding farmland - 9 to 1 point(s)
Proposed project is fully compatible with existing agricultural use of surrounding farmland - 0 points

Appendix H

Resource Agency Coordination

Stephanie Guillot

From: Jay Tullos Jr <Jay.Tullos@txdot.gov>
Sent: Tuesday, May 23, 2017 2:24 PM
To: Stephanie Guillot; John Young Jr; Patrick Lee
Cc: Brooke Droptini; Mary Fletcher
Subject: FW: Early Coordination for FM 2275, CSJ: 2158-01-019 &2158-01-020, Gregg Co.

TPWD had no comments on the BE Form. I've uploaded and closed out the early coordination in ECOS.

Thanks,

jay

From: Sue Reilly [mailto:Sue.Reilly@tpwd.texas.gov]
Sent: Tuesday, May 23, 2017 11:45 AM
To: Jay Tullos Jr
Subject: RE: Early Coordination for FM 2275, CSJ: 2158-01-019 &2158-01-020, Gregg Co.

Jay,

I do not have any comments on this project.

Thank you for submitting the following project for early coordination: FM 2275 widening (CSJ 2158-01-019). TPWD appreciates TxDOT's commitment to implement the practices listed in the Biological Evaluation Form submitted on April 24, 2017. Based on a review of the documentation, the avoidance and mitigation efforts described, and provided that project plans do not change, TPWD considers coordination to be complete. However, please note it is the responsibility of the project proponent to comply with all federal, state, and local laws that protect plants, fish, and wildlife.

According to §2.204(g) of the 2013 TxDOT-TPWD MOU, TxDOT agreed to provide TXNDD reporting forms for observations of tracked SGCN (which includes federal- and state-listed species) occurrences within TxDOT project areas. Please keep this mind when completing project due diligence tasks. For TXNDD submission guidelines, please visit the following link:

http://tpwd.texas.gov/huntwild/wild/wildlife_diversity/txndd/submit.phtml

Thank you,

Sue Reilly
Transportation Assessment Liaison
TPWD Wildlife Division
512-389-8021

From: WHAB_TxDOT
Sent: Monday, April 24, 2017 10:25 AM
To: Jay Tullos Jr <Jay.Tullos@txdot.gov>
Cc: Sue Reilly <Sue.Reilly@tpwd.texas.gov>
Subject: RE: Early Coordination for FM 2275, CSJ: 2158-01-019 &2158-01-020, Gregg Co.

The TPWD Wildlife Habitat Assessment Program has received your request and has assigned it project ID # 37889. The Habitat Assessment Biologist who will complete your project review is copied on this email.

Thank you,

John Ney

Administrative Assistant

Texas Parks & Wildlife Department

Wildlife Diversity Program – Habitat Assessment Program

4200 Smith School Road

Austin, TX 78744

Office: (512) 389-4571

From: Jay Tullos Jr [<mailto:Jay.Tullos@txdot.gov>]

Sent: Monday, April 24, 2017 9:12 AM

To: WHAB_TxDOT <WHAB_TxDOT@tpwd.texas.gov>

Cc: Stephanie Guillot (sguillot@HNTB.com) <sguillot@HNTB.com>

Subject: Early Coordination for FM 2275, CSJ: 2158-01-019 &2158-01-020, Gregg Co.

Please find attached the Early Coordination Package for this project.

