

Draft Environmental Assessment

Farm to Market (FM) Road 1777

Project Limits: From SH 66 to FM 6

CSJ: 1014-04-016

Collin County, Texas

August 2024

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

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CSJ: 1014-04-016 Acronyms

Acronyms

AADT annual average daily traffic APE area of potential effects

BG block group

BMP Best Management Practice

CAFE Corporate Average Fuel Economy
CFR Code of Federal Regulations
CGP Construction General Permit
CRIS Crash Record Information System
CMAQ Congestion Mitigation and Air Quality
CMP congestion management process

CO carbon monoxide
CR County Road
CWA Clean Water Act

dB(A): A-weighted decibel level

DHHS Department of Health and Human Services

DNT Dallas North Tollway
DPM diesel particulate matter
EA Environmental Assessment

EIS Environmental Impact Statement

EFH The Essential Fish Habitat

EMST Ecological Mapping Systems of Texas

EO Executive Order

EPA Environmental Protection Agency

EPIC Environmental Permits, Issues and Commitments

ERLT Emission Rate Lookup Tables ESA Endangered Species Act

FEMA Federal Emergency Management Agency

FHWA Federal Highway Administration

FM Farm to Market

FONSI Finding of No Significant Impact FTA Federal Transit Administration

GHG greenhouse gas

IBWC International Boundary Water Commission
IPAC Information for Planning and Consultation
IPCC Intergovernmental Panel on Climate Change

ISA Initial Site Assessment
LEP Limited English Proficiency
MBTA Migratory Bird Treaty Act

MMT million metric tons

MOU Memorandum of Understanding

MS4 Municipal Separate Storm Sewer System

MSA Magnuson-Stevens Fishery Conservation and Management Act

MSAT Mobile Source Air Toxics

MTP Metropolitan Transportation Plan
NAAQS National Ambient Air Quality Standards

CSJ: 1014-04-016 Acronyms

NAC FHWA Noise Abatement Criteria

NCTCOG North Central Texas Council of Governments

NEPA National Environmental Policy Act
NHD National Hydrography Dataset
NHPA National Historic Preservation Act
NMFS National Marine Fisheries Service

NPDES National Pollutant Discharge Elimination System

NRCS Natural Resources Conservation Service
NRHP National Register of Historic Places

NWI National Wetland Inventory

NWP Nationwide Permit

OHWM Ordinary High Water Mark

PA-TU First Amended Programmatic Agreement among the FHWA, TxDOT, the Texas

SHPO, and the Advisory Council on Historic Preservation Regarding the

i

Implementation of Transportation Undertakings

PCN Pre-construction Notification

PM particulate matter ppm parts per million

PS&E Plans, Specifications, and Estimates

ROW right of way

SAL State Antiquities Landmark

SGCN Species of Greatest Conservation Need

SH State Highway

SHPO State Historic Preservation Officer

SIP State Implementation Plan SOV single occupancy vehicle

SW3P Storm Water Pollution Prevention Plan

TAC Texas Administrative Code

TCEQ Texas Commission on Environmental Quality

TCMP Texas Coastal Zone Management Plan

TDM Travel Demand Management
TERP Texas Emissions Reduction Plan
THC Texas Historical Commission

TIP Transportation Improvement Program
TMA Transportation Management Area

TPDES Texas Pollutant Discharge Elimination System
TPP Transportation Planning and Programming

TPWD Texas Parks & Wildlife Department

TSM Traffic System Management
TWDB Texas Water Development Board
TxDOT Texas Department of Transportation
TXNDD Texas Natural Diversity Database

US or U.S. United States

USACE United States Army Corps of Engineers

USCG United States Coast Guard

USDA United States Department of Agriculture

USDOT U.S. Department of Transportation

CSJ: 1014-04-016 Acronyms

USFWS United States Fish and Wildlife Service

USGS United States Geological Survey

VMT Vehicle Miles Traveled

1.0 Introduction

The Texas Department of Transportation (TxDOT) Dallas District proposes improvements along Farm-to-Market (FM) Road 1777 in Collin County, Texas (see **Figure 1** in **Appendix A**). The purpose of this Environmental Assessment (EA) is to study the potential environmental consequences of the proposed project and to determine whether such consequences warrant the preparation of an Environmental Impact Statement (EIS). The EA is prepared to comply with both TxDOT's environmental review rules and the National Environmental Policy Act (NEPA). The EA will be made available for public review and TxDOT will consider any comments submitted following the comment period. If TxDOT determines that there are no significant adverse effects, it will prepare and sign a Finding of No Significant Impact (FONSI), which will be made available to the public.

2.0 Project Description

2.1 Existing Facility

Existing facility FM 1777 (see **Appendix B**) from SH 66 to FM 6 has two travel lanes, one travel lane in each direction, no shoulders, and grass-lined drainage ditches. Dedicated left turn lanes are located in several locations along the limits. Existing lanes are each 10-feet wide, with no median. ROW is typically 60-feet to 90-feet wide. There are no shoulders, sidewalks, or shared use paths along the extent of FM 1777.

2.2 Proposed Facility

The proposed facility (See **Appendix C**) is consistent along the entire length of the proposed project. The proposed facility includes an ultimate phase of six 12-foot-wide travel lanes (3 lanes in each direction), with an interim phase of four 12-foot-wide lanes (2 lanes in each direction). The proposed project accommodates an ultimate configuration of six 12-foot-wide travel lanes. Proposed ROW would typically be 140-feet, with a maximum ROW width of 226 feet. The 226-foot ROW width occurs in several locations where the bridge segments occur.

2.3 Logical Termini and Independent Utility

Federal regulations require that federally funded transportation projects have logical termini (23 CFR 771.111[f][1]). Simply stated, this means that a project must have rational beginning and end points. Those end points may not be created simply to avoid proper analysis of environmental impacts. The limits for the proposed improvements to FM 1777 are from SH 66 to FM 6, and these limits were chosen because they are major cross-streets.

Federal regulations require that a project have independent utility and be a reasonable expenditure even if no other transportation improvements are made in the area (23 CFR 771.111[f][2]). This means a project must be able to provide benefit by itself and must not

compel further expenditures to make the project useful. Stated another way, a project must be able to satisfy its purpose and need with no other projects being built. The proposed project can stand on its own without the implementation of other traffic improvements as the project provides improved mobility along FM 1777 without the need for improvements to adjacent facilities. Because the proposed project stands alone, it does not irretrievably commit federal funds for other transportation projects.

Federal law prohibits a project from restricting consideration of alternatives for other reasonably foreseeable transportation improvements (23 CFR 771.111[f][3]). This means that a project must not dictate or restrict any future roadway alternatives. The proposed project would not restrict the consideration of alternatives for other foreseeable transportation improvements because the proposed improvements would not preclude the future widening of adjacent roadway facilities or the development of other transportation modes or routes.

2.4 Planning Consistency

Both the financially constrained 2045 Metropolitan Transportation Plan (MTP) and the 2023–2026 Transportation Improvement Program (TIP) were found to conform to the Texas Commission on Environmental Quality (TCEQ) State Implementation Plan (SIP) by the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) on December 15, 2022. Additionally, FHWA concurred on the determination of project level conformity on June 26, 2023.

3.0 Purpose and Need

3.1 Need

The proposed improvements are needed because the existing two-lane FM 1777 roadway between the intersections of SH 66 and FM 6 in Collin County is inadequate to meet future traffic volumes, resulting in congestion and reduced mobility, and is a risk to motorist safety because of roadway design deficiencies.

3.2 Supporting Facts and/or Data

3.2.1 Traffic

Traffic data for the baseline year 2026 and future year 2046 show an annual average daily traffic (AADT) volume of 4,300 and 6,300 vehicles per day, respectively. The future (2046) projections for traffic volumes indicate a 47 percent increase from the 2026 levels, and this increased volume would lead to even further decreases in mobility along the highway.

3.2.2 Safety

The existing FM 1777 roadway has design deficiencies, such as little to no shoulders, no designated left turn lanes, no signalized intersections, and limited amount of lanes to accommodate proper traffic movement, that lead to increased risks to motorists.

According to the TxDOT Crash Record Information System (CRIS), there were 29 crashes along FM 1777 within the limits of the proposed project between 2017 and 2021. Among these 29 crashes, there was one fatality, two suspected minor injury crashes, and two possible injury crashes. Compared to similar rural FM roadways statewide between 2017 and 2021, FM 1777 was below the statewide average rate in terms of crashes per 100 million vehicle miles in 2017, 2018, and 2021. However, for 2019 and 2021, the FM 1777 rates were above the statewide average rates (Jacobs, 2023).

3.2.3 Population Data

Population data related to the proposed project area shows substantial increases over the past several decades. As can be seen in **Table 3.2-1** below, the cities present along the proposed project corridor have seen large increases in population over the past several decades. These growth trends are anticipated to continue. This population growth would lead to increased congestion and therefore decreased mobility along the corridor.

Table 3.2-1. Population Data					
Region	1980	1990	2000	2010	2020
Josephine	*416	503	594	812	2,119
Royse City	1,156	2,206	2,957	9,349	13,508

^{*}Population data for the year 1982. Source: Texas State Historical Association, 1995. US Census Bureau 2000, 2010, and 2020.

3.3 Purpose

The purpose of the project is to reduce congestion, improve mobility and safety, and correct access conflicts.

4.0 Alternatives

4.1 Build Alternative

The Build Alternative is described in **Section 2.0** and includes the reconstruction of 6.02 miles of FM 1777 from SH 66 to FM 6 in Collin County, Texas. FM 1777 is proposed to be a four-lane, ultimate six-lane, urban collector street within an anticipated ROW width of 140 to 226 feet depending on location. The roadway facility would also include shoulders, turn lanes, a sidewalk, and a shared use path. The shared-use path would be included along the east side of the corridor, and the sidewalk would be on the west side. The Build Alternative would require

the acquisition of approximately 49.27 acres of new ROW and 0.16 acre of permanent drainage easement.

The build alternative meets the need and purpose by providing additional capacity to improve mobility and congestion, improves design deficiencies, and improves free-flow traffic conditions which improves safety.

4.2 No Build Alternative

The No Build Alternative would result in TxDOT taking none of the actions described in **Section 2.0**, and consequently the mobility improvements anticipated as a result of the Build Alternative would not occur. The Build Alternative is, therefore, the preferred alternative. The No Build Alternative would not result in the impacts to the natural and human environment described in the following sections. Despite not meeting the purpose and need for the proposed project, the No Build Alternative is carried forward for comparison purposes.

4.3 Preliminary Alternatives Considered but Eliminated from Further Consideration

The Build and No Build Alternatives were the only alternatives considered for this project.

5.0 Affected Environment and Environmental Consequences

Environmental issues were a primary focus in the planning, design, and environmental analysis processes. In support of this EA, the following technical reports were prepared and may be inspected and copied upon request at the TxDOT Dallas District Office:

- Community Impact Assessment Technical Report Form
- Archeological Resources Survey Report
- Historic Resources Survey Report
- Water Features Delineation Report
- Species Analysis Form and Spreadsheet
- Air Quality Technical Report
- Hazardous Materials Initial Site Assessment
- Traffic Noise Analysis Technical Report
- Indirect Effects Technical Report
- Cumulative Impacts Technical Report
- Addendum to the Technical Reports

Resource categories with the potential to be affected by the implementation of the proposed project are summarized in the following sections.

5.1 Right of Way/Potential Displacements

The project would require the acquisition of approximately 49.27 acres of new ROW and 0.16 acre of permanent drainage easement (see **Appendix C**).

The proposed project would potentially displace fifteen single-family homes and potentially impact two agricultural barns. No other potential commercial displacements would occur. The proposed project is not anticipated to result in separation or isolation of any groups of people or areas.

All acquisitions and relocations would be acquired in accordance with the Uniform Relocation Assistance and Real Property Acquisitions Policies Act of 1970. Relocation resources would be available to all residential and business owners without discrimination. The proposed project is not anticipated to result in separation or isolation of any groups of people or areas. See below for a list of potential displacements:

```
1684 FM 1777, Royse City Texas 75189 (Residential)
1250 FM 1777, Royse City Texas 75189 (Residential)
812 FM 1777, Royse City Texas 75189 (Residential)
810 FM 1777, Royse City Texas 75189 (Residential)
808 FM 1777, Royse City Texas 75189 (Residential)
806 FM 1777, Royse City Texas 75189 (Residential)
804 FM 1777, Josephine Texas 75164 (Residential)
706 East FM 1777, Royse City Texas 75189 (Agricultural Barn)
705 East FM 1777, Royse City Texas 75189 (Residential)
612 FM 1777, Royse City Texas 75189 (Residential)
504 East FM 1777, Royse City Texas 75189 (Residential)
501 East FM 1777, Royse City Texas 75189 (Residential)
411 FM 1777, Royse City Texas 75189 (Residential)
1855 FM 1777, Royse City Texas 75189 (Agricultural Barn)
1955 FM 1777, Royse City Texas 75189 (Residential)
2589 FM 1777, Royse City Texas 75189 (Residential)
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No Build Alternative

Under the No Build Alternative, no ROW or easements would be acquired, and no potential residential or commercial displacements would occur.

5.2 Land Use

The land use within the project area is predominantly rural agricultural and single-family residential. Single-family residential lots and residential neighborhoods occur adjacent to the FM 1777 project corridor. Royse City's Main Street (SH 66) area hosts a majority of the commercial development and community facilities near the project. South of and along SH 66, there are industrial facilities and the Northeastern Railroad, which runs west to east through Royse City. The heaviest of the commercial development, located along SH 66, is less than 1-mile from the southern extent of the project limits.

The City of Josephine's Main Street area is predominantly residential, with some commercial and government facilities, such as a city park, City Hall, a historic church, a used-goods store, and a restaurant. This Main Street area is less than 0.25-mile from the northern extent of the project limits.

The area surrounding the proposed project has remained relatively unchanged since 1995, with individual single-family residences present. By the early 2000s, several residential neighborhoods were built directly adjacent to FM 1777, with new development still occurring into 2022, based on historical aerials. The project is not anticipated to change the overall land use character of the FM 1777 project area, which is a mix of agricultural, limited commercial, and residential land uses. Future roadway-adjacent development is already planned and currently undeveloped land is likely to be converted to suburban use. It is anticipated the corridor would continue to develop, and the proposed improvements would not conflict with current or future land use.

No Build Alternative

Under the No Build Alternative, additional ROW or easements would not be acquired and no land uses would be converted to transportation use.

5.3 Farmlands

The proposed project would convert soil types subject to the Farmland Protection Policy Act (FPPA) to a nonagricultural, transportation use. The project was coordinated with the Natural Resource Conservation Service (NRCS) on October 12, 2022. A response dated October 13, 2022, included the completed Farmland Conversion Impact Rating Analysis. Based on the Farmland Conversion Impact Rating Analysis completed by NRCS (see **Appendix F**), the project area has a rating of 92, which is below the reporting threshold of 160. Therefore, the project need not be given further consideration for protection and no additional sites need to be evaluated. The Farmland Conversion Impact Rating analysis is available at the TxDOT Dallas District Area Office.

No Build Alternative

Under the No Build Alternative, no important farmland soil types would be converted to transportation use.

5.4 Utility Relocation

It is reasonably foreseeable that utilities will have to be relocated as a result of this project. The impacts resulting from removal of any utilities from within existing ROW (e.g., construction noise, potential disturbance to archeological resources, and potential impacts to species habitat) have been considered as part of the overall project footprint impacts within this environmental assessment.

Three natural gas pipelines, and two refined liquid pipelines have been identified as crossing the proposed project. Any excavations at these pipelines could cause a rupture. Two Atmos transfer stations occur along the proposed project corridor: one 530 feet south of Maple Lane and one 275 feet south of Prairie Meadow Drive. Formal utilities location and advance planning would be required to facilitate pipeline and utilities adjustments and to otherwise avoid associated impacts.

It has not yet been determined whether the dislocated utilities will be re-installed within the ROW, or to a location outside the ROW. However, the potential impacts resulting from re-installation of the displaced utilities within the ROW have been considered as part of the overall project footprint impacts (e.g., construction noise, potential disturbance to archeological resources, and potential impacts to species habitat) within this environmental assessment. To the extent that the owner of any displaced utility determines to reinstall the displaced utility at a location outside of the ROW, such location will be determined by the owner of the utility subject to the rules and policies governing the utility relocation process. Additionally, the owner of the utility will be responsible for acquiring any easements outside the ROW and ensuring that the design and construction meet all regulatory and environmental compliance requirements. See 43 Texas Administrative Code (TAC) 21.37(a)(9), (g)(1)), and (g)(4); and 43 TAC 21.38(e)(2).

No Build Alternative

Under the No Build Alternative, no utilities would be relocated from areas to be converted to transportation use.

5.5 Bicycle and Pedestrian Facilities

There are no bus or train services with routes or stops along FM 1777, and no designated bicycle facilities/lanes. Bicyclists seen during the field visit were using the full width of the roadway. No dirt pathways from pedestrian use are present along FM 1777. Pedestrians were noticed within the limits of Royse City and Josephine but not near the project area.

Bicycle and pedestrian facilities that comply with TxDOT's Bicycle Accommodation Design Guidance are proposed as part of the proposed project. TxDOT's guidance implements the U.S. Department of Transportation Policy Statement on Bicycle and Pedestrian Accommodations, as well as the FHWA policy. As described in **Section 2.0** bicycles and

pedestrians would be accommodated on the sidewalk and shared-use path to be included along the west and east sides, respectively, of FM 1777 within the project area.

No Build Alternative

Under the No Build Alternative, no shared use paths would be proposed or provided along the project area.

5.6 Community Impacts

5.6.1 Access and Travel Patterns

The proposed project would widen the existing two-lane rural roadway to an ultimate six-lane divided roadway. The proposed project also includes the construction of a sidewalk and shared-use path along the west and east sides of the corridor, respectively. Overall, the proposed project would provide increased capacity for the growing traffic volumes in the area and would improve accessibility and safety for vehicles and bicyclists/pedestrians.

Under the proposed condition, drivers traveling along FM 1777 in either direction would have reduced access when turning left because those movements would be restricted to designated median openings/intersections with left-turn bays. The current roadway allows left turn movements anywhere along the roadway which results in less safe conditions.

Changes in access and travel patterns would lead to increases in travel times for some drivers wishing to cross FM 1777 to change directions or access businesses, community facilities, or residential areas. The differences in travel times would vary based on origin and destination. The majority of residential subdivisions are located at major intersections along the roadway and would still be accessible via median openings/intersections at cross-streets. The proposed left-turn lanes would result in decreased congestion, increased mobility, and improve safety which would be expected to negate increases in travel times for local traffic.

The addition of shared use paths may encourage the use of alternate modes of transportation within the project limits, as there are limited walking and cycling facilities along the existing facility. No bus stops are located within the project limits and no changes in bus routes are anticipated as a result of the proposed project.

Emergency responders would generally experience a decrease in travel times as a result of reduced congestion and improved mobility due to the proposed improvements. While the proposed improvements would limit the ability of emergency response vehicles to cross the mainlanes, the reduced congestion and improved mobility would likely negate increases in site-specific travel times. The proposed improvements would also enhance safety for drivers and emergency responders. Vehicles on the FM1777 mainlanes would also be better able to clear a path for emergency responders, making it easier for ambulances, fire engines, and police cars to travel along FM 1777 in both directions.

No Build Alternative

Under the No Build Alternative, access and travel patterns would remain unchanged.

5.6.2 Community Cohesion

Although the widening of existing roadways can negatively impact cohesion by increasing existing separation, the proposed project is not anticipated to have a substantial impact on community cohesion.

The widened roadway would provide a sidewalk and shared use path that would provide a safe space for pedestrians and non-motorized vehicles to move along the FM 1777 facility. The potential crossing needs of pedestrians and non-motorized vehicles at intersections across FM 1777 would be identified during later design phases of the proposed project. Although no crosswalks are currently proposed within the project, crosswalks are anticipated at the intersection with FM 6. Crosswalks are also anticipated at the existing signalized intersection with SH 66.

Benefits, such as decreased travel times to community facilities, are anticipated. Access to the community facilities is anticipated to be made easier and more efficient, which is anticipated to increase the frequency with which these facilities are visited.

Although potential displacements would occur because of the proposed project, it is anticipated that some residents would rebuild on their existing lots and maintain their connection with neighbors. Overall, community cohesion would be maintained and could improve with the addition of non-vehicular mobility improvements.

No Build Alternative

The No Build Alternative would not result in beneficial impacts to the surrounding community, as described above for the Build Alternative. Taking no action to improve the roadway would lead to increased traffic congestion and decreased mobility over time and would not provide an alternative mode of transportation for non-drivers.

5.6.3 Environmental Justice

An environmental justice analysis was completed in accordance with Executive Order (EO) 12898 "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations." The study area comprises 239 census blocks. These blocks were compared to the next largest parent census geography to determine if any had appreciably greater, or greater than 50% minority populations present. Of the 239, 67 were identified as minority blocks. Among these 67, Hispanic or Latino represents the largest minority group (25.19%, 2,059 individuals). The 2022 HHS poverty guideline for a family of four is \$27,750. There are no low-income census blocks in the study area. There are fifteen potential displacements occurring adjacent to the FM 1777 project limits. Of these potential displacements, three are occurring within EJ census blocks, each within a different census

block. The remaining 15 potential displacements are occurring within 9 different non-EJ census blocks. There are no potential commercial or community facilities displacements. There are no impacts to access and/or travel patterns related to the proposed project. No negative impacts to community cohesion are anticipated with the proposed project. Benefits such as decreased travel times to community facilities, are anticipated.

There are no disproportionately high and adverse impacts to EJ populations. The reduced congestion and improved mobility would benefit the community as a whole, and the shared use path and sidewalk planned along the proposed project would serve to increase walkability for pedestrians and non-drivers.

No Build Alternative

Under the No Build Alternative, no potential impacts or changes in environmental justice considerations are anticipated.

5.6.4 Limited English Proficiency

Each of the block groups within the study area shows a presence of people who speak English "less than very well". A total of 547 limited English proficiency (LEP) individuals (8.43% of the total population over the age of 5) were identified in the study area. Of these, 521 are Spanish speakers, 14 speak Asian and Pacific Islander languages, 9 speak Indo-European languages, and 3 speak some other language.

An open house public meeting was held May 17, 2022, at Ouida Baley Middle School in Royse City, Texas. This meeting took place virtually and in-person. Notices for public involvement opportunities were provided in English and Spanish, and a translator was made available upon request; however, no requests for translation services were received. Future public involvement efforts will provide the same accommodations to ensure LEP individuals are provided with opportunities for meaningful involvement in the environmental process. A public hearing is planned for the proposed project, and Spanish translation services will be available.

No Build Alternative

The No Build Alternative would not impact LEP individuals and would not result in beneficial impacts to the surrounding community, including LEP individuals, as described above for the Build Alternative.

5.7 Visual/Aesthetic Impacts

The proposed project would represent a change in the visual landscape, as the FM 1777 mainlanes and shared-use paths would be the dominant feature in the viewshed. The surrounding viewshed has been steadily converting over several decades from rural agricultural land use to more suburban and residential development, so the proposed

expansion of FM 1777 would continue and exacerbate the increase in urbanization in the overall visual landscape. The construction of the proposed project would not impact unique or important views in the existing landscape, and the project would include aesthetic treatment and landscaping to the extent practicable.

No Build Alternative

Under the No Build Alternative, the visual landscape would remain the same and would still be dominated by FM 1777 and adjacent development.

5.8 Cultural Resources

Evaluation of impacts to cultural resources has been conducted under Section 106 of the National Historic Preservation Act in accordance with the Programmatic Agreement among FHWA, TxDOT, the Texas State Historic Preservation Officer (SHPO), and the Advisory Council on Historic Preservation Regarding the Implementation of Transportation Undertakings (PATU).

Cultural resources are structures, buildings, archeological sites, districts (a collection of related structures, buildings, and/or archeological sites), cemeteries and objects. Both federal and state laws require consideration of cultural resources during project planning. At the federal level, NEPA and the NHPA of 1966, among others, apply to transportation projects such as this one. Compliance with these laws often requires consultation with the Texas Historical Commission (THC)/SHPO and/or federally recognized tribes to determine the project's effects on cultural resources. Review and coordination of this project followed approved procedures for compliance with federal and state laws.

5.8.1 Archeology

In March 2023, under Antiquities Permit #30920, archeologists conducted a survey for the proposed improvements (2023b). It was determined that 5.65 acres of the area of potential effects (APE) would require archeological survey. Investigations consisted of pedestrian survey, four backhoe trenches, and 26 shovel tests, all of which were negative for archeological materials. During the survey, one newly recorded historic period site, 41C0L376, is outside the APE. One piece of historic whiteware was observed on the surface near the southern terminus of the survey area.

Site 41COL376 is situated in a slightly raised locale north adjacent to the survey area, but it does not intersect the APE. The site comprises a collapsed corrugated metal structure with a wooden frame. Wire nails and non-diagnostic metal attachments are present in the wood, and no diagnostically historic materials were observed on the surface. Only modern trash was found. No visible foundation was present, either. The site contains minimal research value, and it does not meet any criteria for National Register of Historic Places (NRHP) eligibility or listing as a State Antiquities Landmark (SAL).

Additionally, as backhoe access to properties along Sabine Creek was restricted due to heavy inundation, TRC recommends mechanical trenching within these parcels when weather conditions improve and backhoe access is possible. Otherwise, it is recommended that no further work is required to evaluate archeological resources within the other surveyed portions of the APE.

No Build Alternative

Under the No Build Alternative, impacts to archeological resources would not occur.

5.8.2 Historic Properties

A historic resources reconnaissance survey of architectural and engineering resources located along the project was conducted to identify historic-age resources in compliance with Section 106 of the NHPA. Historic-age resources are defined as buildings, structures, objects, districts, or sites that are or will be 50 years old or older on the date the project is let for construction.

Seventy historic-age resources are located on 40 properties. Of the 40 properties surveyed, two are recommended eligible for listing in the National Register of Historic Places (NRHP):

- Resource 29A: Shotgun House (3300 block of FM 1777)
- Resource 35: Clinard Farm Property (4496 FM 1777), including the farmhouse (Resource 35A) and historically associated outbuildings (Resources 35B-I)

There is no potential for an NRHP historic district within the APE.

Determination of Section 106 Effects Recommendations

Direct Effects

Based on current project plans and the findings of the reconnaissance survey, the project will not have adverse effects on historic properties. Specific information regarding potential direct effects to the NRHP-eligible properties is provided below:

Resource 29A: 3300 Block of FM 1777

The recommended NRHP-eligible boundary of Resource 29A is limited to the footprint of the building, which is located approximately 168 feet west of the existing ROW and approximately 195 feet from the FM 1777 pavement edge. At this location, proposed new ROW would be acquired from the east side of FM 1777 and construction on the west side of FM 1777 would be completed within the existing ROW. The proposed project would not result in a direct taking or displacement of Resource 29A or require ROW acquisition from the parcel. However, within the existing ROW the FM 1777 roadway pavement edge would move approximately 5 feet closer to the building. The proposed sidewalk would bring overall paved surface approximately 13 feet closer to the building.

Based on reconnaissance-level research, Resource 29A is not directly associated with significant events or persons in national, state, or local history necessary for significance under NRHP Criteria A or B. This building does not possess high artistic value or represent the work of a master. However, it represents a well-preserved example a Shotgun-style residence from the late nineteenth or early twentieth century. For this reason, Resource 29A is significant under Criterion C in the area of Architecture. Its period of significance is c.1900, its estimated date of construction.

Resources 35A-I: 4496 FM 1777

Based on reconnaissance-level survey, the recommended NRHP-eligible boundary of Resource 35 includes the parcel containing all known extant built resources associated with the Clinard Farm (Resources 35A-I) and the adjacent parcel, which surrounds the agricultural buildings to the north, south, and west: Collin CAD Parcel ID Nos. 2550472 and 2550473.

TxDOT historians originally coordinated the results of a reconnaissance survey with the SHPO office in April 2023. SHPO concurred with findings of eligibility and asked for further research of the NRHP-eligible Clinard Farm (property #35) to determine NRHP-boundaries and further information to ascertain proper boundaries.

It was determined that the Clinard Farm is significant under NRHP Criterion A in the area of Agriculture and retains sufficient inegrity to convey its significance. In May 2023, the Clinard Farm was determined eligible under Criterion A in the area of Agriculture with a period of significance that extends from 1940 to 1981. Appropriate boundaries for an agricultural property eligible for the NRHP under Criterion A ideally include the domestic and agricultural work zones as well as associated fields. Intensive survey (IS) efforts revealed a larger NRHP-boundary for the farm. The recommended NRHP-eligible boundary of the Clinard Farm is comprised of twenty-eight contiguous parcels, totaling approximately 1,230 acres on both sides of FM 1777. Eleven of those parcels extend into the project APE between County Road 590 and Prairie Meadow Drive.

Once intensive survey efforts revealed the size and further contributing properties to the farm, TxDOT redesigned the roadway to avoid all contributing resources of the Clinard farm. However, new ROW is required from the property's NRHP-eligible boundaries.

New ROW from four of the 11 Clinard Farm parcels located within the APE is required, including two containing built resources that contribute to the NRHP-eligible Clinard Farm (see Table 3). In total, 10.85 acres (0.88 percent) of the approximately 1,230-acre NRHP-eligible Clinard Farm is required as new ROW for the proposed project. The proposed project would not result in displacements or building removals from the property.

Additional noise and/or visual impacts were also considered. In the vicinity of both NRHP-eligible properties, FM 1777 will remain at-grade following its current alignment, which has been in place since the 1950s. FM 1777 is already a paved and heavily traveled highway with traffic averaging 3,700 vehicles per day in 2021 in the northern Royse City area. Although the

project would add capacity to FM 1777, which may result in additional traffic volume, these changes are not likely to impact the overall setting or feeling of the NRHP-eligible properties, nor their abilities to convey their NRHP significance. For these reasons, based on current project plans and the findings of the reconnaissance survey, the project would have no adverse effect on NRHP-eligible properties in the APE (Resources 29A and 35A-I).

Indirect, Cumulative or Reasonable Foreseeable Effects

Increasing suburbanization and traffic volumes are already occurring on the FM 1777 corridor. Although the project will add capacity to FM 1777, it is not expected to alter existing developmental trends in the area. The proposed FM 1777 improvements would improve traffic flow and overall safety but would not have a major impact to NRHP-eligible properties when added to other past, present, and reasonably foreseeable actions. Based on current project plans and the findings of the reconnaissance survey, the project will not have cumulative or reasonably foreseeable adverse effects on NRHP-eligible properties.

No Build Alternative

The No Build Alternative would not result in impacts to historic standing structures.

5.9 Protected Lands

5.9.1 Section 4(f) of the Department of Transportation Act

There is a football stadium operated by Royse City Independent School District, located adjacent to FM 1777 near the southern terminus of the project area. There is no ROW required from the school property adjacent to the stadium. Therefore, there would be no impacts to Section 4(f) recreational facility properties.

Resources 35A-I: 4496 FM 1777

The proposed project would require use of 10.85 acres (0.88 percent) of the approximately 1,230-acre NRHP-eligible Clinard Farm (Resource 35A-L). TxDOT determined that the proposed project meets the requirements for a Section 4(f) de minimis impact finding under 23 CFR 774. The proposed use of the Section 4(f) property would not adversely affect the activities, features, or attributes that qualify the property for protection under Section 4(f). TxDOT based its determination on the fact that the use for the Clinard Farm amounts to less than 1% of the property's overall acreage and the project will have no adverse effect on the NRHP-eligible property.

No Build Alternative

The No Build Alternative would not result in impacts to Section 4(f) resources.

5.9.2 Section 6(f) of the Land and Water Conservation Fund Act

There are no Section 6(f) properties present in the project area.

5.9.3 Chapter 26 of the Texas Parks and Wildlife Code

There are no Chapter 26 properties present in the project area.

No Build Alternative

Under the No Build Alternative, impacts to properties protected by Section 4(f), Section 6(f), or Chapter 26 would not occur.

5.10 Water Resources

5.10.1 Clean Water Act Section 404

This project would involve regulated activity in jurisdictional waters and therefore will require authorization under Section 404. The following table (**Table 5.10-1**), as well as **Appendix E**, shows the waters that are anticipated to be jurisdictional waters in which regulated activity is anticipated to take place. The table also indicates whether the impacts are anticipated to be authorized under Section 404 by a non-reporting nationwide permit (i.e., no pre-construction notification [PCN] required), or if it is anticipated that a nationwide permit with PCN, individual standard permit, letter of permission, or regional general permit will be required.

Table 5.10-1. Water Features within Proposed Construction Limits					
Name of Water Feature	Type of Water Feature	Location of Water Feature	Covered by non-reporting nationwide permit under Section 404?	Nationwide permit with PCN, individual standard permit, letter of permission, or regional general permit required under Section 404?	
Unnamed Wetland (W-1)	Palustrine Emergent Wetland	32.98699, - 96.32430	N	Υ	
Unnamed Drainage (DF-1)	Drainage Ditch	32.99238, -96.32827	Y	N	
Unnamed Tributary of Sabine Creek (ES- 2)	Ephemeral Stream	33.013303, - 96.322680	Y	N	
Unnamed Pond (Pond 5)	Pond/Impoundment	33.0125, -96.3223	Y	N	
Unnamed Wetland (W-3)	Palustrine Emergent Wetland	33.0125, -96.3223	N	Y	
Unnamed Tributary of Sabine Creek (DF-4)	Drainage Ditch	33.0113, -96.3224	Y	N	
Unnamed Tributary of Sabine Creek (ES- 3)	Ephemeral Stream	33.02251, -96.32195	Y	N	
Unnamed Tributary of Sabine Creek (ES- 4)	Ephemeral Stream	33.02758, -96.32176	Y	N	

Table 5.10-1. Water Features within Proposed Construction Limits						
Name of Water Feature	Type of Water Feature	Location of Water Feature	Covered by non-reporting nationwide permit under Section 404?	Nationwide permit with PCN, individual standard permit, letter of permission, or regional general permit required under Section 404?		
Unnamed Tributary of Sabine Creek (ES- 5)	Ephemeral Stream	33.03661, -96.31007	N	Υ		
Unnamed Tributary of Sabine Creek (ES- 6)	Ephemeral Stream	33.04167, -96.30917	Y	N		
Unnamed Tributary of Sabine Creek (DF- 3)	Drainage Ditch	33.04173, -96.30883	Y	N		

Source: TxDOT 2023d, TxDOT 2024a

This project will use a reportable nationwide permit 14 (linear transportation projects) under Section 404, where a PCN will be submitted to the USACE. At this time, the PCN package has not been submitted to the USACE for review. Additionally, coordination with the USACE has not begun.

The need for an individual standard permit under Section 404 is not anticipated. If it is later determined that an individual standard permit under Section 404 is needed, compliance with EPA's Section 404(b)(1) Guidelines will be confirmed prior to submittal of the individual standard permit application.

No-Build Alternative

Under the No Build Alternative, impacts to waters of the U.S. would not occur.

5.10.2 Clean Water Act Section 401

For projects that require a NWP under Section 404 that is covered by TCEQ's blanket 401 water quality certification, regardless of whether the NWP is non-reporting, or requires the submission of a PCN, TxDOT complies with Section 401 of the Clean Water Act by implementing Texas Commission on Environmental Quality (TCEQ) conditions for NWPs. For projects that require authorization under a NWP under Section 404 that is not covered by TCEQ's blanket 401 water quality certification, or under an Individual Standard Permit, Letter of Permission, or Regional General Permit under Section 404, TxDOT will coordinate the Section 401 water quality certification with TCEQ. TCEQ will either approve or deny the Section 401 water quality certification or issue a waiver. The TCEQ Section 401 water quality certification decision must be submitted to the USACE before use of the NWP can be confirmed, or an Individual Standard Permit, Letter of Permission, or Regional General Permit decision can be made.

No Build Alternative

Under the No Build Alternative, impacts to waters of the U.S. would not occur.

5.10.3 Executive Order 11990 Wetlands

Executive Order 11990 requires federal agencies to provide leadership and take action to minimize the destruction, loss or degradation of wetlands, and preserve and enhance the natural and beneficial values of wetlands. The proposed project would impact wetlands as detailed in **Section 5.10.1**. because the project includes expansion of an existing roadway, and there are two wetlands along this roadway, and expansion in the direction opposite the wetlands would involve school and residential right-of-way (ROW) issues, there is no practicable alternative to construction in wetlands. Practicable measures to minimize harm to wetlands would include the use of stormwater Best Management Practices during construction.

No Build Alternative

Under the No Build Alternative, impacts to wetlands would not occur.

5.10.4 Rivers and Harbors Act

The proposed project would not involve work in or over a navigable water of the U.S.; therefore, Sections 9 and 10 of the Rivers and Harbors Act and the General Bridge Act of 1946 do not apply.

5.10.5 Clean Water Act Section 303(d)

This project is located within five linear miles (not stream miles) of, is within the watershed of, and drains to an impaired assessment unit under Section 303(d) of the federal Clean Water Act (TCEQ 2022) **Table 5.10-2**, below, includes the impaired assessment unit.

Table 5.10-2. TCEQ Section 303(d) Impaired Waters					
Watershed Segment Name		Segment Number	Assessment Unit Number		
Upper Sabine	South Fork of Sabine River	0507G	0507G_01		

Source: 2022 Texas Integrated Report – Texas 303(d) List (Category 5)

To date, TCEQ has not identified (through either a total maximum daily load (TMDL) or the review of projects under the TCEQ MOU) a need to implement control measures beyond those required by the construction general permit (CGP) on road construction projects. Therefore, compliance with the project's CGP, along with coordination under the TCEQ MOU for certain transportation projects, collectively meets the need to address impaired waters during the

environmental review process. As required by the CGP, the project and associated activities will be implemented, operated, and maintained using best management practices to control the discharge of pollutants from the project site.

No Build Alternative

Under the No Build Alternative, impacts to impaired waters of the U.S. would not occur.

5.10.6 Clean Water Act Section 402

Since TPDES Construction General Permit (CGP) authorization and compliance (and the associated documentation) occur outside of the environmental clearance process, compliance is ensured by the policies and procedures that govern the design and construction phases of the project. The Project Development Process Manual and the Plans, Specifications, and Estimates (PS&E) Preparation Manual require a storm water pollution prevention plan (SWP3) be included in the plans of all projects that disturb one or more acres. The Construction Contract Administration Manual requires that the appropriate CGP authorization documents (notice of intent or site notice) be completed, posted, and submitted, when required by the CGP, to TCEQ and the municipal separate storm sewer system (MS4) operator. It also requires that projects be inspected to ensure compliance with the CGP.

The PS&E Preparation Manual requires that all projects include Standard Specification Item 506 (Temporary Erosion, Sedimentation, and Environmental Controls), and the "Required Specification Checklists" require the current version of Special Provision 506 on all projects that need authorization under the CGP. These documents require the project contractor to comply with the CGP and SWP3, and to complete the appropriate authorization documents.

No Build Alternative

Under the No Build Alternative, compliance with Section 402 of the Clean Water Act would not be required.

5.10.7 Floodplains

This project is federally funded and is therefore subject to EO 11988, Floodplain Management. However, the project would not involve a significant encroachment in the floodplain. Coordination with the local Floodplain Administrators will be required.

The project is located within a Federal Emergency Management Agency (FEMA) designated 100-year floodplain (FEMA FIRM panels 48085C0470J, effective 6/2/2009; 48085C0465J, effective 6/2/2009 and 48085C0580J, effective 6/1/2009). These areas include Bois d'Arc Creek, Sabine Creek, and one unnamed tributary to Sabine Creek.

No Build Alternative

The No Build Alternative would not impact floodplains, and coordination with the local floodplain administrator would not be required.

5.10.8 Wild and Scenic Rivers

The proposed project would not involve work within a segment of any river designated as a Wild and Scenic River.

5.10.9 Coastal Barrier Resources

The Coastal Barrier Resources Act (CBRA) does not apply.

5.10.10 Coastal Zone Management

The project is not located within the Texas Coastal Zone Management Plan (TCMP) boundary. Therefore, a consistency determination is not required.

5.10.11 Edwards Aquifer

The TCEQ Edwards Aquifer Rules do not apply.

5.10.12 International Boundary and Water Commission

This project does not cross or encroach upon the floodway of the International Boundary Water Commission (IBWC) ROW or an IBWC flood control project.

5.10.13 Drinking Water Systems

A review of TCEQ's Water Well Report Reviewer and Texas Water Development Board's Groundwater Data Viewer did not find any water wells mapped within the project area. In accordance with TxDOT's Standard Specifications for Construction and Maintenance of Highways, Streets and Bridges (Item 103, Disposal of Wells), any drinking water wells would need to be properly removed and disposed of during construction of the project.

No Build Alternative

Under the No Build Alternative, impacts to water wells or drinking water systems would not occur.

5.11 Biological Resources

5.11.1 Impacts to Vegetation

The Ecological Mapping Systems of Texas (EMST) categorized the project area vegetation into 11 different communities. Field investigations conducted by qualified biologists on August 4th, 2022 somewhat agreed with the EMST though multiple discrepancies were noted. Vegetation mapped during field investigations was categorized into seven communities and potential

impacts to vegetation types were calculated for the proposed project. **Table 5.11-1** provides a summary of the EMST vegetation types and total acreages that may be impacted by the proposed project.

Table 5.11-1. Observed EMST Vegetation – Acreage of Impacts within Project Area					
MOU Habitat Type	EMST Vegetation Type	Acreage of Impacts			
Agriculture	Row Crops	20.59			
Disturbed Prairie	Blackland Prairie: Disturbance or Tame Grassland	10.23			
	Pineywoods: Bottomland Herbaceous Wetland	0.57			
Floodplain	Pineywoods: Bottomland Temporarily Flooded Hardwood Forest	0.25			
Mixed Woodlands and Forest	Native Invasive: Deciduous Woodland	1.12			
Riparian	Pineywoods: Small Stream and Riparian Temporarily Flooded Hardwood Forest	1.53			
Urban	Urban Low Intensity	86.69			
	Total Acreage 120.98				

Impacts to vegetation would be restricted to the existing and proposed ROW, and impacts would be avoided/minimized by limiting disturbance to areas necessary to construct the project. The removal of native vegetation, and especially mature woody vegetation, would be avoided as much as practicable. Seeding and replanting with TxDOT-approved seed mixes containing native species would be used for revegetation of disturbed areas.

No Build Alternative

Under the No Build Alternative, impacts to vegetation from the proposed construction would not occur, although the existing ROW would continue to be mowed and maintained.

5.11.2 Executive Order 13112 on Invasive Species

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

5.11.3 Executive Memorandum on Environmentally and Economically Beneficial Landscaping

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

5.11.4 Impacts to Wildlife

The proposed project would affect wildlife species present within the existing and proposed ROW. Some sessile and/or slow moving species could be killed by heavy machinery during ROW clearing. Impacts to wildlife within the proposed project area would also occur in conjunction with the removal of vegetation and disturbance in and around water features. Wooded areas provide cover, food, and habitat for many resident and migratory species. Trees within maintained landscape areas provide nesting habitat for birds. Additional information regarding impacts to wildlife can be found in **Section 5.11.10**.

The use of best management practices (BMPs), careful vegetation clearing techniques, and replanting would minimize impacts to wildlife habitat within the proposed project area. Adjacent wildlife habitat would be protected from stormwater runoff by implementing BMPs that would control erosion and sedimentation.

No Build Alternative

Under the No Build Alternative, impacts to wildlife and wildlife habitat would not occur, although the existing ROW would continue to be moved and maintained.

5.11.5 Migratory Bird Treaty Act

This project would comply with applicable provisions of the Migratory Bird Treaty Act (MBTA) and Texas Parks and Wildlife Code Title 5, Subtitle B, Chapter 64, Birds. It is the department's policy to avoid removal and destruction of active bird nests except through federal or state approved options. In addition, it is the department's policy to, where appropriate and practicable:

- use measures to prevent or discourage birds from building nests on man-made structures within portions of the project area planned for construction, and
- schedule construction activities outside the typical nesting season.

Additional preemptive and preventative measures that may be applied, where appropriate and practicable, are described in TxDOT's Guidance – Avoiding Migratory Birds and Handling Potential Violations.

No Build Alternative

The No-Build Alternative would not require any removal or disturbance of migratory birds, their nests, or their young, and there would be no impacts to migratory birds.

5.11.6 Fish and Wildlife Coordination Act

The project is anticipated to require a nationwide permit issued by the USACE. Compliance with the Fish and Wildlife Coordination Act will be accomplished by complying with the terms and conditions of the nationwide permit.

5.11.7 Bald and Golden Eagle Protection Act of 2007

This project is not within 660 feet of an active or inactive Bald or Golden Eagle nest. Therefore, no coordination with USFWS is required.

5.11.8 Magnuson-Stevens Fishery Conservation Management Act

The Essential Fish Habitat (EFH)/Magnuson-Stevens Fishery Conservation and Management Act (MSA) does not apply.

5.11.9 Marine Mammal Protection Act

The project area does not contain suitable habitat for marine mammals.

5.11.10 Threatened, Endangered, and Candidate Species

A Species Analysis was performed to assess potential impacts and/or effects the proposed project would have on federally and state-listed threatened, endangered, and candidate species. A Species Analysis Form and Species Analysis Spreadsheet (TxDOT 2022e) are available at the TxDOT Dallas District office.

Federally Listed Species

One federally proposed endangered, two federally threatened, one federally endangered and one candidate species for federal listing are listed on the USFWS Information for Planning and Consultation (IPaC) Official Species List as possibly occurring within the project area. These species are as follows: tricolored bat (*Perimyotis subflavus*), Piping Plover (*Charadrius melodus*), Red Knot (*Calidris canutus rufa*), Whooping Crane (*Grus americana*), and monarch

butterfly (*Danaus plexippus*) respectively. The USFWS IPaC Official Species List states that the Piping Plover and Red Knot only need to be considered for wind energy projects. No effects to the species listed above are anticipated.

Potential habitat for the Whooping Crane (*Grus Americana*) occurs in the vicinity of the project area. Four small ponds, cropland and ephemeral/intermittent streams were identified within the project area. Although habitat for this species was observed, any occurrences within the project area would be incidental and temporary. No effect to this species is anticipated.

Potential habitat for the monarch butterfly (*Danaus plexippus*) occurs in the vicinity of the proposed project and it was determined that the proposed project may affect the species. However, the monarch butterfly is currently a candidate species and no consultation with USFWS is required at this time. As construction activities for this project are not anticipated to be completed prior to Fiscal Year 2024, when a listing decision for the species is anticipated, additional coordination may be required. The project should be reevaluated at that time to determine if further action is required if the species becomes proposed for federal listing.

State-listed Species

Potential habitat for two state-listed threatened species occurs in the vicinity of the proposed project. These species include White-faced Ibis (*Plegadis chihi*) and Wood Stork (*Mycteria americana*). Shallow standing water with open canopy, pastures with the potential to flood, two freshwater wetlands, multiple ponds, and ditches were identified within the project area. Although habitat for this species was observed, any occurrences within the project area would be incidental and temporary; therefore, no impact to these species are anticipated.

Species of Greatest Conservation Need

Potential habitat for thirteen Species of Greatest Conservation Need (SGCN) occurs in the vicinity of the proposed project. These include two amphibians, the southern crawfish frog (Lithobates areolatus) and Woodhouse's toad (Anaxyrus woodhousii); one bird, Western Burrowing Owl (Athene cunicularia hypugaea); six mammals, big brown bat (Eptesicus fuscus), eastern red bat (Lasiurus borealis), eastern spotted skunk (Spilogale putorius), hoary bat (Lasiurus cinereus), long-tailed weasel (Mustela frenata), and swamp rabbit (Sylvilagus aquaticus); three reptiles, eastern box turtle (Terrapene carolina), Texas garter snake (Thamnophis sirtalis annectens), and western box turtle (Terrapene ornata); and one plant, Sutherland hawthorn (Crataegus viridis var. glabriuscula).

The southern crawfish frog and Woodhouse's toad could occur in wet or moist areas along project area creeks, drainages, and wetlands. The Western Burrowing Owl could occur in disturbed grassland and agricultural fields within the project area. The eastern spotted skunk,

long-tailed weasel, and swamp rabbit could inhabit disturbed prairie, woodlands, and riparian areas throughout and adjacent to the proposed project.

Big brown bat and eastern red bat could inhabit forested areas within the project area. While specific roost trees were not observed during the site assessment, woodlands where ROE was not granted would need to be assessed after acquisitions occur before a final determination is made.

Sutherland hawthorn could inhabit riparian areas within the project area. While suitable habitat was identified, areas with ROE were observed unoccupied. However, areas without ROE will need further habitat assessment upon acquisition.

Impacts to these SGCN would be avoided or minimized by implementing the following BMPs:

- Minimize impacts to wetland habitats including isolated ephemeral pools
- Aquatic Amphibian and Reptile BMP
- Terrestrial Amphibian and Reptile BMP
- Bat BMP
- Rare Plant BMP
- Bird BMP
- General Design and Construction BMP
- Water Quality BMP
- Vegetation BMP

Collaborative review with the Texas Parks and Wildlife Department (TPWD) was initiated on December 16, 2022. The results of the coordination can be found in **Appendix F**.

No Build Alternative

Under the No Build Alternative, impacts to wildlife and wildlife habitat, including impacts to state-listed threatened or endangered species and effects to federally listed threatened or endangered species, would not occur.

5.12 Air Quality

This project is located within an area that has been designated by EPA as a severe and moderate nonattainment area for the 2008 and 2015 ozone NAAQS, respectively; therefore, transportation conformity rules apply. Conformity for older standards is satisfied by conformity to the more stringent 2008 and 2015 ozone NAAQS, as applicable.

Both the MTP and the TIP, as amended, were initially found to conform to the TCEQ State Implementation Plan (SIP) by FHWA and FTA on December 15, 2022. TxDOT will not take final action on this environmental document until a project level conformity determination has been obtained from FHWA, as applicable.

Traffic data for the estimated time of completion (ETC) year 2026 and design year 2046 is 4,300 vehicles per day and 6,300 vehicles per day, respectively. A prior TxDOT modeling study and previous analyses of similar projects demonstrated that it is unlikely that the carbon monoxide standard would ever be exceeded as a result of any project with an average annual daily traffic (AADT) below 140,000. The AADT projections for the project do not exceed 140,000 vehicles per day; therefore, a Carbon Monoxide Traffic Air Quality Analysis was not required.

Qualitative Mobile Source Air Toxics (MSAT) Analysis

Controlling air toxic emissions became a national priority with the passage of the Clean Air Act Amendments (CAAA) of 1990, whereby Congress mandated that the U.S. Environmental Protection Agency (EPA) regulate 188 air toxics, also known as hazardous air pollutants. The EPA has assessed this expansive list in their latest rule on the Control of Hazardous Air Pollutants from Mobile Sources (Federal Register, Vol. 72, No. 37, page 8430, February 26, 2007), and identified a group of 93 compounds emitted from mobile sources that are listed in their Integrated Risk Information System (IRIS) (https://www.epa.gov/iris). In addition, EPA identified nine compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers or contributors and non-cancer hazard contributors from the 2011 National Air Toxics Assessment (NATA) (EPA, 2014a). These are 1,3-butadiene, acetaldehyde, acrolein, benzene, diesel particulate matter (diesel PM), ethylbenzene, formaldehyde, naphthalene, and polycyclic organic matter. While FHWA considers these the priority mobile source air toxics, the list is subject to change and may be adjusted in consideration of future EPA rules.

Motor Vehicle Emissions Simulator (Moves)

According to EPA, MOVES3 is a major revision to MOVES2014 and improves upon it in many respects. MOVES3 includes new data, new emissions standards, and new functional improvements and features. It incorporates substantial new data for emissions, fleet, and activity developed since the release of MOVES2014. These new emissions data are for light-and heavy-duty vehicles, exhaust and evaporative emissions, and fuel effects. MOVES3 also adds updated vehicle sales, population, age distribution, and vehicle miles travelled (VMT) data. In the November 2020 EPA issued MOVES3 Mobile Source Emissions Model Questions and Answers (EPA, 2020) EPA states that for on-road emissions, MOVES3 updated heavy-duty (HD) diesel and compressed natural gas (CNG) emission running rates and updated HD gasoline emission rates. They updated light-duty (LD) emission rates for hydrocarbon (HC), carbon monoxide (CO) and nitrogen oxide (NOx) and updated light-duty (LD) particulate matter rates, incorporating new data on Gasoline Direct Injection (GDI) vehicles.

Using EPA's MOVES3 model, as shown in **Figure 5.12-1**, FHWA estimates that even if VMT increases by 31 percent from 2020 to 2060 as forecast, a combined reduction of 76 percent in the total annual emissions for the priority MSAT is projected for the same time period.

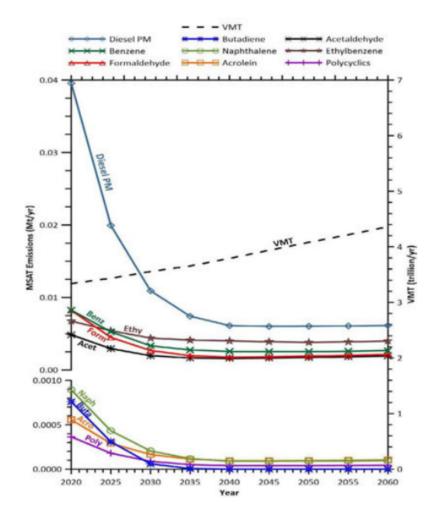


Figure 5.12-1. FHWA Projected National MSAT Emission Trends 2020 - 2060 For Vehicles Operating on Roadways

Note: Trends for specific locations may be different, depending on locally derived information representing vehicle-miles travelled, vehicle speeds, vehicle mix, fuels, emission control programs, meteorological, and other factors.

Source: EPA MOVES3 model runs conducted by FHWA, March 2021.

Diesel PM is the dominant component of MSAT emissions, making up 36 to 56 percent of all priority MSAT pollutants by mass, depending on calendar year. Users of MOVES3 will notice some differences in emissions compared with MOVES2014. MOVES3 is based on updated data on some emissions and pollutant processes compared to MOVES2014, and also reflects the latest Federal emissions standards in place at the time of its release. In addition, MOVES3 emissions forecasts are based on lower VMT projections than MOVES2014, consistent with nationwide VMT trends.

MSAT Research

Air toxics analysis is a continuing area of research. While much work has been done to assess the overall health risk of air toxics, many questions remain unanswered. In particular, the tools and techniques for assessing project-specific health outcomes as a result of lifetime MSAT exposure remain limited. These limitations impede the ability to evaluate how potential public health risks posed by MSAT exposure should be factored into project-level decision-making within the context of NEPA.

Project Specific MSAT Information

A qualitative analysis provides a basis for identifying and comparing the potential differences among MSAT emissions, if any, from the various alternatives. The qualitative assessment presented below is derived in part from a study conducted by FHWA entitled A Methodology for Evaluating Mobile Source Air Toxic Emissions Among Transportation Project Alternatives (FHWA, 2005).

Widening Projects

For each alternative, the amount of MSAT emitted would be proportional to the vehicle miles traveled, or VMT, assuming that other variables such as fleet mix are the same for each alternative. The VMT estimated for each of the Build Alternatives is slightly higher than that for the No Build Alternative, because the additional capacity increases the efficiency of the roadway and attracts rerouted trips from elsewhere in the transportation network. The emissions increase from the additional VMT is offset somewhat by lower MSAT emission rates due to increased speeds; according to the EPA's MOVES3 model, emissions of all of the priority MSAT decrease as speed increases. The additional travel lanes contemplated as part of the project alternatives will have the effect of moving some traffic closer to nearby homes, schools, and businesses; therefore, under each alternative there may be localized areas where ambient concentrations of MSAT could be higher under certain Build Alternatives than the No Build Alternative. The localized increases in MSAT concentrations would likely be most pronounced along the expanded roadway sections that would be built along FM 1777. However, the magnitude and the duration of these potential increases compared to the No Build alternative cannot be reliably quantified due to incomplete or unavailable information in forecasting project-specific MSAT health impacts. Also, MSAT will be lower in other locations when traffic shifts away from them; therefore, on a regional basis, EPA's vehicle and fuel regulations, coupled with fleet turnover, will over time cause substantial reductions that, in almost all cases, will cause region- wide MSAT levels to be significantly lower than today.

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

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

The U.S. Environmental Protection Agency (EPA) is responsible for protecting the public health and welfare from any known or anticipated effect of an air pollutant. They are the lead

authority for administering the Clean Air Act and its amendments and have specific statutory obligations with respect to hazardous air pollutants and MSAT. The EPA is in the continual process of assessing human health effects, exposures, and risks posed by air pollutants. They maintain the Integrated Risk Information System (IRIS), which is "a compilation of electronic reports on specific substances found in the environment and their potential to cause human health effects" (EPA, http://www.epa.gov/iris/). Each report contains assessments of non-cancerous and cancerous effects for individual compounds and quantitative estimates of risk levels from lifetime oral and inhalation exposures with uncertainty spanning perhaps an order of magnitude.

Other organizations are also active in the research and analyses of the human health effects of MSAT, including the Health Effects Institute (HEI). A number of HEI studies are summarized in Appendix D of FHWA's Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents (FHWA, 2023). Among the adverse health effects linked to MSAT compounds at high exposures are; cancer in humans in occupational settings; cancer in animals; and irritation to the respiratory tract, including the exacerbation of asthma. Less obvious is the adverse human health effects of MSAT compounds at current environmental concentrations (HEI, 2007), or in the future as vehicle emissions substantially decrease.

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

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

There are considerable uncertainties associated with the existing estimates of toxicity of the various MSAT, because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population, a concern expressed by HEI (HEI, 2007). As a result, there is no national consensus on air dose-response values assumed to protect the public health and welfare for MSAT compounds, and in particular for diesel PM. The EPA states that with respect to diesel engine exhaust, "[t]he absence of adequate data to develop a sufficiently confident dose-response relationship from the epidemiologic studies has prevented the estimation of inhalation carcinogenic risk" (EPA, 1993).

There is also the lack of a national consensus on an acceptable level of risk. The current context is the process used by the EPA as provided by the Clean Air Act to determine whether more stringent controls are required in order to provide an ample margin of safety to protect public health or to prevent an adverse environmental effect for industrial sources subject to the maximum achievable control technology standards, such as benzene emissions from refineries. The decision framework is a two-step process. The first step requires EPA to determine an "acceptable" level of risk due to emissions from a source, which is generally no greater than approximately 100 in a million. Additional factors are considered in the second step, the goal of which is to maximize the number of people with risks less than 1 in a million due to emissions from a source. The results of this statutory two-step process do not guarantee that cancer risks from exposure to air toxics are less than 1 in a million; in some cases, the residual risk determination could result in maximum individual cancer risks that are as high as approximately 100 in a million. In a June 2008 decision, the U.S. Court of Appeals for the District of Columbia Circuit upheld EPA's approach to addressing risk in its two-step decision framework. Information is incomplete or unavailable to establish that even the largest of highway projects would result in levels of risk greater than deemed acceptable (U.S. Court of Appeals, 2008).

Because of the limitations in the methodologies for forecasting health impacts described, any predicted difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with predicting the impacts. Consequently, the results of such assessments would not be useful to decision makers, who would need to weigh this information against project benefits, such as reducing traffic congestion, accident rates, and fatalities plus improved access for emergency response, that are better suited for quantitative analysis.

Congestion Management Process

The congestion management process (CMP) is a systematic process for managing congestion that provides information on transportation system performance and on alternative strategies for alleviating congestion and enhancing the mobility of persons and goods to levels that meet state and local needs. The project was developed from the NCTCOG's CMP, which meets all requirements of 23 CFR 450.320 and 500.109, as applicable. The CMP 2021 Update approved by the Regional Transportation Council in August 2021.

The region commits to operational improvements and travel demand reduction strategies at two levels of implementation: program level and project level. Program level commitments are inventoried in the regional CMP, which was adopted by the NCTCOG; they are included in the financially constrained MTP, and future resources are reserved for their implementation.

The CMP element of the plan carries an inventory of all project commitments (including those resulting from major investment studies) that details type of strategy, implementing responsibilities, schedules, and expected costs. At the project's programming stage, travel

demand reduction strategies and commitments will be added to the regional TIP or included in the construction plans. The regional TIP provides for programming of these projects at the appropriate time with respect to the single occupancy vehicle (SOV) facility implementation and project-specific elements.

Committed congestion reduction strategies and operational improvements within the study boundary will consist of new lane additions (see **Table 5.12-1**).

Table 5.12-1. Congestion Management Process Strategies					
Operational Improvements in Travel Corridor					
Project Type (MTP Project Code) Implementation					
Collin County Outer Loop – from Denton County Line to Rockwall County Line	New Roadway project (TIP Code 20088)	N/A			
FM 6 Widening - from SH 78 to Hunt County Line (CSJ: 0619-01-027)	Roadway Widening project (NRSA – DAL – 230)	2045			

Source: NCTCOG 2023, Revenue and Project Tracking System https://rapts.dfwmaps.com/; Mobility2045 - 2022 Update (Jan. 30, 2023) https://www.nctcog.org/trans/plan/mtp/mobility-2045-2022-update.

In an effort to reduce congestion and the need for SOV lanes in the region, TxDOT and NCTCOG will continue to promote appropriate congestion reduction strategies through the Congestion Mitigation and Air Quality Improvement (CMAQ) program, the CMP, and the MTP. The congestion reduction strategies considered for this project would help alleviate congestion in the SOV study boundary but would not eliminate it.

Therefore, the proposed project is justified. The CMP analysis for added SOV capacity projects in the Transportation Management Area (TMA) is on file and available for review at NCTCOG.

Construction Emissions

During the construction phase of this project, temporary increases in PM and MSAT emissions may occur from construction activities. The primary construction-related emissions of PM are fugitive dust from site preparation, and the primary construction-related emissions of MSAT are diesel PM from diesel powered construction equipment and vehicles.

The potential impacts of PM emissions will be minimized by using fugitive dust control measures contained in standard specifications, as appropriate. The Texas Emissions Reduction Plan (TERP) provides financial incentives to reduce emissions from vehicles and equipment. TxDOT encourages construction contractors to use this and other local and federal incentive programs to the fullest extent possible to minimize diesel emissions. Information about the TERP program can be found at https://www.tceq.texas.gov/airquality/terp.

However, considering the temporary and transient nature of construction-related emissions, the use of fugitive dust control measures, the encouragement of the use of TERP, and compliance with applicable regulatory requirements; it is not anticipated that emissions from construction of this project will have any significant impact on air quality in the area.

No Build Alternative

Under the No Build Alternative, emissions related to construction would not occur, and MSAT emissions would be expected to decrease overtime, as noted above. The No Build Alternative, however, would not result in the mobility improvements and congestion reduction anticipated with the Build Alternative.

5.13 Hazardous Materials

The presence of hazardous materials within a project study area can create issues affecting ROW acquisition, project development, and construction.

A Hazardous Materials Initial Site Assessment (ISA) including a visual survey of the project limits and surrounding area and research of existing and previous land use was prepared (TxDOT 2022g) to identify sites of potential hazardous materials concerns within the project limits. Additional components of the ISA included reviewing project design and right of way requirements and reviewing federal and state regulatory databases and files. Documentation of the ISA is available at the TxDOT Dallas District office.

The existing and previous land use of the project limits and surrounding area is predominantly a combination of undeveloped agricultural fields and residential development. As part of the ISA, a review of selected environmental regulatory databases published by federal and state agencies was conducted to determine the potential for hazardous material issues within and near the project study area. A review of the regulatory database report dated June 27, 2022, was performed in general accordance with the ASTM Standard E1527 and TxDOT guidelines, which defines the environmental record sources to be reviewed and their minimum search distances from the proposed project.

The federal and state database searches identified three located sites, based on facility addresses. Based on distance, all three sites are considered low environmental risk to the project or no concern; there are no unresolved hazardous materials sites within the project limits.

Possible Asbestos-Containing Materials and Lead-Based Paint

The proposed project includes the demolition and/or relocation of structures. The structures may involve asbestos containing materials or lead-based paint. Asbestos and lead-based paint inspections, specification, notification, license, accreditation, abatement and disposal, as applicable, would comply with federal and state regulations. Asbestos and lead-based paint issues would be addressed during the right of way process and prior to construction.

Well Plugging (Water Quality)

Due to the presence of rural residential lots and farm properties adjacent to the proposed project corridor, water wells are likely to be encountered. Proper plugging of wells would be addressed during the right-of-way negotiation and acquisition process. If not plugged prior to

construction, wells would be addressed per TxDOT Standard Specification Item 103 Disposal of Wells.

Should unanticipated hazardous materials/substances be encountered during construction, TxDOT and/or the contractor would be notified and steps would be taken to protect personnel and the environment. Any unanticipated hazardous materials encountered during construction would be handled according to applicable federal, state, and local regulations per TxDOT Standard Specifications. The contractor would take appropriate measures to prevent, minimize, and control the spill of hazardous materials in construction staging areas. All construction materials used for the proposed project would be removed as soon as the work schedules permit. The contractor would initiate early regulatory agency coordination during project development.

No Build Alternative

Under the No Build Alternative, the potential for impacts related to construction of the proposed improvements would not exist. Facilities listed in the ISA would continue to operate, and, presumably, additional records associated with contamination would be generated over time. These issues would be addressed by the appropriate regulatory agency or program.

5.14 Traffic Noise

A traffic noise analysis was conducted for the proposed project in accordance with TxDOT's (FHWA-approved) 2019 Traffic Noise Policy. The Traffic Noise Analysis Technical Report (TxDOT 2022h), which includes details about the analysis, is available for public review at the TxDOT Dallas District office.

Build Alternative

Existing and predicted traffic noise levels were modeled at representative land use activity areas (receptors) adjacent to the project that might be impacted by traffic noise and would potentially benefit from feasible and reasonable noise abatement.

Modeled noise-sensitive locations were primarily residential, but also included two playgrounds, and a sports field. Existing and predicted traffic noise levels were modeled at receiver locations (**Table 5.14-1**) 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. Previously modeled receivers R17 and R21 were omitted due to being displaced by re-alignment. New receivers, N-1 to N-14, were added to reflect recently built homes as well as the updated first row residential parcels along the realignment.

Table 5.14-1. Traffic Noise Levels dB(A) Leq

Representative Receiver	NAC Category	NAC Level	Existing 2026	Predicted 2046	Change (+/-)	Noise Impact (Yes/No)
R1 - Glenda Arnold Learning Center Playground	С	67	48	53	5	No
R2 - Royse City ISD Football Field	С	67	50	54	4	No
R3-Residential	В	67	54	56	2	No
R4-Residential	В	67	55	56	1	No
R5-Residential	В	67	55	56	1	No
R6-Residential	В	67	55	56	1	No
R7-Residential	В	67	51	53	2	No
R8-Residential	В	67	54	57	3	No
R9-Residential	В	67	57	61	4	No
R10-Residential	В	67	55	58	3	No
R11-Residential	В	67	54	57	3	No
R12-Residential	В	67	51	55	4	No
R13-Residential	В	67	54	57	3	No
R14-Residential	В	67	54	56	2	No
R15-Residential	В	67	49	46	-2	No
R16-Residential	В	67	54	48	-6	No
R18-Residential	В	67	57	60	3	No
R19-Residential	В	67	59	60	1	No
R20-Residential	В	67	51	54	3	No
R22-Residential	В	67	53	54	1	No
R23-Residential	В	67	55	56	1	No
R24-Residential	В	67	54	51	0	No
R25-Residential	В	67	52	49	5-2	No

Representative Receiver	NAC Category	NAC Level	Existing 2026	Predicted 2046	Change (+/-)	Noise Impact (Yes/No)
N1-Residential	В	67	49	55	6	No
N2-Residential	В	67	50	56	6	No
N3-Residential	В	67	51	56	5	No
N4-Residential	В	67	54	58	4	No
N5-Residential	В	67	52	56	4	No
N6-Residential	В	67	52	56	4	No
N7-Residential	В	67	57	58	1	No
N8-Residential	В	67	57	60	3	No
N9-Residential	В	67	58	60	2	No
N10-Residential	В	67	58	60	2	No
N11-Residential	В	67	58	60	2	No
N12-Residential	В	67	58	60	2	No
N13-Residential	В	67	59	60	1	No
N14-Residential	В	67	57	58	1	No
R26-Residential	В	67	51	57	6	No
R27-Residential	В	67	52	58	6	No
R28-Residential	В	67	56	60	4	No
R29-Residential	В	67	53	58	5	No
R30-Residential	В	67	50	55	5	No
R31-Residential	В	67	52	56	4	No
R32-Residential	В	67	49	54	5	No
R33-Residential	В	67	49	53	4	No
R34-Residential	В	67	52	58	6	No
R35-Residential	В	67	56	61	5	No
R36-Residential	В	67	55	63	8	No

Representative Receiver	NAC Category	NAC Level	Existing 2026	Predicted 2046	Change (+/-)	Noise Impact (Yes/No)
R37-Residential	В	67	55	60	5	No
R38-Residential	В	67	45	51	6	No
R39-Residential	В	67	54	58	4	No
R40-Residential	В	67	54	59	5	No
R41-Residential	В	67	50	55	5	No
R42-Residential	В	67	56	60	4	No
R43-Residential	В	67	56	63	7	No
R44-Residential	В	67	52	56	4	No
R45-Residential	В	67	48	53	5	No
R46-Residential	В	67	47	53	6	No
R47-Residential	В	67	47	53	6	No
R48-Residential	В	67	41	47	6	No
R49-Residential	В	67	44	51	7	No
R50-Residential	В	67	50	56	6	No
R51-Residential	В	67	58	63	5	No
R52-Residential	В	67	47	52	5	No
R53-Residential	В	67	52	55	3	No
R54 - Magnolia Pointe Community Playground	С	67	47	52	5	No
R55-Residential	В	67	52	57	5	No
R56-Residential	В	67	51	56	5	No
R57-Residential	В	67	51	56	5	No
R58-Residential	В	67	50	55	5	No
R59-Residential	В	67	53	58	5	No
R60-Residential	В	67	52	57	5	No

Representative Receiver	NAC Category	NAC Level	Existing 2026	Predicted 2046	Change (+/-)	Noise Impact (Yes/No)
R61-Residential	В	67	55	59	4	No
R62-Residential	В	67	58	62	4	No
R63-Residential	В	67	52	58	6	No
R64-Residential	В	67	56	61	5	No
R65-Residential	В	67	54	59	5	No
R66-Residential	В	67	59	60	1	No
R67-Residential	В	67	56	59	3	No
R68-Residential	В	67	54	57	3	No
R69-Residential	В	67	56	58	2	No
R70-Residential	В	67	52	54	2	No

Source: TxDOT 2022h.

As indicated in **Table 5.14-1**, the proposed project would not result in a traffic noise impact; therefore, noise abatement was not considered for this project.

To avoid noise impacts that may result from future development of properties adjacent to the project, local officials responsible for land use control programs must ensure, to the maximum extent possible, that no new activities are planned or constructed along or within the following predicted (2046) noise impact contours.

Table 5.14-2. Traffic Noise Impact Contours						
Contour Area	Land Use	Impact Contour	Distance from Right of Way			
SH 66 to CR 636	NAC category B & C	66 dB(A)	20 feet			
SH 66 to CR 636	NAC category E	71 dB(A)	At ROW			
CR 940 to CR 590	NAC category B & C	66 dB(A)	10 feet			
CR 940 to CR 590	NAC category E	71 dB(A)	At ROW			
CR 590 to CR 639	NAC category B & C	66 dB(A)	20 feet			
CR 590 to CR 639	NAC category E	71 dB(A)	At ROW			
CR 639 to FM 6	NAC category B & C	66 dB(A)	30 feet			
CR 639 to FM 6	NAC category E	71 dB(A)	At ROW			

Source: TxDOT 2022h.

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

A copy of this traffic noise analysis will be available to local officials to assist in future land use planning. On the date of approval of the document (Date of Public Knowledge), FHWA and TxDOT are no longer responsible for providing noise abatement for new development adjacent to the project.

No Build Alternative

Under the No Build Alternative, the proposed project would not be constructed. If the No Build Alternative were implemented, traffic noise levels would be expected to increase with an associated future increase in traffic volumes.

5.15 Induced Growth

5.15.1 Encroachment-alteration Effects

Encroachment-alteration effects are defined as effects that alter the behavior and functioning of the affected environment by project encroachment (NCHRP 2002, 55). These effects can be separated into two broad categories: socioeconomic and ecological effects. These potential effects are evaluated within an area of influence (AOI). The AOI represents the geographic area within which potential encroachment-alternation effects related to the proposed project would be likely to occur. The AOI encompasses a total of approximately 23,115 acres. The northern AOI boundaries are based on CR 850 and CR 1778, and FM 547. The entire eastern limits follow the path of Brushy Creek. The western limits follow both FM 1138 and CR 543. The southern limits follow SH 66 and the Dallas Garland and Northeastern Railroad.

Socioeconomic Effects

Socioeconomic effects in the encroachment-alteration category could generally include changes to the condition of the local and regional economies, and changes to access, travel patterns, and community cohesion.

Short-term impacts during the construction phase of the proposed project would potentially occur due to increased economic activity in the area during the period of construction. Overall, impacts to the local economy during the construction phase of the proposed project would be expected to be beneficial and would not result in substantial, long-term changes to the local or regional economies.

It is anticipated that the proposed project would potentially accelerate development adjacent and in close proximity to FM 1777. These changes would result in continued conversion of predominantly agriculture land to urbanized developed areas; however, this is congruent with the visions of Royse City and Josephine, and do not interrupt or drastically change development trends that have been occurring in previous years. In consideration of the current population growth and development trends present within the AOI, the socioeconomic effects related to encroachment-alteration effects within the AOI would not be substantial and could positively contribute to providing population and economic growth in the future.

The proposed roadway configuration would result in decreased congestion and increased mobility, which would be expected to negate increases in travel times for local traffic related to the construction of a curbed median and limited left turn availability. Based on the minor nature of community impacts that would directly result from the proposed improvements, in addition to the generally beneficial nature of the changes, adverse encroachment-alteration effects are not anticipated.

Ecological Effects

Ecological effects in the encroachment-alteration category could generally include impacts to groundwater, surface water, and vegetation and wildlife habitat, including habitat for sensitive species. The additional pavement from the roadway, pedestrian facilities, the extension of culverts and the movement of stormwater from ditches to a gutter system would affect the groundwater, surface water and vegetation/habitat of the AOI.

Regulatory protections exist for waters in the state and US, including the Texas Water Code and the Clean Water Act (33 USC 26), Sections 401, 402, and 404, which, would serve to mitigate potential adverse effects to streams. Section 402, describing the National Pollutant Discharge Elimination System, requires the implementation of a storm water pollution prevention plan during the construction phase of public or private development over one acre and implementation of erosion and sedimentation controls to protect surface waters from storm water runoff. If future development requires filling or channelizing streams, Section 404 would regulate the amount of fill that could be placed within the channels, and Section 401 would require water quality protection measures. Given appropriate implementation of these regulatory controls, the encroachment-alteration effects that could result from the proposed project would be minor.

Agricultural land is found throughout the AOI but in higher concentrations in the central and eastern portions. Disturbed Prairie is concentrated along the western and eastern portions of the AOI. Urban land is in highest concentration along the southern boundary of the AOI (Royse City), but also occurs in Josephine and Nevada. Woodland, shrubland, and savanna areas occur along or in close proximity to the riparian and floodplain areas.

The future development within the AOI that would potentially affect these vegetation types would also potentially result in habitat fragmentation and impacts to wildlife, such as habitat

degradation and roadway mortality of individual species. However, the extent to which impacts to vegetation would result in impacts to dependent species cannot be reliably determined. Additionally, most of the areas of potential induced growth are adjacent to the existing roadway and other developments, or occur on already disturbed agriculture land or disturbed prairie habitat. Additionally, future development in the potential induced growth areas would be required to comply with the Endangered Species Act (ESA) of 1973, which protects federally listed species and their habitats. With disturbed agriculture land accounting for the highest percent (72%) within areas of potential induced growth, coupled with agriculture land's reduced ecological value, impacts to biological resources and their associated habitats related to encroachment-alteration effects are not anticipated to be substantial as a result of the proposed project.

5.15.2 Induced Growth Effects

The proposed project is intended to improve mobility and safety and manage congestion along the FM 1777 roadway by adding capacity and correcting access conflicts. These changes would be expected to make it more convenient for travelers to move through the area, including bicyclists and pedestrians.

Agricultural land is found predominantly throughout the AOI, but in higher concentrations in the central and eastern portions. Disturbed Prairie is concentrated along the western and eastern portions of the AOI. Urban land is in highest concentration along the southern boundary of the AOI (near Royse City), but also occurs in Josephine and Nevada. Woodland, shrubland, and savanna areas occur along or in close proximity to the riparian and floodplain areas.

The future development within the AOI that would potentially affect these vegetation types would also potentially result in habitat fragmentation and impacts to wildlife, such as habitat degradation and roadway mortality of individual species. However, the extent to which impacts to vegetation would result in impacts to dependent species cannot be reliably determined. Additionally, most of the areas of potential induced growth are adjacent to the existing roadway and other developments or occur on already disturbed agricultural land or disturbed prairie habitat. Additionally, future development in the potential induced growth areas would be required to comply with the Endangered Species Act (ESA) of 1973, which protects federally listed species and their habitats. With disturbed agricultural land accounting for the highest percent (72%) within areas of potential induced growth, coupled with agriculture land's reduced ecological value, impacts to biological resources and their associated habitats related to induced growth are not anticipated to be substantial as a result of the proposed project.

The proposed project is not expected to interrupt or drastically change the trajectory of current development trends. These trends are expected to continue within the AOI, regardless of if the proposed project is implemented. The development anticipated to occur within the AOI is consistent with the land use plans at the city and county levels. The anticipated growth that

would potentially be accelerated by the proposed project would not result in substantial effects to ecological or socioeconomic resources. In consideration of these factors, the induced growth effects of the proposed FM 1777 project are not expected to be substantial.

No Build Alternative

Under the No Build Alternative, indirect impacts related to encroachment-alteration effects and induced growth and related effects would not occur.

5.16 Cumulative Impacts

A Cumulative Impacts Analysis (TxDOT 2023j) was prepared for the proposed project which focuses on resources anticipated to be substantially impacted by the proposed project (either directly or indirectly), as well as resources that would be affected to any degree by the proposed project and are considered at risk or in poor or declining health. In order to thoroughly assess the potential cumulative impacts to a resource, minor direct or indirect impacts to a resource considered at risk or in poor or declining health should be considered along with past, present, and reasonably foreseeable future actions to determine if such actions, when considered together, would pose a threat to the sustainability or health of that resource.

Archeological resources and historic resources are considered to be in good health in the context of the proposed project; therefore, these resources were not carried forward for detailed evaluation in the Cumulative Impacts Analysis (TxDOT 2023j). The health of socioeconomic, biological resources and water resources within the project area were considered to be at risk due to potential effects.

Based on the cumulative impacts analysis, the proposed project would not substantially contribute to cumulative impacts on community resources. Many of the past, present and future planned developments are residential developments on undeveloped land which would not result in displaced residences but instead provide new options for displaced individuals from proposed transportation improvements.

When considering the cumulative effect of biological resources, continued development within the study area is expected to contribute to an overall decline in vegetation and wildlife habitat. However, the direct and indirect contribution of the proposed project would be minimal. As these changes relate to the monarch butterfly, the transition of the study area to a more urbanized area would not have a substantial impact on this species, as this species is a generalist and is known to inhabit urban areas.

When considering the cumulative effect of water resources, the reasonably foreseeable future actions discussed would further increase the urban nature of the area, through new or expanded land development. Therefore, it is assumed that these actions would lead to increases in storm water runoff that could result in localized erosion and sedimentation of surface streams. However, given existing regulatory protections provided to habitats

associated with rivers and streams and associated floodplains, cumulative effects to water resources within the RSA would not be substantial.

The proposed project would not result in substantial direct, indirect, or cumulative effects to community resources, biological resources, or water resources. The contribution of the proposed project to cumulative effects on these resources would be minor and would not adversely affect the overall sustainability or long-term health of the resources discussed in this report.

No Build Alternative

Implementation of the No Build Alternative would not result in cumulative impacts.

5.17 Construction Phase Impacts

This section discusses the temporary effects associated with the construction of the proposed Build Alternative. Since the No Build Alternative would not involve any project-related construction, discussions here are focused on the Build Alternative. Typically, construction effects of a disruptive nature are dependent on the type and location of proposed construction activities and the duration of the construction process from initiation to completion.

Construction activities necessary for the implementation of the Build Alternative would temporarily affect existing transportation facilities within the project area. To allow for vehicles to continue utilizing the roadway during construction, the proposed project would be constructed while traffic continued to use the existing facilities. In this way, traffic disruptions and other user impacts would be minimized.

Temporary construction effects would include traffic delays and work-zone congestion that could disrupt travel patterns for local residents and businesses for the duration of construction. Mitigation measures, such as maintenance of traffic plans, would be implemented to address user impacts including work-zone safety and traffic delays. Access for police, fire, and emergency vehicles would be maintained during construction; details would be developed in a maintenance of traffic plan to be implemented for the proposed project.

Temporary impacts to natural resources could result from the construction of the proposed Build Alternative and include disturbances, including hydrologic disturbances, to wildlife and vegetative communities. Implementation of the Build Alternative would involve the removal of grasses, trees and shrubs during the construction phase, affecting the natural, erosion-inhibiting ground cover and resulting in the loss of habitat for both resident and migratory species. Disturbed areas would be restored, reseeded, and recontoured as necessary according to TxDOT specifications, making these effects largely temporary.

Noise associated with the construction of the proposed project is difficult to predict. Heavy machinery, the major source of noise in construction, is constantly moving in unpredictable

patterns. However, construction normally occurs during daylight hours when occasional loud noises are more tolerable. None of the receivers are expected to be exposed to construction noise for a long duration; therefore, any extended disruption of normal activities is not expected. Provisions would be included in the plans and specifications that require the contractor to make every reasonable effort to minimize construction noise through abatement measures such as work-hour controls and proper maintenance of muffler systems.

During the construction phase of this project, temporary increases in particulate matter (PM) and MSAT emissions may occur from construction activities. The primary construction-related emissions of PM are fugitive dust from site preparation, and the primary construction-related emissions of MSAT are diesel particulate matter from diesel powered construction equipment and vehicles. The potential impacts of PM emissions will be minimized by using fugitive dust control measures contained in standard specifications, as appropriate. Considering the temporary and transient nature of construction-related emissions, as well as the mitigation actions to be utilized including compliance with applicable regulatory requirements, it is not anticipated that emissions from construction of this project will have a significant impact on air quality in the area.

5.18 Greenhouse Gas Emissions and Climate Change

The Texas Department of Transportation has prepared a Statewide On-Road Greenhouse Gas Analysis and Climate Change Assessment technical report (TxDOT 2021). The report discloses: 1) an analysis of available data regarding statewide greenhouse gas (GHG) emissions for on-road GHG emissions, 2) TxDOT actions and funding that support reducing GHG emissions, 3) projected climate change effects for the state of Texas, and 4) TxDOT's current strategies and plans for addressing the changing climate. A summary of key issues in this technical report is provided below. Please refer to the technical report for more details.

The Earth has gone through many natural changes in climate over time. However, since the industrial revolution began in the 1700s, atmospheric concentration of GHG emissions have continued to climb, primarily due to humans burning fossil fuel (e.g., coal, natural gas, gasoline, oil and/or diesel) to generate electricity, heat and cool buildings, and power industrial processes, vehicles, and equipment. According to the Intergovernmental Panel on Climate Change (IPCC), this increase in GHG emissions is projected to contribute to future changes in climate (Solomon 2007, Stocker 2013).

5.18.1 Statewide On-road Greenhouse Gas

TxDOT prepared a GHG analysis for the statewide on-road transportation system and associated emissions generated by motor vehicle fuels processing called "fuel-cycle emissions." EPA's Motor Vehicle Emissions Simulator (MOVES2014 version) emissions model was used to estimate emissions. Texas on-road and fuel cycle GHG emissions are estimated to be 186 million metric tons (MMT) in 2050 and reach a minimum in 2032 at 161 MMT. Future on-road GHG emissions may be affected by changes that may alter where people live

and work and how they use the transportation system, including but not limited to: 1) the results of federal policy including tailpipe and fuel controls, 2) market forces and economics, 3) individual choice decisions, 4) acts of nature (e.g., pandemic) or societal changes, and 5) other technological advancements. Such changes cannot be accurately predicted due to the inherent uncertainty in future projections related to demographics, social change, technology, and inability to accurately forecast where people work and live (Transportation Research Board 2007).

5.18.2 Mitigation Measures

Strategies that reduce on-road GHG emissions fall under four major categories:

- Federal engine and fuel controls under the Clean Air Act implemented jointly by EPA and U.S. Department of Transportation (USDOT), which includes Corporate Average Fuel Economy (CAFE) standards;
- "Cash for clunker" programs which remove older, higher-emitting vehicles from roads;
- Traffic system management (TSM) which improves the operational characteristics of the transportation network (e.g., traffic light timing, pre-staged wrecker service to clear accidents faster, or traveler information systems); and
- Travel demand management (TDM) which provides reductions in VMT (e.g., transit, rideshare, and bicycle and pedestrian facilities) and requires personal choice decisions.

TxDOT has implemented programmatic strategies that reduce GHG emissions including: 1) travel demand management projects and funding to reduce VMT, such as bicycle and pedestrian facilities, 2) traffic system management projects and funding to improve the operation of the transportation system, 3) participation in the national alternative fuels corridor program, 4) clean construction activities, 5) clean fleet activities, 6) CMAQ funding, 7) transit funding, and 8) two statewide campaigns to reduce tailpipe emissions.

5.18.3 TxDOT and a Changing Climate

TxDOT has strategies that address a changing climate in accordance with TxDOT and FHWA design, asset management, maintenance, emergency response, and operational policies and guidance. The flexibility and elasticity in TxDOT transportation planning, design, emergency response, maintenance, asset management, and operation and maintenance of the transportation system are intended to consider any number of changing scenarios over time. Additional detail is in the statewide technical report.

No Build Alternative

Implementation of the No Build Alternative would not result in changes in the effect of GHG and Climate Change.

6.0 Agency Coordination

Federally Recognized Tribes

TxDOT initiated project-specific consultation under Section 106 of the National Historic Preservation Act with federally recognized tribes on March 24, 2023. On April 4, 2023, the Caddo Nation responded that the project would have no effect on sites of cultural or religious significance to them. On May 1, 2023, the Shawnee Tribe responded that the project would have no effect on sites of cultural or religious significance to them. No other tribe has objected or otherwise responded. TxDOT will resume coordination with federally recognized tribes after access to the remaining unsurveyed portions of the APE has been obtained and those studies have been completed

Copies of the correspondence are on file in TxDOT's ECOS and available from the District.

Texas Historical Commission

TxDOT initiated coordination with THC regarding potential project effects to archeological historic properties on April 3, 2023. On April 10, 2023, the THC concurred with the finding that no archeological sites occur within the evaluated portions of the APE and therefore no archeological historic properties would be affected within those portions of the APE. TxDOT will continue coordination with THC after access to the remaining unsurveyed portions of the APE has been obtained and those studies have been completed.

Copies of the correspondence are on file in TxDOT's ECOS and available from the District office.

Texas Parks and Wildlife Department

Coordination (collaborative review) with TPWD was initiated on December 16, 2022. In accordance with the MOU between TxDOT and TPWD, TPWD has provided a set of recommended BMPs in a document titled "Beneficial Management Practices - Avoiding, Minimizing, and Mitigating Impacts of Transportation Projects on State Natural Resources," available which is on TxDOT's Natural Resources Toolkit at https://www.txdot.gov/insidetxdot/division/environmental/compliance-toolkits/naturalresources.html. The MOU provides that application of specific BMPs to individual projects will be determined by TxDOT at its discretion. The TPWD-recommended BMPs that will be applied to this project are indicated in the Form - Documentation of Texas Parks and Wildlife Department Best Management Practices prepared for the project, which is included in Appendix F.

Coordination between TxDOT and TPWD will be initiated. In accordance with the TxDOT-TPWD MOU, **Appendix F** will include written coordination correspondence between TxDOT and TPWD.

7.0 Public Involvement

Public involvement for the proposed project to date has consisted of an open house public meeting held on May 17, 2022, at Quida Baley Middle School. This meeting also took place virtually and the virtual public meeting was available from May 17, 2022, until June 1, 2022. Advertisement for the public meeting included mailed notices to adjacent property owners and elected officials, and publications were made 15 days prior to the meeting both in print and online. Publications included the Dallas Morning News (print), Al Día (print), McKinney Courier-Gazette (print), TxDOT online schedule (https://www.txdot.gov/projects/hearings-meetings/dallas/fm-1777-sh-66-fm-6.html), and Keep It Moving Dallas (https://www.keepitmovingdallas.com/FM1777).

The Public Meeting was held on Tuesday, May 17, 2022 from 6-8 PM at Ouida Baley Middle School. The project schematics were available to view at the public meeting. A total number of 57 people attended the in-person meeting, including four elected officials; 110 people viewed the online YouTube presentation; the website received 220 visitors; and 22 total comments were received during the comment period. Topics of concern, listed from most to least frequently mentioned, were as follows: increased speeds of travelers along the southern portion of FM 1777 (leading up to the stop light at SH 66) impacting the safety of children leaving/going to school and crossing the street to get to neighborhoods; traffic and congestion that will come with more people using the roadway because it's wider; need of a traffic light at FM 1777 and Hidden Creek & Rolling Meadow neighborhood entrances; request to greenscape the new roadway; increased crime rates due to larger roadway supporting more development, which means more people; home values being negatively impacted because of location adjacent to large roadway; taxes increasing; flooding along the roadway and in people's backyards; and noise concerns from six lanes of traffic. There was one comment in favor of the project and was received through email. The comment stated that the inclusion of sidewalks and the expansion of the roadway will provide benefits such as safety, recreation opportunities, and ease of travel to the local schools and neighborhood subdivisions.

A summary of the meeting was prepared and is available at the TxDOT Dallas District Office. The Public Meeting Documentation may be inspected and copied upon request.

A public hearing is anticipated to be held in late fall/winter of 2024 upon approval of this draft EA for public review. Public Hearing notices will be mailed and published in both Spanish and English language newspapers. Language translation services and other accommodations will also be provided upon request. Comments and responses will be included in **Appendix G**.

A notice of impending construction would be provided to owners of adjoining property and affected local governments and public officials. The notice may be provided via a sign or signs posted in the right of way, mailed notice, printed notice distributed by hand, or notice via website when the recipient has previously been informed of the relevant website address. This notice would be provided after the environmental decision (i.e., FONSI), but before earthmoving or other activities requiring the use of heavy equipment begin.

8.0 Post-Environmental Clearance Activities and Design/Construction Commitments

8.1 Post-Environmental Clearance Activities

This section lists unresolved environmental activities that could not be done prior to issuance of a FONSI, for which the project sponsor will be responsible.

- 1. Due to limited access to private property during field investigations, it is recommended that Parcels 107 and 112 still warrant archeological survey prior to construction.
- Asbestos and lead-based paint inspections, specification, notification, license, accreditation, abatement and disposal would be addressed during the right of way process for building structures and prior to any demolition/construction activities on bridges.
- 3. Formal utilities location and advance planning would be required to facilitate pipeline and utilities adjustments and to otherwise avoid associated impacts prior to construction.
- 4. Proper plugging of the wells would be addressed during the ROW negotiation and acquisition process and prior to construction. If not plugged prior to construction, the wells would be addressed per TxDOT Standard Specification Item 103 Disposal of Wells during construction.
- 5. Coordination with the local Floodplain Administrators would be required prior to construction.

8.2 Design/Construction Commitments

This section lists project-specific avoidance measures or special instructions that will be conveyed to the design or construction contractor as a result of the department's environmental review of the project.

- 1. In the unlikely event that significant cultural resources are discovered during construction of the proposed project, TxDOT would immediately initiate cultural resource discovery procedures. All work in the vicinity would cease until a specialist from TxDOT and/or the THC could arrive on site and assess the discovery's significance and the potential need for additional investigation, if necessary.
- 2. Formal utilities location and advance planning would be required to facilitate pipeline and utilities adjustments and to otherwise avoid associated impacts.
- 3. Should unanticipated hazardous materials/substances be encountered during construction, TxDOT and/or the contractor would be notified and steps would be taken to protect personnel and the environment. Any unanticipated hazardous materials encountered during construction would be handled according to applicable federal, state, and local regulations per TxDOT Standard Specifications. The contractor would take appropriate measures to prevent, minimize, and control the spill of hazardous

- materials in construction staging areas. All construction materials used for the proposed project would be removed as soon as the work schedules permit. The contractor would initiate early regulatory agency coordination during project development.
- 4. The potential impacts of PM emissions would be minimized by using fugitive dust control measures contained in standard specifications, as appropriate. The TERP provides financial incentives to reduce emissions from vehicles and equipment. TxDOT encourages construction contractors to use this and other local and federal incentive programs to the fullest extent possible to minimize diesel emissions. Information about the TERP program can be found at: https://www.tceq.texas.gov/airquality/terp.
- 5. This project would involve regulated activity in jurisdictional waters and therefore will require authorization under Section 404. This project will use a reportable nationwide permit 14 (linear transportation projects) under Section 404, where a PCN will be submitted to the USACE.
- Implement the following BMPs: minimize impacts to wetland habitats including isolated ephemeral pools; Aquatic Amphibian and Reptile BMP; Terrestrial Amphibian and Reptile BMP; Bat BMP; Rare Plant BMP; Bird BMP; General Design and Construction BMP; Water Quality BMP; and Vegetation BMP.
- 7. Implement water quality BMPs including: approved temporary vegetation; blankets/matting or mulch filter berms; vegetated filter strips; and silt fence, sand bags and/or compost filter berms and socks.
- 8. Avoid and minimize disturbance of vegetation and soils. All disturbed areas would be revegetated according to TxDOT specifications as soon as it becomes practicable. In accordance with EO 13112 on Invasive Species, the Executive Memorandum on Beneficial Landscaping, and the 1999 FHWA guidance on invasive species, all revegetation would, to the extent practicable, use only native species. Furthermore, BMPs would be used to control and prevent the spread of invasive species.
- MBTA compliance, including taking all appropriate actions to prevent the take of migratory birds, their active nests, eggs or young by the use of proper phasing of the project or other appropriate actions.

As indicated above in **Section 6.0**, the TPWD-recommended BMPs that will be applied to this project are indicated in the Form – Documentation of Texas Parks and Wildlife Department Best Management Practices prepared for the project, which is included in **Appendix F**.

9.0 Conclusion

Implementation of the proposed project would not result in significant impacts to the human or natural environment. Therefore, a FONSI is recommended.

10.0 References

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 2023d. Water Features Delineation Report Air Quality Technical Report.
 2022e. Species Analysis Form and Spreadsheet.
 2023f. Air Quality Technical Report.
 2022g. Hazardous Materials Initial Site Assessment.
 2023h. Traffic Noise Analysis Technical Report.
 2022i. Indirect Effects Technical Report.
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11.0 Names and Qualifications of Persons Preparing the EA or Conducting an Independent Evaluation of the EA

TxDOT Environmental Affairs Division (ENV) personnel name and title, years of experience, and role:

Deborah Nixon, ENV Hazardous Materials Specialist, 21 years, Hazardous Materials Reviewer/Approver

Glendora Lopez, Air Quality Specialist, 2 years, Air Quality Analysis Reviewer/Approver

John Young, Ph.D, ENV Biologist, 11 years, Document Reviewer

Michelle Lueck, Project Delivery Manager, 24 years, Document Reviewer

Spencer Ward, ENV Community Impacts Specialist, 4 years, Community Impacts Reviewer/Approver

Susan M. Shuffield, Environmental Specialist, ENV Water Team Lead, 25 years, Water Resources Analysis/404 Permitting Reviewer/Approver

Adam Fouts, Environmental Specialist, 12 years, Water Resources Analysis/404 Permitting Reviewer/Approver

TxDOT Dallas District personnel name and title, years of experience, and role:

Christine Polito, Document Reviewer, 19 years, District Environmental Lead

Lillian Salinas, Document Reviewer, 6 years, Environmental Manager

Manuel Trevino Frias, Noise Reviewer, 17 years, District Traffic Noise Specialist

Jacobs personnel name and title, years of experience, and role:

David Van Gorder, Environmental Project Manager, 31 years, Environmental Task Lead, EA Preparation, Client & Staff Coordination, Project Manager

Madeline Jurek, Environmental Scientist, 2 years, EA Preparation

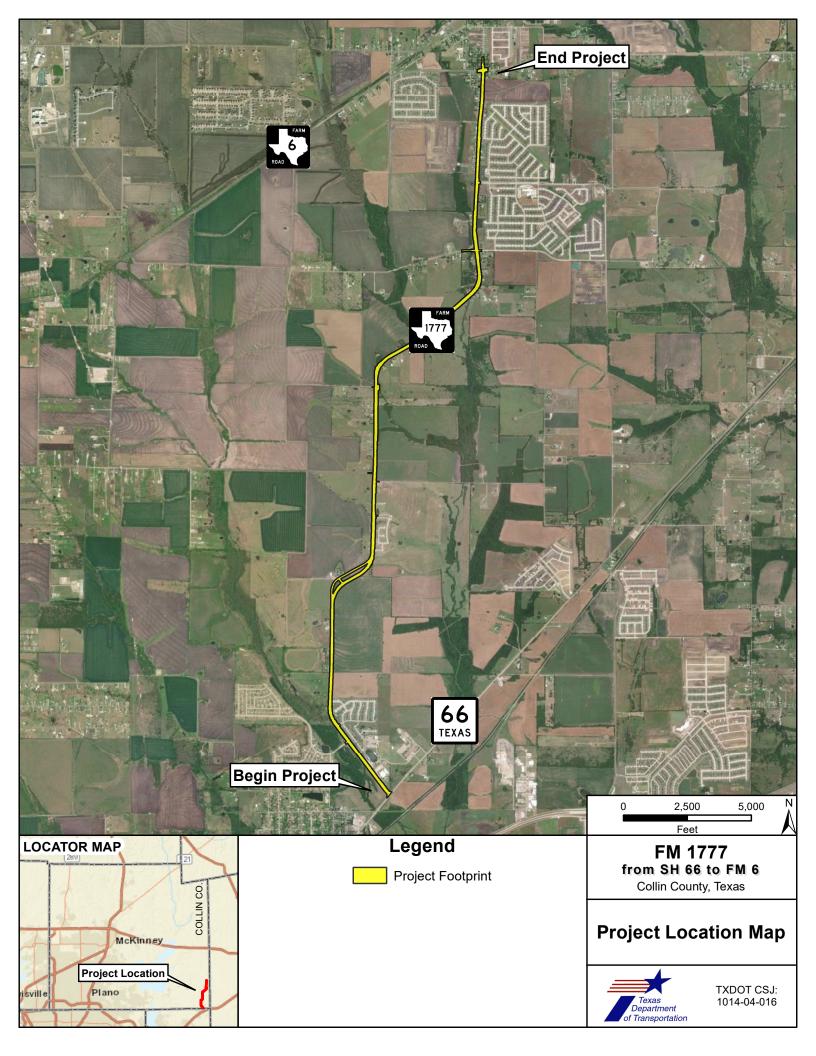
Raba Kistner personnel name and title, years of experience, and role:

Brady O'Neal, Senior Project Manager, NEPA/Natural Resources, 7 years, Environmental Task Lead for Water Resources & Biological Resources & EA Preparation

Brittney Davis, AICP, ENV SP, Director, Environmental Planning & Permitting, 16 years, Environmental Project Manager for Water Resources & Biological Resources

Jaimie Galm, Environmental Scientist, 3 years, Water Resources & Biological Report Preparation

APPENDIX A PROJECT LOCATION MAP



APPENDIX B PROJECT PHOTOS



Photograph 1. View facing north along FM 1777, looking at the northern terminus of the project area - the intersection with FM 6.



Photograph 2. View facing south along FM 1777. Josephine water tower is adjacent to FM 1777, located approximately 1,800-feet south of the FM 1777 and FM 6 intersection.



Photograph 3. View facing south along FM 1777, located near the middle of the corridor at one of the existing curves in the roadway.



Photograph 4. View facing south, looking at the intersection of FM 1777 and SH 66 which is the southern terminus of the proposed project.



Photograph 5. View facing south along FM 1777. Ruth Cherry Elementary School is adjacent to FM 1777, located at the southern terminus of the proposed project, near the intersection with SH 66.



Photograph 6. View facing west, looking at the entrance to Magnolia Phase 1. This is one of the several residential neighborhoods located adjacent to the FM 1777 corridor.



Photograph 7. View facing west, looking at a lot adjacent to FM 1777. ROW acquisition is proposed for this lot, and the associated structures are proposed to be displaced.



Photograph 8. View facing southeast, looking at a lot adjacent to FM 1777. ROW acquisition is proposed for this lot, and the associated structures are proposed to be displaced.



Photograph 9. View facing south, looking at a barn and rusted storage tank (Low Potential [HazMat]) adjacent to the FM 1777 corridor. ROW acquisition is proposed for this lot, and associated structures are proposed to be displaced.



Photograph 10. View facing west, looking at a lot with rusted farm equipment (Low Potential [HazMat]) adjacent to the FM 1777 corridor.



Photograph 11. View facing west, looking at ES-2b, an ephemeral stream that crosses the FM 1777 corridor, near CR 639.



Photograph 12. View facing west, looking at IS-1 (Sabine Creek), an intermittent stream that crosses the FM 1777 corridor, north of CR 639.



Photograph 13. View facing southwest, looking at W2, an emergent wetland area adjacent to the FM 1777 corridor, south of CR 678.



Photograph 14. View facing southwest, looking at Pond 4, adjacent to the FM 1777 corridor and directly south of the W2 wetland area.



Photograph 15. View facing north, looking at ES-4, an ephemeral stream segment that occurs within the proposed project area, near CR 638.



Photograph 16. View facing west, looking at an Atmos transfer station, located adjacent to the project corridor, approximately 530 feet south of Maple Lane. ROW acquisition is proposed from this parcel.



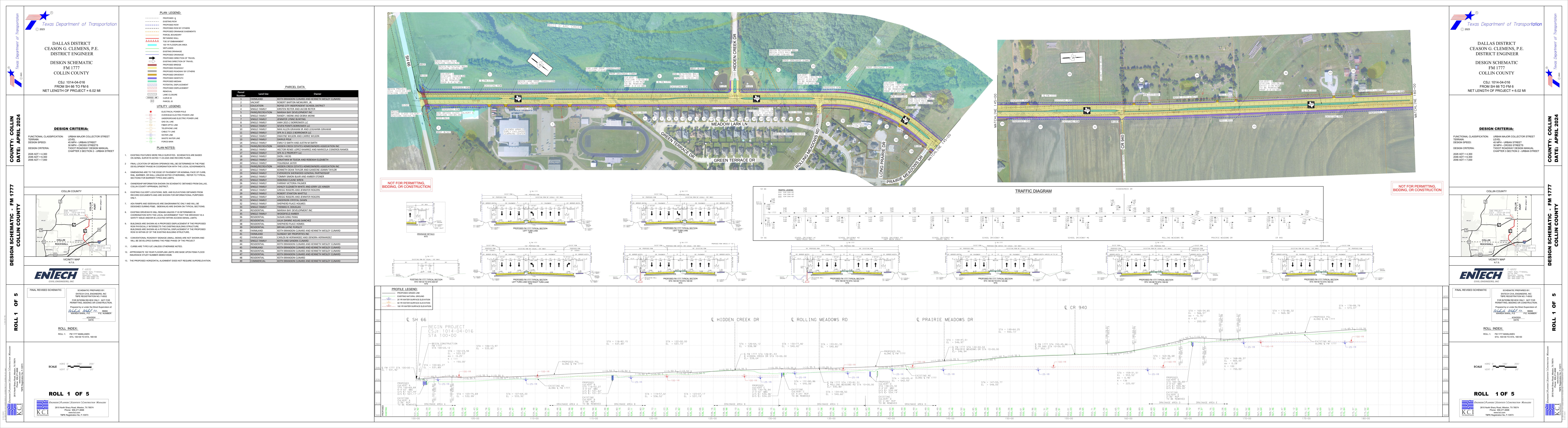
Photograph 17. View facing east, looking at an Atmos transfer station, located adjacent to the project corridor, approximately 275 feet south of Prairie Meadow Drive. ROW acquisition is proposed from this parcel. Source: Google Street View.



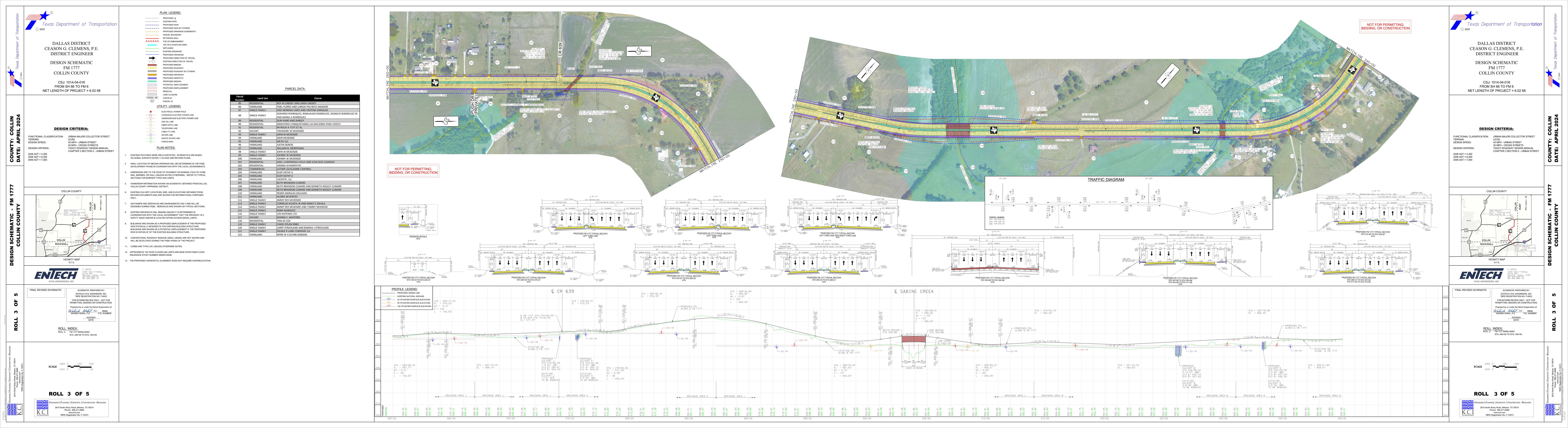
Photograph 18. View facing north looking at the homes adjacent to the existing ROW (black metal fenceline) of FM 1777. Existing houses and houses under construction are not proposed to be displaced, however, minor ROW acquisition would occur from these lots.

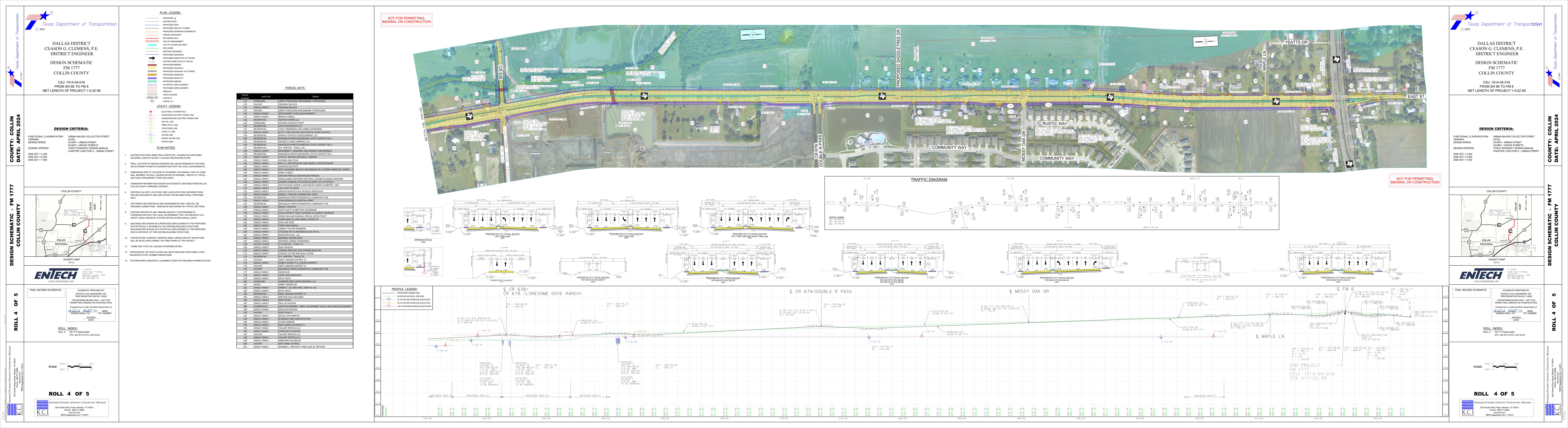
APPENDIX C

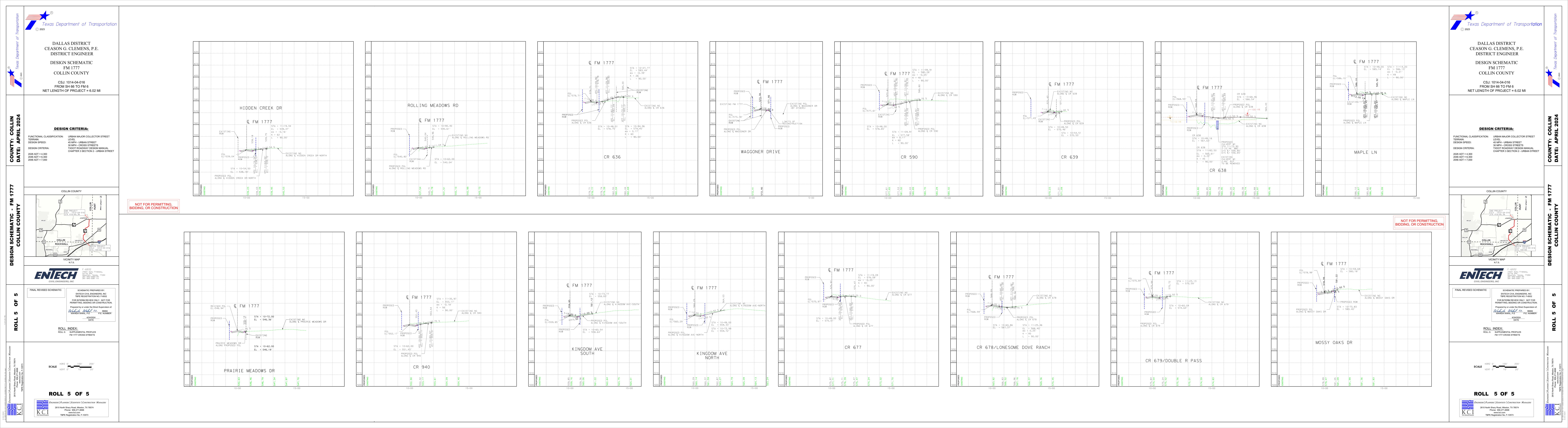
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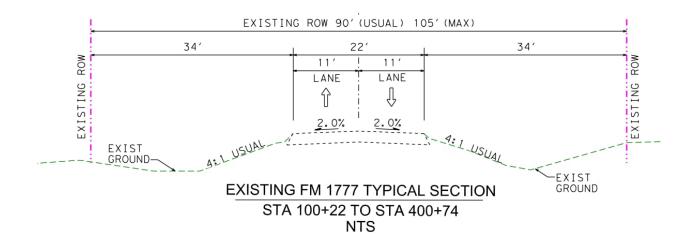


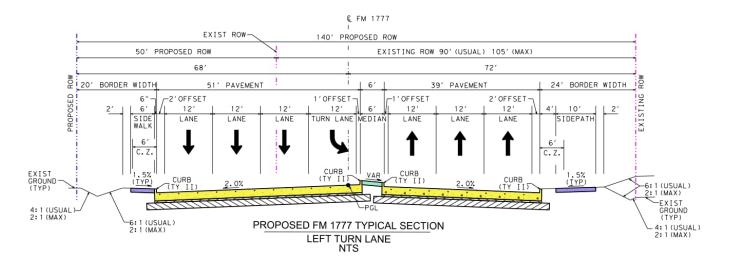


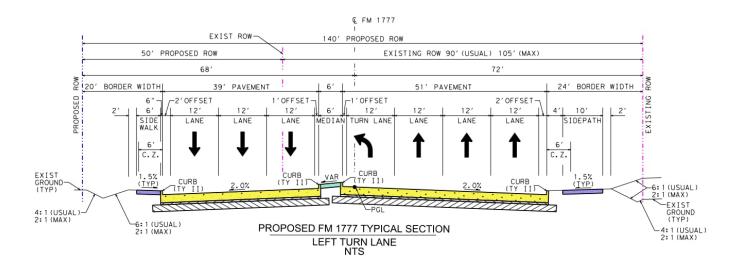


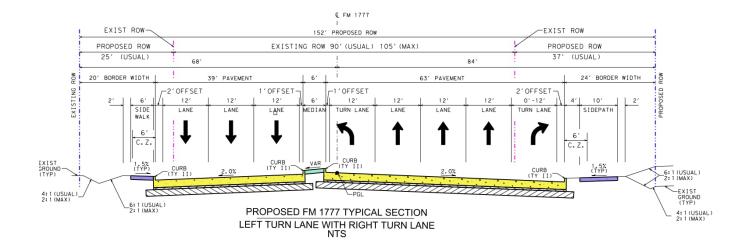


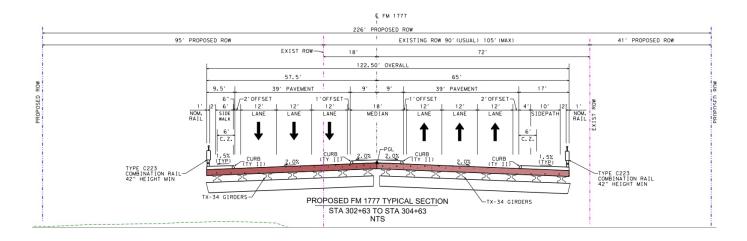
APPENDIX D TYPICAL SECTIONS



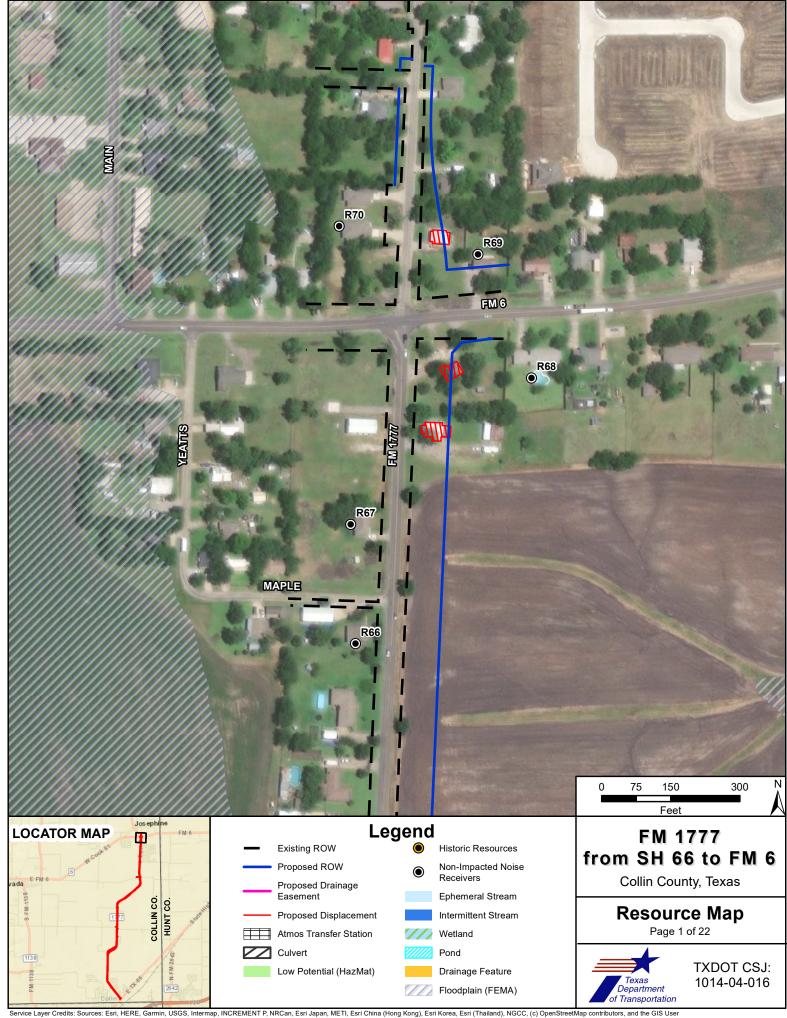








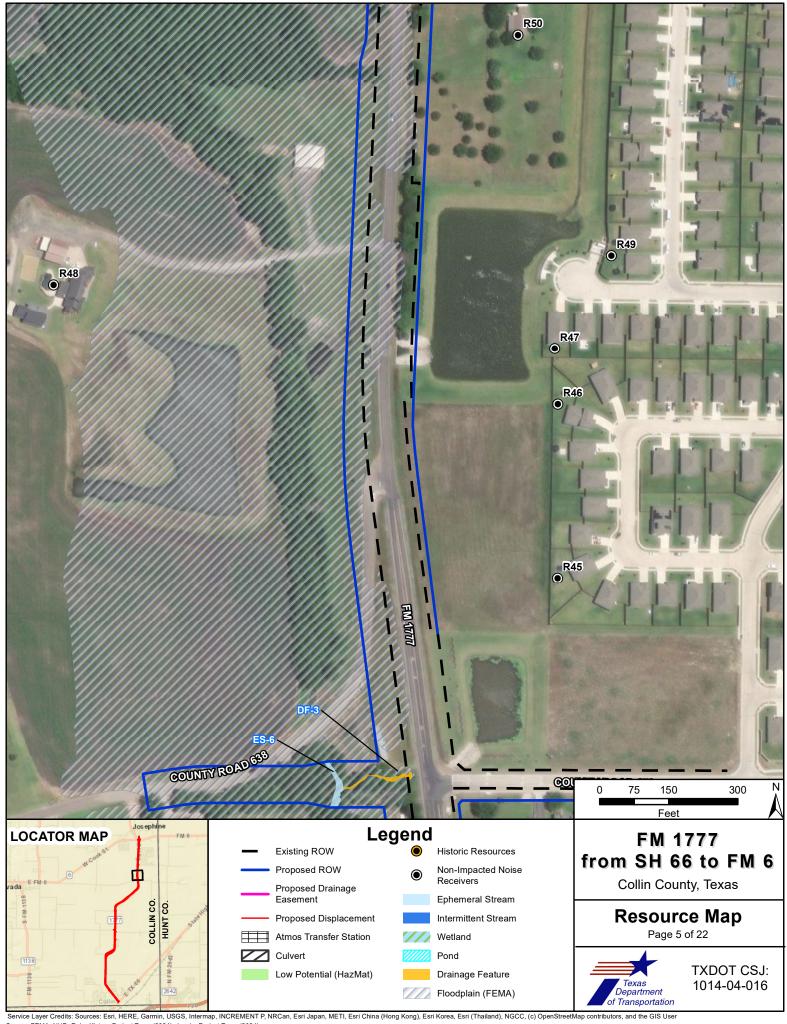
APPENDIX E RESOURCE-SPECIFIC MAPS

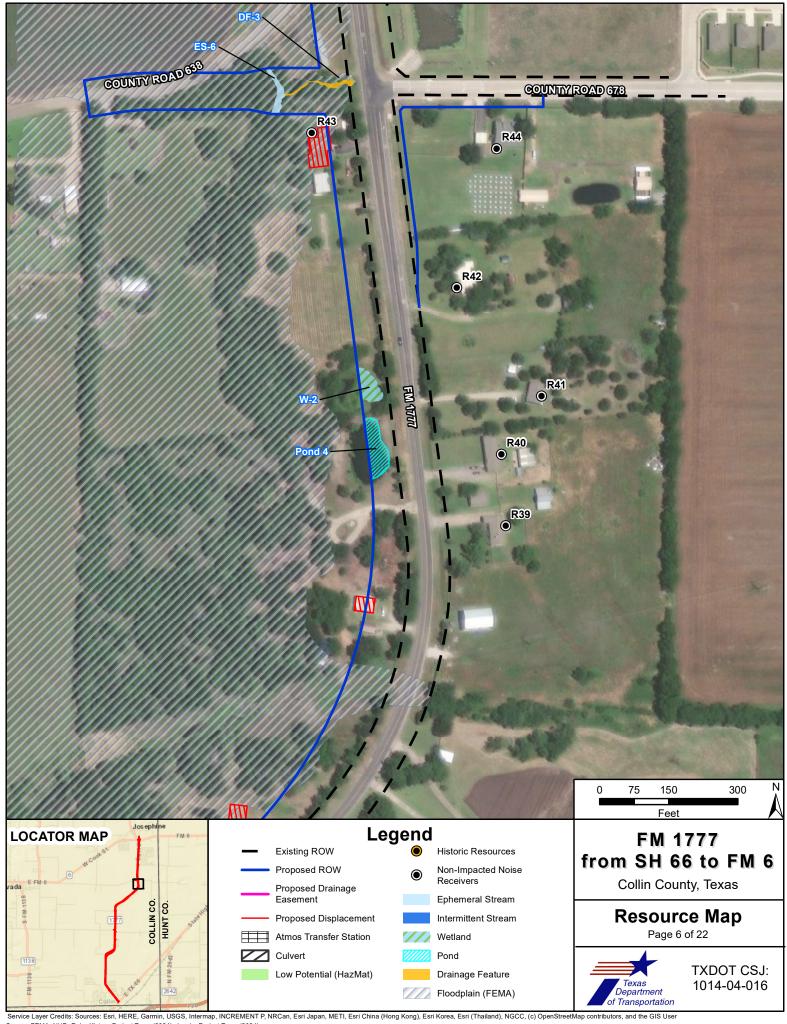




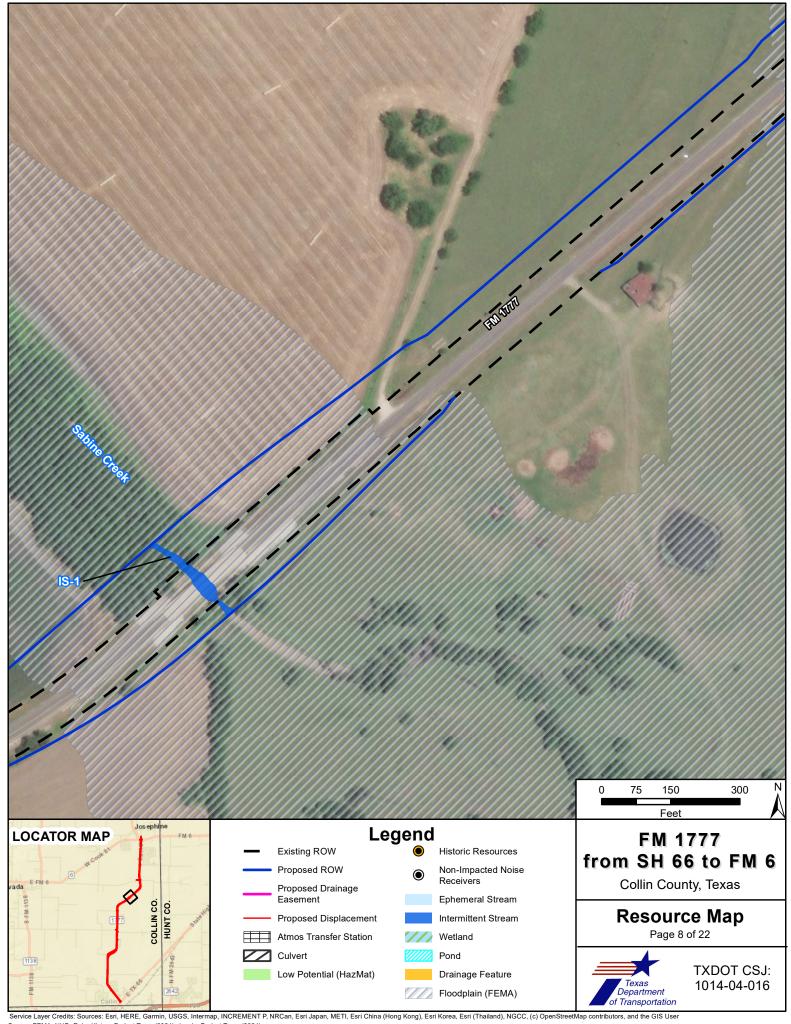


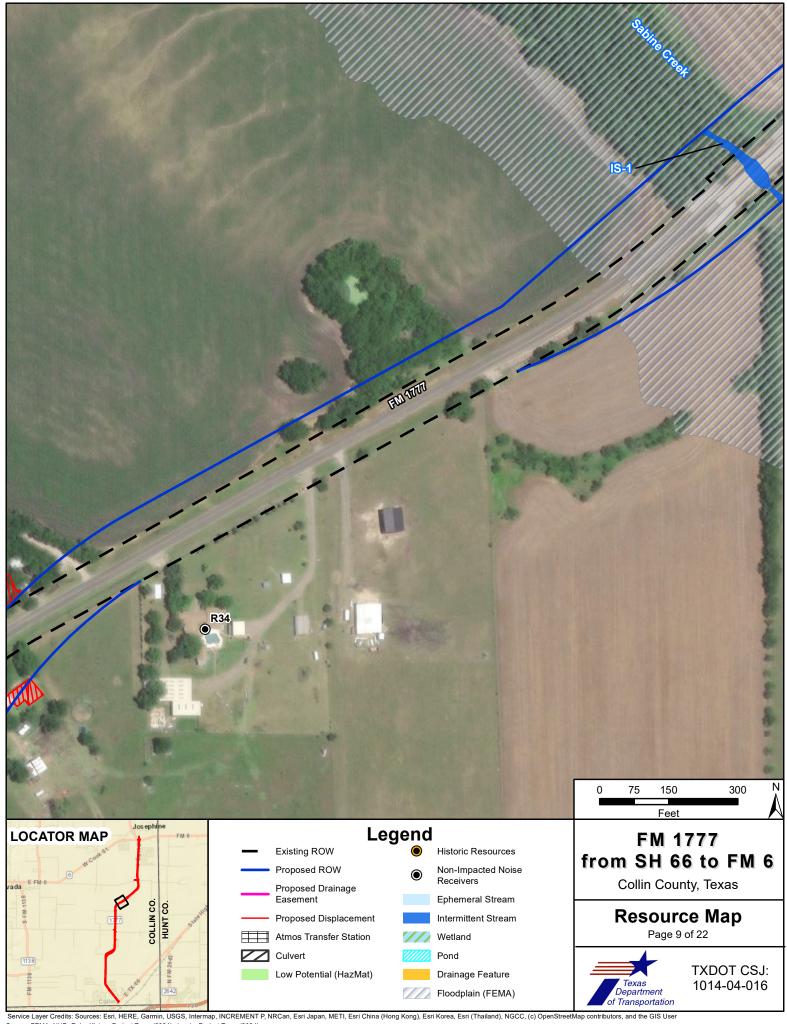




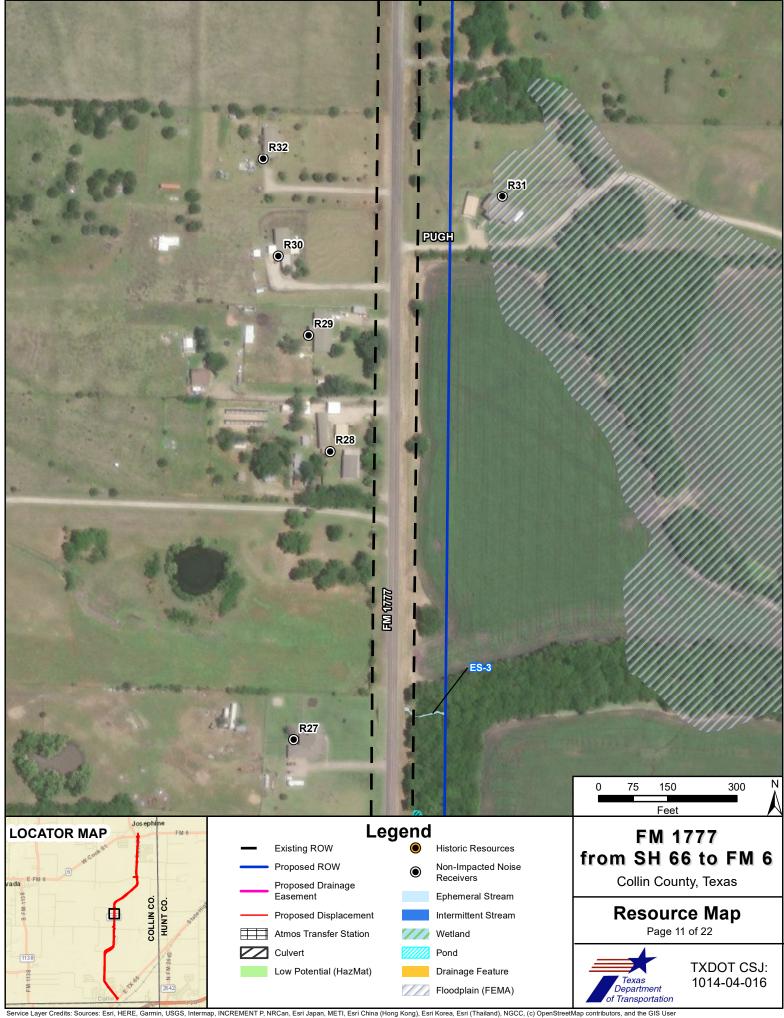






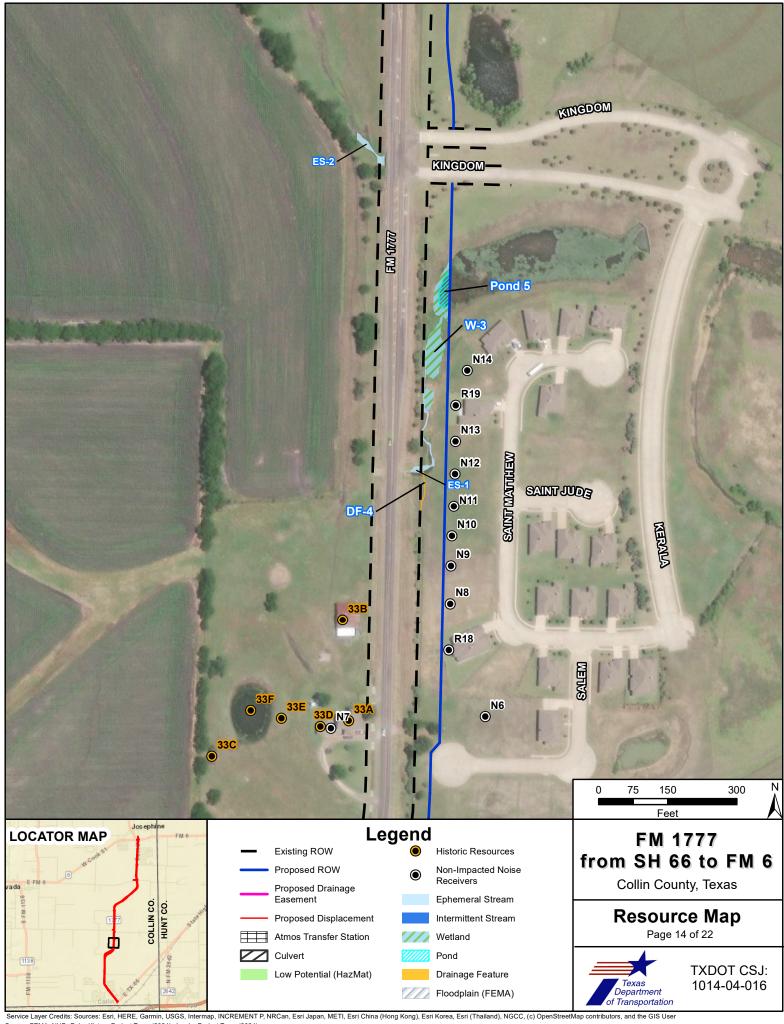


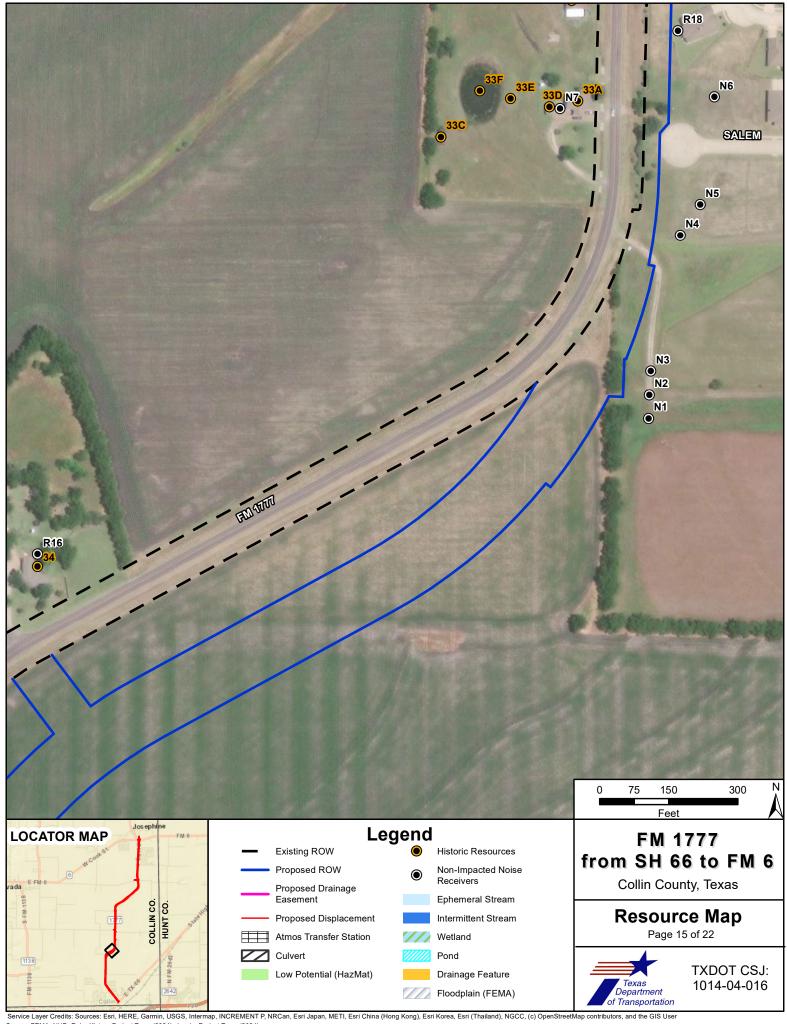




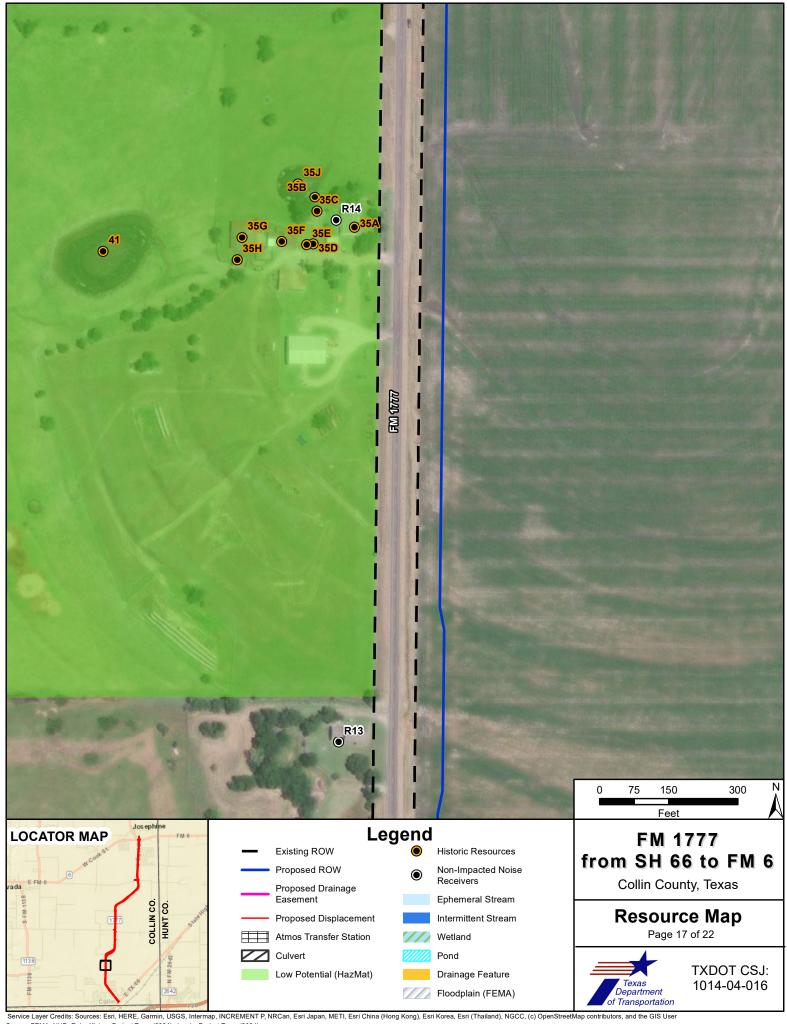


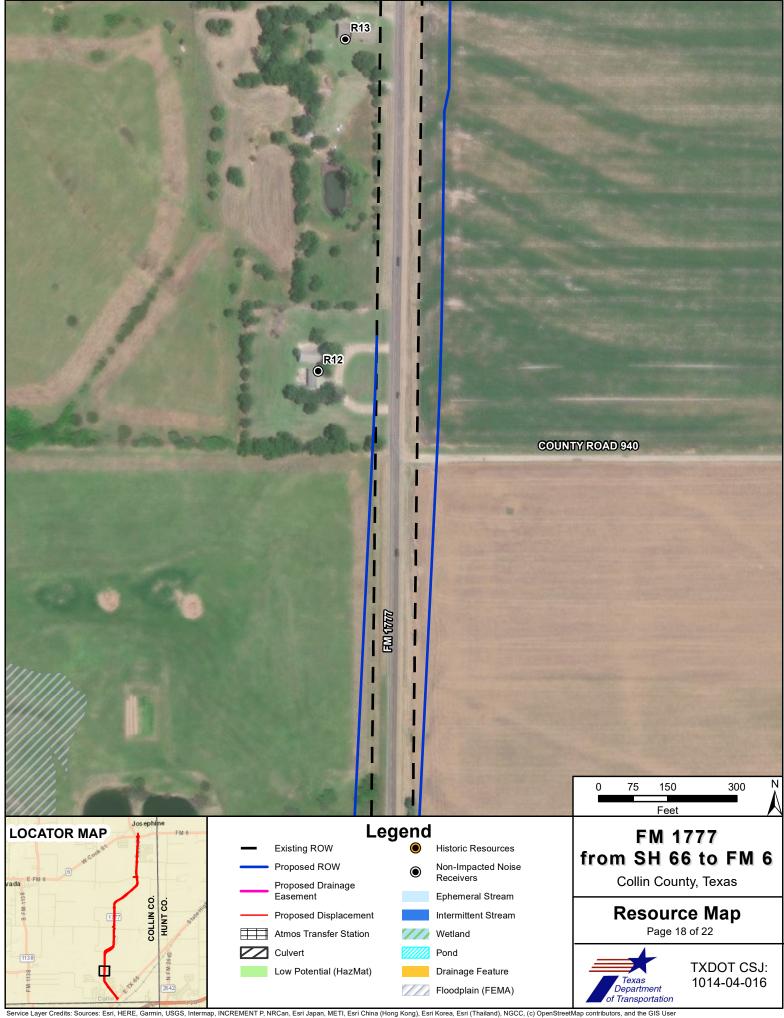


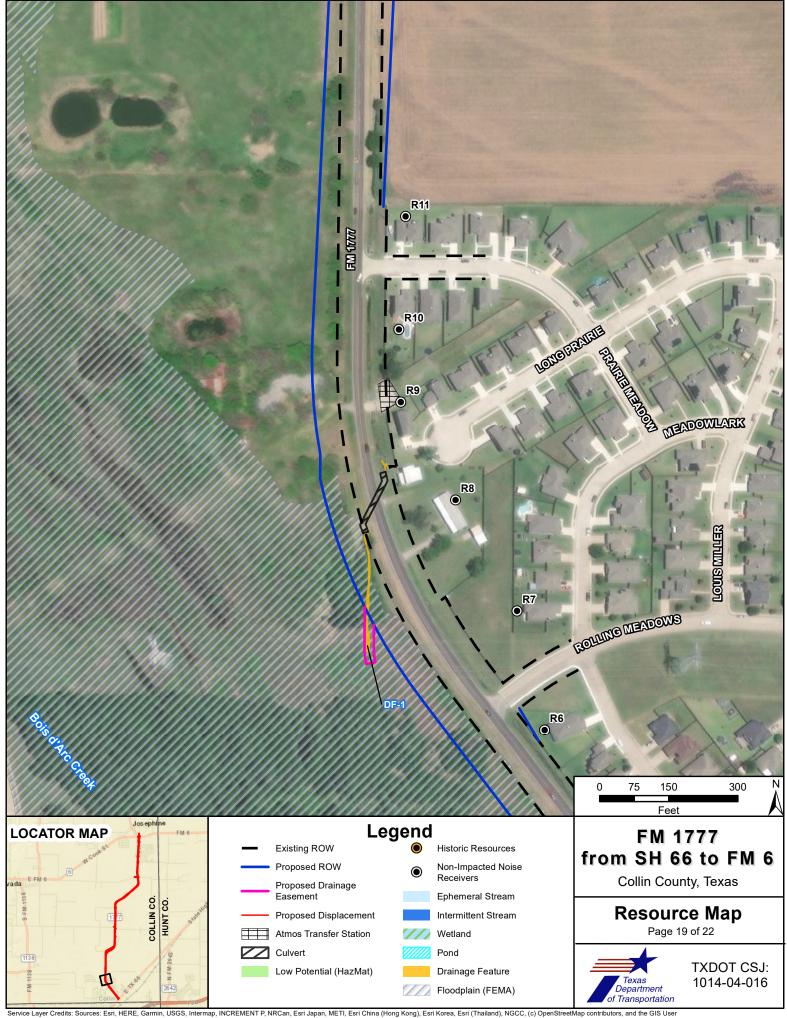


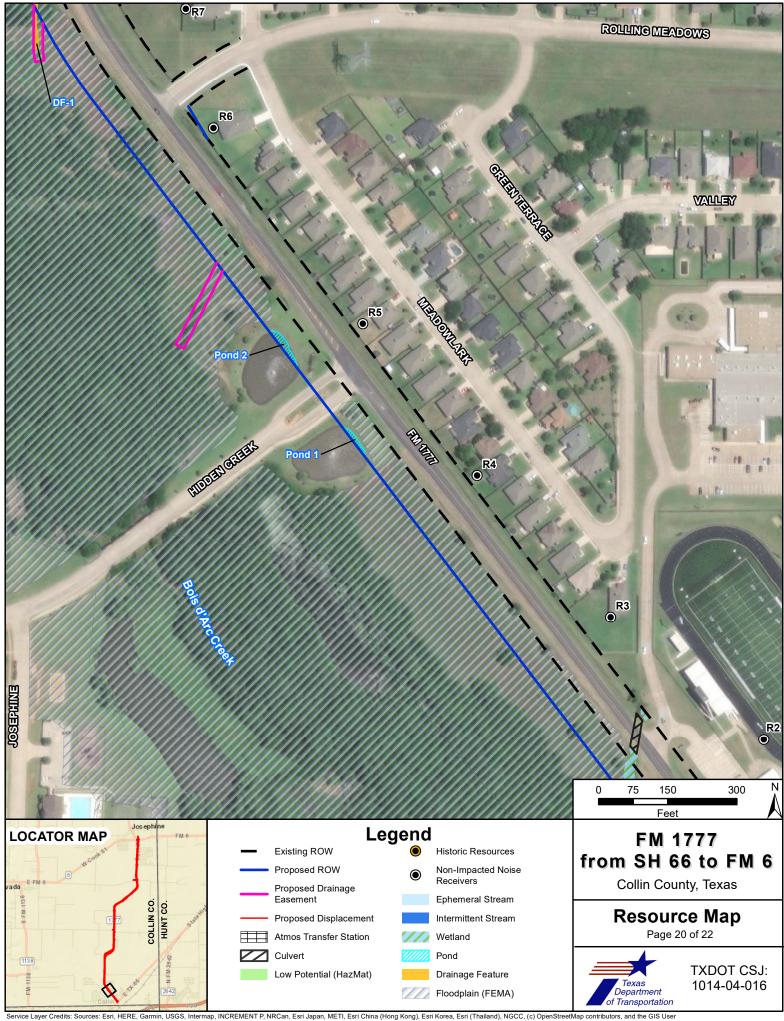


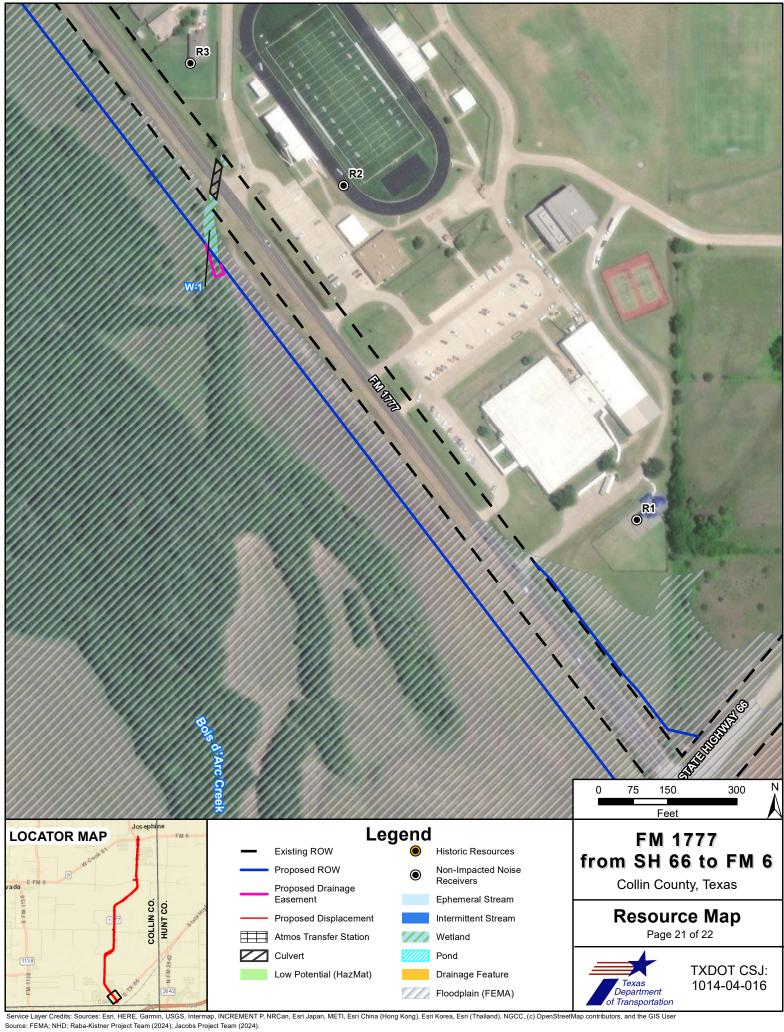


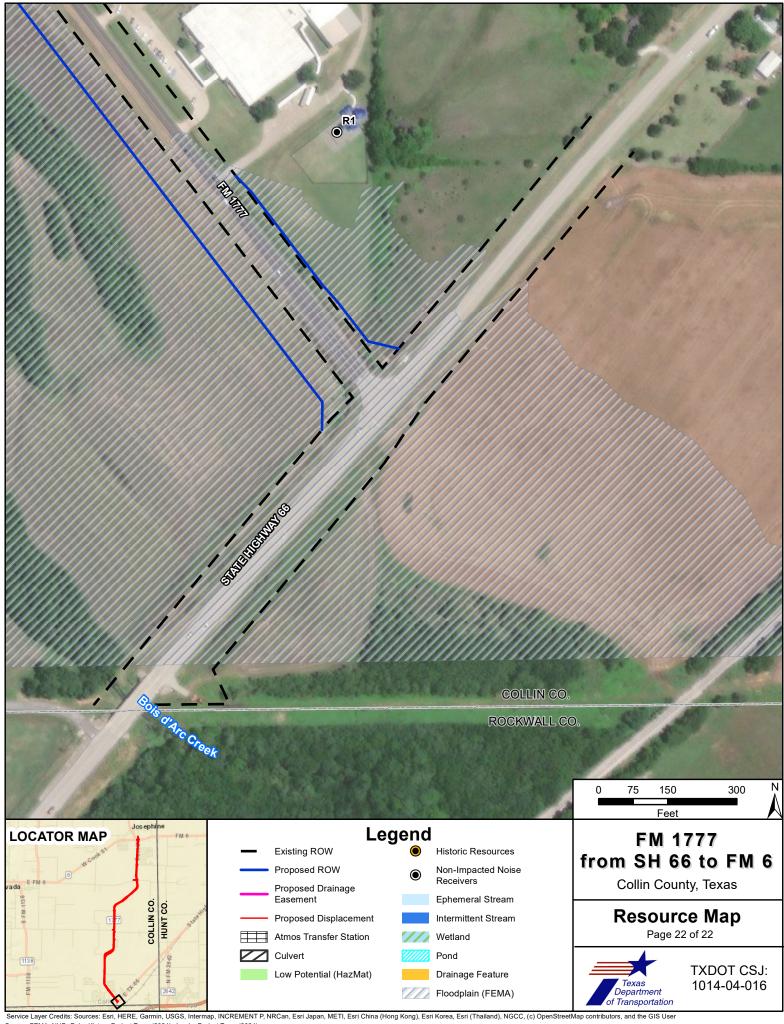












APPENDIX F RESOURCE AGENCY COORDINATION



125 EAST 11TH STREET, AUSTIN, TEXAS 78701-2483 | 512.463.8588 | WWW.TXDOT.GOV

March 24, 2023

RE: CSJ: 1014-04-016; FM 1777, Widen road, Collin County, Dallas District; Section 106 Consultation

Mr. Jonathan M. Rohrer, THPO Caddo Nation P.O. Box 487 Binger, OK 73009

Dear Mr. Rohrer:

The above referenced transportation project is being considered for construction by the Federal Highway Administration (FHWA) and the Texas Department of Transportation (TxDOT). Environmental studies are in the process of being conducted for this project. The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 9, 2019, and executed by FHWA and TxDOT.

The purpose of this letter is to contact you in order to consult with your Tribe pursuant to stipulations of the Programmatic Agreement among the Federal Highway Administration, the Texas Department of Transportation, the Texas State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding the Implementation of Transportation Undertakings (PA-TU). The project is located in an area that is of interest to your Tribe.

Undertaking Description

The Texas Department of Transportation (TxDOT) is proposing to expand FM Highway 1777(US 287) in Collin County, Texas (CSJ 1014-04-016). The proposed project will extend 6.02 miles from SH 66 to approximately 552 feet north of the intersection of FM 1777 and FM 6 in Collin County, Texas. The proposed project will require the acquisition of 50 to 105 feet of permanent right-of-way (ROW) on either side of FM 1777 from SH66 to approximately 552 feet north of the FM 1777 and FM 6 intersection for a total of 45.7-acres (ac) of new ROW, 20.9-ac on the east side of FM 1777 and 24.8-ac on the west side of FM 1777. The new ROW width will vary from 140 to 195 feet. Typical depth of impact is 3.5 feet at bridge approaches and up to 68 feet deep for drilled shafts for support piers.

Area of Potential Effects

The project's area of potential effects (APE) comprises the following area.

The project limits extend from State Highway (SH) 66 to approximately 552-feet north of the
intersection of FM 1777 and FM 6, for a total of 6.02-miles along FM 1777 in Collin County,
Texas. The project's new ROW is typically going to be 140 foot wide, and in some locations
the ROW will be increased to 195 foot wide maximum. The APE includes any existing ROW
within these limits.

- The existing ROW comprises approximately 73.3 acres.
- The proposed project would require 45.7 acres of new right of way.
- The estimated depth of impacts is typically 3.5 feet with a maximum depth of impacts of 68 feet.
- The APE is further detailed and illustrated in the attached report.

Identification Efforts

For this project, TxDOT has conducted an archeological survey of accessible portions of the APE. See the attached technical report for details.

Findings and Recommendations

Based on the above, TxDOT proposes the following findings and recommendations.

- The identification efforts and analysis of effects completed to date are adequate.
- No further work or consultation is required within the evaluated portions of the APE. Once
 access is obtained to areas for which access has been denied, TxDOT will complete required
 investigations and consultation prior to construction.

According to our procedures and agreements currently in place regarding consultation under Section 106 of the National Historic Preservation Act, we are writing to request your comments on historic properties of cultural or religious significance to your Tribe that may be affected by the proposed project APE and any buffer area defined in the report. Any comments you may have on the TxDOT findings and recommendations should also be provided. Please provide your comments within 30 days of receipt of this letter. Any comments provided after that time will be addressed to the fullest extent possible. If you do not object that the proposed findings and recommendations are appropriate, please sign below to indicate your concurrence. In the event that further work discloses the presence of archeological deposits, we will contact your Tribe to continue consultation.

Thank you for your attention to this matter. If you have questions, please contact Scott Pletka at 512/416-2631 (email: Scott.Pletka@txdot.gov). When replying to this correspondence by US Mail, please ensure that the envelope address includes reference to the Archeological Studies Branch, Environmental Affairs Division.

Sincerely.

Scott Pletka, Environmental Program Manager

Archeological Studies Branch, Environmental Affairs Division

Enclosure

Van Gorder, David

From: Jonathan Rohrer <noreply@jotform.com>

Sent: Tuesday, April 4, 2023 10:42 AM

To: Scott Pletka

Subject: FM 1777, Widen Road, Collin County, Dallas District - 1014-04-016

This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Scott

Thank you for your request for consultation, received on 04-03-2023. The Caddo Nation appreciates your willingness to conduct proper consultation, pursuant to Section 106 of the National Historic Preservation Act.

Upon review of the project and location I have determined that it does not affect known cultural, traditional or sacred sites of interest to the Caddo Nation. As such, the Caddo Nation has no objection to the project at this time. However, in the event that an inadvertent discovery of potentially relevant cultural sites, funerary objects, or human remains occurs, we request that the project be immediately halted and the proper authorities be contacted. Additionally, The Caddo Nation would need to be notified of an inadvertent discovery with 24 hours.

Should you have any question or concerns regarding this response please feel free to contact our office.

Best regards,

Jonathan

Jonathan M. Rohrer

Tribal Historic Preservation Officer



Caddo Nation

P.O. Box 487 Binger, OK 73009 t: (405)656-0970 Ext. 2070 e: jrohrer@mycaddonation.com

www.mycaddonation.com





125 EAST 11TH STREET, AUSTIN, TEXAS 78701-2483 | 512.463.8588 | WWW.TXDOT.GOV

April 3, 2023

RE: CSJ: 1014-04-016; FM 1777, Widen Road, Collin County, Dallas District; Section 106 Consultation and Antiquities Code Coordination; Texas Antiquities Permit No. Number 30920

Mr. Mark Wolfe Texas Historical Commission P.O. Box 12276 Austin, Texas 78711

Dear Mr. Wolfe:

As required by the Programmatic Agreement and the Memorandum of Understanding with your agency, we are initiating consultation on this project. Environmental studies are in the process of being conducted for this project. The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 9, 2019 and executed by FHWA and TxDOT. We have enclosed for your further review a draft report of archeological investigations for this undertaking.

Undertaking Description

TxDOT's Dallas District is proposing to expand FM Highway 1777 (US 287) in Collin County, Texas (CSJ 1014-04-016). The proposed project will extend 6.02 miles from SH 66 to approximately 552 feet north of the intersection of FM 1777 and FM 6 in Collin County, Texas. The proposed project will require the acquisition of 50 to 105 feet of permanent right-of-way (ROW) on either side of FM 1777 from SH66 to approximately 552 feet north of the FM 1777 and FM 6 intersection for a total of 45.7-acres (ac) of new ROW, 20.9-ac on the east side of FM 1777 and 24.8-ac on the west side of FM 1777. The new ROW width will vary from 140 to 195 feet. Typical depth of impact is 3.5 feet at bridge approaches and up to 68 feet deep for drilled shafts for support piers.

Area of Potential Effects

The project's area of potential effects (APE) comprises the following area.

• The project limits extend from State Highway (SH) 66 to approximately 552-feet north of the intersection of FM 1777 and FM 6, for a total of 6.02-miles along FM 1777 in Collin County, Texas. The project's new ROW is typically going to be 140 foot wide,

and in some locations the ROW will be increased to 195 foot wide maximum. The APE includes any existing ROW within these limits.

- The existing ROW comprises approximately 43.78 acres.
- The proposed project would require 45.7 acres of new right of way.
- The estimated depth of impacts is typically 3.5 feet with a maximum depth of impacts of 68 feet.
- The APE is further detailed and illustrated in the attached report.

Identification Efforts

For this project, TxDOT has conducted a survey. The enclosed report of investigations has more details regarding this work. The following bullets summarize the identification efforts.

- The investigations reported here concern portions of the APE that did not warrant survey and portions of the APE that were accessible during survey.
- Archeologists undertook a survey.
 - o No acres had been previously surveyed or otherwise evaluated for this project.
 - The following portions of the APE do not require survey due to prior development and disturbances:
 - the approximately 43.78 acres of existing ROW, due to disturbances from prior road construction and maintenance activities; and
 - the parcels of proposed new ROW in the northern portion of the APE (numbered 141 to 182, excluding parcels 142 and 168) extending from 552 feet north of FM 6 to CR 679 due to the minor amount of ROW, limited geoarcheological potential for site preservation, and prior residential development (see attached parcel map for specific locations).
 - Archeologists surveyed 5.65 acres of proposed new ROW, distributed across 16 parcels, and the attached report describes this survey. The survey encompassed parcels 3, 5, 33, 35, 107, 112, 131, 129A, 129B, 135A, 135B, 167, and three unnumbered parcels. Of these surveyed parcels, only parcels 107 and 112, located at the Sabine Creek, require additional work as that area was too waterlogged to trench safely at the time of the survey.
 - The fully-evaluated portion of the APE thus comprises the entirety of the existing ROW; unsurveyed proposed ROW parcels 141, 143-167, 169-182; and surveyed proposed ROW parcels 3, 5, 33, 35, 131, 129A, 129B, 135A, 135B, 167, and three unnumbered parcels (see the attached survey report and parcel map).
 - The current survey identified no archeological sites within the APE. Site 41COL376, a historic-age structure, was recorded as a site located immediately adjacent to the APE. The site does not extend into the APE.
 - Due to lack of diagnostic materials, site 41COL376 is recommended as not eligible for inclusion in the National Register of Historic Places, and the site does not warrant formal designation as a State Antiquities Landmark.

CSJ: 1014-04-016, FM 1777, Collin County, Dallas District Texas Antiquities Permit No. 30920

Effects Determination

The proposed project would have direct effects resulting from ground-disturbing construction activities within the APE. Given the results of the identification efforts, TxDOT proposes that the project will have no effect on archeological history properties within the fully-evaluated portion of the APE. The next section identifies the steps recommended by TxDOT based on the results of the identification efforts and this effects analysis.

Recommendations

TxDOT seeks your concurrence on the following points:

- The identification efforts and analysis of effects completed to date within the fullyevaluated portion of the APE are adequate.
- The project will have no effect on archeological historic properties within the fullyevaluated portion of the APE.
- TxDOT will complete survey of the proposed new ROW parcels 1, 2, 4, 6-28, 30-32, 34, 36-128, 130, 132-134, 136-140, 142, and 168 prior to construction (see attached parcel map for specific locations). These parcels generally comprise the unsurveyed portions of the proposed new ROW in the APE located south of CR 679. The parcels requiring survey include parcels 107 and 112. These two parcels require trenching at Sabine Creek. The parcels requiring survey also include parcels 142 and 168, parcels of farmland located north of CR 679.
- The attached draft report meets the reporting requirements of the Texas Antiquities Permit issued for the investigation.

Thank you for your consideration of this matter. If you have any questions or have need of further information, please contact me at 512-416-2631.

Sincerely,

Scott Pletka

Archeological Studies Branch Environmental Affairs Division

Sattelle

Van Gorder, David

From: noreply@thc.state.tx.us

Sent: Monday, April 10, 2023 1:27 PM
To: Scott Pletka; reviews@thc.state.tx.us

Subject: 101404016

This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.



Re: Project Review under Section 106 of the National Historic Preservation Act and/or the Antiquities Code of Texas

THC Tracking #202306750

Date: 04/10/2023

101404016 (Permit 30920)

FM 1777 at SH 66 Royse City,TX 75189

Description: TxDOT proposes to widen FM 1777. The submitted report is the draft archeological survey report for the accessible portions of this project.

Dear TxDOT Staff:

Thank you for your submittal regarding the above-referenced project. This response represents the comments of the State Historic Preservation Officer, the Executive Director of the Texas Historical Commission (THC), pursuant to review under Section 106 of the National Historic Preservation Act and the Antiquities Code of Texas.

The review staff, led by Bill Martin and Brad Jones, has completed its review and has made the following determinations based on the information submitted for review:

Archeology Comments

- No historic properties affected. However, if cultural materials are encountered during construction or disturbance activities, work should cease in the immediate area; work can continue where no cultural materials are present. Please contact the THC's Archeology Division at 512-463-6096 to consult on further actions that may be necessary to protect the cultural remains.
- Thank you for submitting this final report. To facilitate review and make project information and final reports available through the Texas Archeological Sites Atlas, we appreciate submission of abstracts and shapefiles through eTRAC via their corresponding tabs, if this has not already occurred. Please note that these steps are required for projects conducted under a Texas Antiquities Permit. For questions on how to submit these please visit our video training series at:

https://www.youtube.com/playlist?list=PLONbbv2pt4cog5t6mCqZVaEAx3d0MkgQC

- THC/SHPO concurs with information provided.
- Property/properties are not eligible for listing in the National Register of Historic Places.
- This draft report is acceptable. To facilitate review and make project information and final reports available through the Texas Archeological Sites Atlas, we appreciate submission of tagged pdf copies of the final report including one restricted version with all site location information (if applicable), and one public version with all site location information redacted; an online abstract form submitted via the abstract tab on eTRAC; and survey area shapefiles submitted via the shapefile tab on eTRAC. For questions on how to submit these please visit our

video training series at: https://www.youtube.com/playlist?list=PLONbbv2pt4cog5t6mCqZVaEAx3d0MkgQC Please note that these steps are required for projects conducted under a Texas Antiquities Permit.

We have the following comments: This report is considered to be both draft and final per the MOU.

We look forward to further consultation with your office and hope to maintain a partnership that will foster effective historic preservation. Thank you for your cooperation in this review process, and for your efforts to preserve the irreplaceable heritage of Texas. If the project changes, or if new historic properties are found, please contact the review staff. If you have any questions concerning our review or if we can be of further assistance, please email the following reviewers: bill.martin@thc.texas.gov, brad.jones@thc.texas.gov.

This response has been sent through the electronic THC review and compliance system (eTRAC). Submitting your project via eTRAC eliminates mailing delays and allows you to check the status of the review, receive an electronic response, and generate reports on your submissions. For more information, visit http://thc.texas.gov/etrac-system.

Sincerely,



for Mark Wolfe, State Historic Preservation Officer Executive Director, Texas Historical Commission

Please do not respond to this email.

Natural Resources Conservation Service

State Office

101 S. Main Street Temple, TX 76501 Voice 254.742.9800 Fax 254.742.9819 Attention: Jaimie Galm

1777 Roadway Expansion Project

Subject: NEPA/FPPA Evaluation

We have reviewed the information provided in your correspondence concerning the proposed project This review is part of the National Environmental Policy Act (NEPA) evaluation. We have evaluated the proposed site as required by the Farmland Protection Policy Act (FPPA).

The proposed corridor contains areas of Prime Farmland and Statewide Important Farmlands and we have completed the Farmland Conversion Impact Rating for Corridor Type Projects form (NRCS-CPA-106) for the site. The combined rating of the site is 92. The FPPA law states that sites with a rating less than 160 will need no further consideration for protection and no additional evaluation is necessary. We encourage the use of accepted erosion control methods during the construction of this project.

As such, no further consideration from protection is necessary. We strongly encourage the use of acceptable erosion control methods during the construction of this project.

If you have further questions, please contact me at 505-516-7822 or by email at mark.palmer@tx.usda.gov.

Sincerely,

Mark V. Palmer Jr.

(Rev. 1-91)

FARMLAND CONVERSION IMPACT RATING FOR CORRIDOR TYPE PROJECTS

PART I (To be completed by Federal Agency)		3. Date	of Land Evaluation	Request		4. Sheet 1 o	of
1. Name of Project Farm-to-Market (FM) 1777 fro	m State Highway		ral Agency Involved	Texas	Departn	nent of Transp	oortation
2. Type of Project Road Widening			ty and State Col		nty, Texa		
PART II (To be completed by NRCS)			Request Received by		2 Person	n Completing Form	١
Does the corridor contain prime, unique statewide or loca (If no, the FPPA does not apply - Do not complete addition)	•		YES NO			rrigated Average	
5. Major Crop(s)	6. Farmable Land		nment Jurisdiction			t of Farmland As D	Defined in FPPA
Grains, oilseeds, dry beans, dry peas	Acres: 280		%		Acres	280790	%
Name Of Land Evaluation System Used	9. Name of Local					and Evaluation R	
PART III (To be completed by Federal Agency)	•		Alternati	ve Corri	dor For S	egment	
			Corridor A	Corri	dor B	Corridor C	Corridor D
A. Total Acres To Be Converted Directly			115.1				
B. Total Acres To Be Converted Indirectly, Or To Receiv	e Services		0				
C. Total Acres In Corridor			115.1				
PART IV (To be completed by NRCS) Land Evalu	ation Information						
A. Total Acres Prime And Unique Farmland			62.5				
B. Total Acres Statewide And Local Important Farmland	<u>t</u>		47.5				
C. Percentage Of Farmland in County Or Local Govt. L			.000001				
D. Percentage Of Farmland in Govt. Jurisdiction With Sa			25				
PART V (To be completed by NRCS) Land Evaluation In		Relative	31				
value of Farmland to Be Serviced or Converted (Scale PART VI (To be completed by Federal Agency) Corri	ŕ						
Assessment Criteria (These criteria are explained in		laximum Points					
Area in Nonurban Use	7 07 11 00010(0))	15	12				
Perimeter in Nonurban Use		10	7				
Percent Of Corridor Being Farmed		20	18				
Protection Provided By State And Local Government	ent	20	0				
5. Size of Present Farm Unit Compared To Average		10	7				
6. Creation Of Nonfarmable Farmland		25	5				
7. Availablility Of Farm Support Services		5	0				
8. On-Farm Investments		20	0				
9. Effects Of Conversion On Farm Support Services		25	0				
10. Compatibility With Existing Agricultural Use		10	10				
TOTAL CORRIDOR ASSESSMENT POINTS		160	59	0		0	0
PART VII (To be completed by Federal Agency)							
Relative Value Of Farmland (From Part V)		100	31	0		0	0
Total Corridor Assessment (From Part VI above or a lo assessment)	ocal site	160	59	0		0	0
TOTAL POINTS (Total of above 2 lines)		260	92	0		0	0
Corridor Selected: Converted by President Converted Con	* '	Date Of	Selection:	4. Was	A Local Sit	e Assessment Use	ed?
Convented by 11	oject.				YES [NO 🗌	
5. Reason For Selection:	·			•			
Signature of Person Completing this Part:					DATE		
NOTE: Complete a form for each segment wit	h more than one	Alternat	e Corridor				

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 folerable 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



FormDocumentation of Texas Parks and Wildlife Department Best Management Practices

Pr	oject Name: FM 1777 Widening
CS	SJ(s): 1014-04-016
Co	ounty(ies): Collin
Da	ate Form Completed: 3/20/2022
Pr	epared by: Jaimie Galm, AWB® - Raba Kistner, Inc.
in	formation on state-listed species, SGCN, water resources, and other natural resources can be found the ECOS documents tab under the filenames specified in the e-mail sent to HAB_TXDOT@tpwd.texas.gov .
1.	Does the project impact any state parks, wildlife management areas, wildlife refuges, or other designated protected areas?
	⊠ No
	☐ Yes
2.	Does TxDOT need TPWD assistance in identifying and locating Section 404 mitigation opportunities for this project?
	No / N/A / Not yet determined
	☐ Yes
3.	Is there a species or resource challenge that TPWD can assist with additional guidance? If so, describe below:
4.	List all BMP that will be applied to this project per the document <i>Beneficial Management Practices:</i> Avoiding, Minimizing, and Mitigating Impacts of Transportation Projects on State Natural Resources.
	*Note, these are BMP that TxDOT commits to implement at the time this form is completed. This list may change prior to or during construction based on changes to project impacts, design, etc.
<u>BI</u>	MP to be Implemented:
	Inimize impacts to wetland habitats including isolated ephemeral pools Continued next page)

Effective Date: April 2022



2.6.1 Aquatic Amphibian and Reptile BMP

- For projects within existing right-of-way (ROW) when work is in water or will permanently impact a water feature and potential habitat exists for the target species complete the following:
 - Minimize impacts to wetlands, temporary and permanent open water features, including depressions, and riverine habitats.
 - Maintain the existing hydrologic regime and any connections between wetlands and other aquatic features.
 - Use barrier fencing to direct animal movements away from construction activities and areas of potential wildlife-vehicle collisions in construction areas directly adjacent, or that may directly impact, potential habitat for the target species.
 - Apply hydromulching and/or hydroseeding in areas for soil stabilization and/or revegetation of disturbed areas around wetlands and in riparian areas. If erosion control blankets or mats will be used, the product should not contain netting, but should only contain loosely woven natural fiber netting in which the mesh design allows the threads to move, therefore allowing expansion of the mesh openings. Plastic netting should be avoided.
 - Project specific locations (PSLs) proposed within state-owned ROW should be located in uplands away from aquatic features.
 - When work is directly adjacent to the water, minimize impacts to shoreline basking sites (e.g., downed trees, sand bars, exposed bedrock) and refugia/overwinter sites (e.g., brush and debris piles, crayfish burrows, aquatic logjams, and leaf packs).
 - o If gutters and curbs are part of the roadway design, install gutters that do not include the side box inlet and include sloped (i.e., mountable) curbs to allow small animals to leave roadway. If this modification to the entire curb system is not possible, install sections of sloped curb on either side of the storm water drain for several feet to allow small animals to leave the roadway. Priority areas for these design recommendations are those with nearby wetlands or other aquatic features.
- For projects that require acquisition of additional ROW and work within that new ROW is in water or will permanently impact a water feature, implement BMP for projects within existing ROW above plus those below:
 - For sections of roadway adjacent to wetlands or other aquatic features, install wildlife barriers that prevent climbing. Barriers should terminate at culvert openings in order to funnel animals under the road. The barriers should be of the same length as the adjacent feature or 80 feet long in each direction, or whichever is the lesser of the two.
 - For culvert extensions and culvert replacement/installation, incorporate measures to funnel animals toward culverts such as concrete wingwalls and barrier walls with overhangs.
 - When riprap or other bank stabilization devices are necessary, their placement should not impede the movement of terrestrial or aquatic wildlife through the water feature.
 Biotechnical streambank stabilization methods using live native vegetation or a combination of vegetative and structural materials should be used.

2.6.2 Terrestrial Amphibian and Reptile BMP

For open trenches and excavated pits, install escape ramps at an angle of less than 45 degrees
 (1:1) in areas left uncovered. Visually inspect excavation areas for trapped wildlife prior to
 backfilling



- Avoid or minimize disturbing or removing cover objects, such as downed trees, rotting stumps, brush piles, and leaf litter. If avoidance or minimization is not practicable, consider removing cover objects prior to the start of the project and replace them at project completion.
- Examine heavy equipment stored on site before use, particularly after rain events when
 reptile and amphibian movements occur more often, to ensure use will not harm individuals
 that might be seeking temporary refuge.
- Due to increased activity (mating) of reptiles and amphibian during the spring, construction
 activities like clearing or grading should attempt to be scheduled outside of the spring
 (March-May) season. Also, timing ground disturbing activities before October when reptiles
 and amphibians become less active and may be using burrows in the project area is also
 encouraged.
- When designing roads with curbs, consider using Type I or Type III curbs to provide a gentle slope to enable turtles and small animals to get out of roadways.
- If Texas tortoises (*Gopherus berlandieri*) or box turtles (*Terrepene* spp.) are present in a project area, they should be removed from the area and relocated between 100 and 200 meters from the project area. After removal of the individuals, the area that will be disturbed during active construction and project specific locations should be fenced off to exclude reentry by turtles, tortoises, and other reptiles. The exclusion fence should be constructed and maintained as follows:
 - The exclusion fence should be constructed with metal flashing or drift fence material.
 - o Rolled erosion control mesh material should not be used.
 - The exclusion fence should be buried at least 6 inches deep and be at least 24 inches high.
 - The exclusion fence should be maintained for the life of the project and only removed after the construction is completed and the disturbed site has been revegetated.
- After project is complete, revegetate disturbed areas with an appropriate locally sourced
 native seed mix. If erosion control blankets or mats will be used, the product should not
 contain netting, but should only contain loosely woven natural fiber netting in which the
 mesh design allows the threads to move, therefore allowing expansion of the mesh openings.
 Plastic netting should be avoided.

2.5.3 Bat BMP

- Inform TPWD WHAB during initial collaborative review phase for projects that may impact the following bat species:
 - o Any *Myotis* spp.
 - Tricolored bat (Perimyotis subflavus)
- If identification of a bat species is in question, consult with TPWD or a qualified TxDOT biologist during initial collaborative review phase.
- For activities that have the potential to impact structures, cliffs or caves, or trees; a qualified biologist will perform a habitat assessment and occupancy survey of the feature(s) with roost potential as early in the planning process as possible or within one year before project letting.
- For roosts where occupancy is strongly suspected but unconfirmed during the initial survey, revisit feature(s) at most four weeks prior to scheduled disturbance to confirm absence of bats.
- If bats are present or recent signs of occupation (i.e., piles of guano, distinct musky odor, or staining and rub marks at potential entry points) are observed, take appropriate measures to



- ensure that bats are not harmed, such as implementing non-lethal exclusion activities or timing or phasing of construction.
- Exclusion devices can be installed by a qualified individual between September 1 and March 31. Exclusion devices should be used for a minimum of seven days when minimum nighttime temperatures are above 50°F AND minimum daytime temperatures are above 70°F. Prior to exclusion, ensure that alternate roosting habitat is available in the immediate area. If no suitable roosting habitat is available, installation of alternate roosts is recommended to replace the loss of an occupied roost. If alternate roost sites are not provided, bats may seek shelter in other inappropriate sites, such as buildings, in the surrounding area.
- If feature(s) 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.
- Conversion of property containing cave or cliff features to transportation purposes should be avoided.
- Avoid unnecessary removal of dead fronds on native and ornamental palm trees in south
 Texas (Cameron, Hidalgo, Willacy, Kenedy, Brooks, Kleberg, Nueces, and San Patricio
 counties) from April 1 through October 31. If removal of dead fronds is necessary at other
 times of the year, limit frond removal to extended warms periods (nighttime temperatures ≥
 55°F for at least two consecutive nights), so bats can move away from the disturbance and
 find new roosts.
- Large hollow trees, snags (dead standing trees), and trees with shaggy bark should be surveyed for colonies and, if found, should not be disturbed until the bats are no longer occupying these features. Post-occupancy surveys should be conducted by a qualified biologist prior to tree removal from the landscape.
- Retain mature, large diameter hardwood forest species and native/ornamental palm trees.
- If gating a cave or abandoned mine is desired, consult with TPWD before installing gates. Gating should only be conducted by qualified groups with a history of successful gating operations. Gate designs must be approved by TPWD.
- In all instances, avoid harm or death to bats. Bats should only be handled as a last resort and after communication with TPWD.
- Coordinate with TPWD about the latest bat handling restrictions and protocols involving COVID-19 and bat handling. In general, all staff must follow the guidelines listed below:
 - Do not handle bats if not part of a critical or time-sensitive research project. Contact TPWD to discuss your project needs before beginning work.
 - o All participants must follow CDC social-distancing guidelines.
 - Wear a face mask to minimize the exchange of respiratory droplets such as a surgical mask, dust mask, or cloth mask when within 6 feet of a living bat.
 - Use disposable exam gloves or other reusable gloves (e.g., rubber dish-washing gloves) that can be decontaminated to prevent spread of pathogens. Do not touch your face or other potentially contaminated surfaces with your gloves prior to handling bats.
 - Limit handling to as few handlers as possible.
 - Do not blow on bats for any reason.
 - Use separate temporary holding containers for each bat such as disposable paper bags.
 - Caves housing bats should be avoided unless absolutely necessary.
 - Implement additional disinfection, quarantine, and cleaning procedures.



- Bat surveys of structures should include visual inspections of structural fissures (cracked or spalled concrete, damaged or split beams, split or damaged timber railings), crevices (expansion joints, space between parallel beams, spaces above supports piers), and alternative structures (drainage pipes, bolt cavities, open sections between support beams, swallow nests) for the presence of bats.
- Before excluding bats from any occupied structure, bat species, weather, temperature, season, and geographic location must be incorporated into any exclusion plans to avoid unnecessary harm or death to bats. Winter exclusion must entail a survey to confirm either, 1) bats are absent or 2) present but active (i.e., continuously active not intermittently active due to arousals from hibernation).
 - Avoid using materials that degrade quickly, like paper, steel wool or rags, to close holes.
 - Avoid using products or making structural modifications that may block natural ventilation, like hanging plastic sheeting over an active roost entrance, thereby altering roost microclimate.
 - o Avoid using chemical and ultrasonic repellents.
 - Avoid use of silicone, polyurethane or similar non-water-based caulk products.
 - Avoid use of expandable foam products at occupied sites.
 - Avoid the use of flexible netting attached with duct tape.
- In order to avoid entombing bats, exclusion activities should be only implemented by a qualified individual. A qualified individual or company should possess at least the following minimum qualifications:
 - Experience in bat exclusion (the individual, not just the company).
 - o Proof of rabies pre-exposure vaccinations.
 - Demonstrated knowledge of the relevant bat species, including maternity season date range and habitat requirements.
 - Demonstrated knowledge of rabies and histoplasmosis in relation to bat roosts.
- Contact TPWD for additional resources and information to assist in executing successful bat exclusions that will avoid unnecessary harm or death in bats.

2.1 Rare Plant BMP

- The following plant BMP apply to projects within range of and in suitable habitat for all plant SGCN that are listed on TPWD's RTEST online application.
- Survey project area during appropriate seasons to allow for correct species identification.
 Habitat and survey seasons are usually during the flowering and/or fruiting period listed on
 the RTEST website, if available. Surveys should be performed within suitable habitat for the
 species. Survey effort is project-, species- and habitat-dependent. Botanical field surveys
 should be conducted by qualified individual(s) with botanical experience and according to
 commonly accepted survey protocols. Ensure that any equipment, tools, footwear and
 clothing are clean prior to entering the project site area to avoid introducing invasive species.
 Prior to surveying, TPWD Staff is available to provide assistance with species identification
 and appropriate survey effort.
- If SGCN plants are located, the surveyor should attempt to determine the complete extent of the occurrence and the approximate number of individuals within the occurrence. Suitable GPS equipment should be used to map the boundaries of the population. Photographs should be taken and/or voucher specimens should be collected (if sufficient plants are present, i.e., more than 10 reproductive plants). Please note that a state collection permit is required from TPWD to collect voucher specimens of state-listed species and a federal collection permit is



required from U.S. Fish and Wildlife Service (USFWS) to collect federally listed species. Photographs should capture diagnostic characters of the species for verification and should be discussed with TPWD Staff prior to surveys if surveyor is unfamiliar with the species. Vouchers should be deposited with TPWD Staff or in one of Texas' major herbaria (e.g., University of Texas at Austin, Botanical Research Institute of Texas, Texas A&M University, Sul Ross State University, etc.).

- If there is a known TXNDD SGCN plant population within the project area and project timing or other constraints do not allow for surveys, contact TPWD Transportation Staff as soon as possible to discuss other options.
- If an SGCN plant species is located during surveys of the project area, then complete the following during the construction phase:
 - a. Avoid impacts and minimize unavoidable impacts. Plant locations should be protected with temporary barrier fencing and contractors should be instructed to avoid protected areas. Conducting construction outside of the growing season or after a plant has produced mature fruit is the preferred way to avoid/minimize impacts to SGCN plant populations. Staging areas, stockpiles, and other project related sites on TxDOT ROW should not impact SGCN plant populations. After construction begins, minimize herbicide use near SGCN plant populations (if possible, use hand-held spot sprayers, several meters from rare plants, on still or days with little wind).
 - b. If there are unintended impacts to SGCN populations, these impacts should be reported to TPWD Transportation Staff.
 - c. If the project footprint is finalized or is subject to change AND impacts to SGCN plants cannot be avoided, notify TPWD Transportation Staff as soon as possible. Early notification will allow adequate time and opportunity to seed bank or otherwise conserve populations prior to construction.
- Submit observation(s) of SGCN plant populations and associated data to the TXNDD and WHAB_TxDOT@tpwd.texas.gov. A TXNDD Reporting Form with shapefiles delineating the outer boundary of the population are preferable. Include detailed information on who identified and how a species was identified (resources/references used; diagnostic characters observed). If an SGCN plant population is located near non-native invasive plants, this should be recorded and reported in TXNDD Reporting Form.
- Although these BMP do not apply to federally listed species, the observation of federally listed species should also be submitted to TPWD.
- During project period, conduct work during times of the year when plants are dormant and/or conditions minimize disturbance of the habitat.
- Develop a plan based on growing season, mower height/season, etc. for protecting sites into
 future. Maps should also be developed for rare plant area, which includes no mow areas.
 Known rare plant sites on ROWs and/or new sites found in future projects can be added to
 this map/plan.
- Conducting maintenance outside of the growing season or after a plant has produced mature fruit is the preferred way to avoid/minimize impacts to habitat.

2.2.1 Bird BMP

 The following Bird BMP apply to projects within the range and in suitable habitat for all bird SGCN listed on TPWD's RTEST application. Please note that projects within the range and in suitable habitat for the bald eagle (*Haliaeetus leucocephalus*) are required to comply with the Bald and Golden Eagle Protection Act.



- In addition to complying with the Migratory Bird Treaty Act (MBTA) and Chapter 64 of the Parks and Wildlife Code (PWC) regarding nongame bird protections, perform the following BMP:
- Avoid vegetation clearing activities during the general bird nesting season, March through August, to minimize adverse impacts to birds.
- Prior to construction, perform daytime surveys for nests including under bridges and in culverts to determine if they are active before removal. Nests that are active should not be disturbed. If active nests are observed during surveys, TPWD recommends a 150-foot buffer of vegetation remain around the nests until the young have fledged or the nest is abandoned.
- Do not disturb, destroy, or remove active nests, including ground nesting birds, during the nesting season.
- If unoccupied, inactive nests will be removed, ensure that nests are not protected under the Endangered Species Act (ESA), MBTA, or BGEPA.
- Prevent the establishment of active nests during the nesting season on TxDOT owned and operated facilities and structures proposed for replacement or repair.
- Do not collect, capture, relocate, or transport birds, eggs, young, or active nests without a permit.
- Minimize extended human presence near nesting birds during construction and maintenance activities. Protect sensitive habitat areas with temporary barriers or fencing to limit human foot-traffic and off-road vehicle use to alert and discourage contractors from causing any unintentional impacts.
- Minimize construction noise above ambient levels during general bird nesting season to minimize adverse impacts on birds.
- Minimize construction lighting during the general bird nesting season by scheduling work activities between dawn and dusk.

1.1 General Design and Construction BMP

- Employees and contractors will be provided information prior to start of construction to
 educate personnel of the potential for all state-listed threatened species or other SGCN to
 occur within the project area and should be advised of relevant rules and regulations to
 protect plants, fish, and wildlife.
- Contractors will be informed to avoid harming all wildlife species if encountered and allow them to safely leave the project site. Due diligence should be used to avoid killing or harming any wildlife species in the implementation of transportation projects.
- Direct animals away from the construction area with the judicious use and placement of sediment control fencing to exclude wildlife. Exclusion fence should be buried at least 6 inches and be at least 24 inches high, maintained for the life of the project, and removed after construction is completed. Contractors should examine the inside of the exclusion area daily to determine if any wildlife species have been trapped inside the area of impact and provide safe egress opportunities prior to initiation of construction activities.
- Apply hydromulching and/or hydroseeding in areas for soil stabilization and/or revegetation of disturbed areas around wetlands and in riparian areas.
- If erosion control blankets or mats will be used, the product should not contain netting, but should only contain loosely woven natural fiber netting in which the mesh design allows the threads to move, therefore allowing expansion of the mesh openings. Plastic netting should be avoided.



- Project staging areas, stockpiles, temporary construction easements, and other project related sites should be situated in previously disturbed areas to avoid or minimize impacts to sensitive or unique habitats including intact native vegetation, floodplains, riparian corridors, wetlands, playa lakes, and habitat for wildlife species.
- When lighting is added, consider wildlife impacts from light pollution and incorporating darksky practices into design strategies. Minimize sky glow by focusing light downward, with full cutoff luminaries to avoid light emitting above the horizontal. The minimum amount of nighttime lighting needed for safety and security should be used.

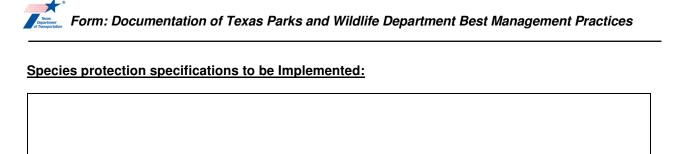
1.4 Water Quality BMP

In addition to BMP required for a TCEQ Storm Water Pollution Prevention Plan and/or 401 Water Quality Certification:

- Minimize the use of equipment in streams and riparian areas during construction. When possible, equipment access should be from banks, bridge decks, or barges.
- When temporary stream crossings are unavoidable, remove stream crossings once they are no longer needed and stabilize banks and soils around the crossing.
- Wet-Bottomed detention ponds are recommended to benefit wildlife and downstream water quality. Consider potential wildlife-vehicle interactions when siting detention ponds.
- Rubbish found near bridges on TxDOT ROW should be removed and disposed of properly to minimize the risk of pollution. Rubbish does not include brush piles or snags.

1.2 Vegetation BMPs

- Minimize the amount of vegetation cleared. Removal of native vegetation, particularly
 mature native trees and shrubs should be avoided. Impacted vegetation should be replaced
 with in-kind on-site replacement/restoration of native vegetation.
- To minimize adverse effects, activities should be planned to preserve mature trees, particularly acorn, nut or berry producing varieties. These types of vegetation have high value to wildlife as food and cover.
- It is strongly recommended that trees greater than 12 inches in diameter at breast height (DBH) that are removed be replaced. TPWD's experience indicates that for ecologically effective replacement, a ratio of three trees for every one (3:1) lost should be provided to either on-site or off-site. Trees less than 12 inches DBH should be replaced at a 1:1 ratio.
- Replacement trees should be of equal or better wildlife quality than those removed and be regionally adapted native species.
- When trees are planted, a maintenance plan that ensures at least an 85 percent survival rate after three years should be developed for the replacement trees.
- The use of any non-native vegetation in landscaping and revegetation is discouraged. Locally adapted native species should be used.
- The use of seed mix that contains seeds from only regional ecotype native species is recommended.
- 5. List all TxDOT species protection specifications that will be applied to this project (e.g., Amphibian and Reptile Exclusion Fence, Bat Houses, etc.)



Leslie Mirise

From: Suzanne Walsh <Suzanne.Walsh@tpwd.texas.gov>

Sent: Tuesday, March 21, 2023 9:34 PM

To: Leslie Mirise

Cc: Christine Polito; Dan Perge; Lillian Salinas

Subject: RE: CSJ 1014-04-016 FM 1777 Widening - Request for Collaborative Review

This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Leslie,

Thank you for your response and considering my comments. Please feel free to reach out to me if you need any further assistance. TPWD looks forward to reviewing the draft EA when it is available.

Thanks, Suzanne

Suzanne Walsh

Transportation Conservation Coordinator
Wildlife Division – Wildlife Habitat Assessment Program

Phone: (512) 389-4579

From: Leslie Mirise <Leslie.Mirise@txdot.gov> Sent: Monday, March 20, 2023 11:26 AM

To: Suzanne Walsh <Suzanne.Walsh@tpwd.texas.gov>

Cc: Christine Polito <Christine.Polito@txdot.gov>; Dan Perge <Dan.Perge@txdot.gov>; Lillian Salinas

<Lillian.Salinas@txdot.gov>

Subject: RE: CSJ 1014-04-016 FM 1777 Widening - Request for Collaborative Review

ALERT: This email came from an external source. Do not open attachments or click on links in unknown or unexpected emails.

Suzanne,

The full BMP language has been added to the updated BMP form that is attached and uploaded into ECOS. This form will be included in the Draft EA. Currently, we expect the public hearing to occur on June 15, 2023. TxDOT will notify TPWD once the NOA of the Draft EA is released. Please let me know if I can be of further assistance.

Thank you,

Leslie Mirise

Environmental Specialist
Dallas District – DAL-ENV
Texas Department of Transportation

4777 East Highway 80 Mesquite, Texas 75150 (214) 320-6162 office (214) 320-4470 FAX

From: Suzanne Walsh <Suzanne.Walsh@tpwd.texas.gov>

Sent: Friday, March 17, 2023 5:01 PM **To:** Leslie Mirise < Leslie.Mirise@txdot.gov>

Subject: RE: CSJ 1014-04-016 FM 1777 Widening - Request for Collaborative Review

This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Leslie,

Thank you for your patience.

TPWD recommends revising TxDOT's "Documentation of Texas Parks and Wildlife Department Best Management Practices" form to add the full language of all individual BMP within a category (i.e. bulleted list) from TPWD's Beneficial Management Practices: Avoiding, Minimizing, and Mitigating Impacts of Transportation Projects on State Natural Resources (September 17, 2021 Version) that will be implemented for this project and including the revised form in the Draft EA.

Please feel free to reach out to me if you need any further assistance. We would also appreciate being notified about any upcoming scoping or public meetings for this project. TPWD looks forward to reviewing the draft EA when it is available.

Sincerely,

Suzanne Walsh Transportation Conservation Coordinator (512) 389-4579

From: WHAB TxDOT < WHAB TxDOT@tpwd.texas.gov>

Sent: Monday, December 19, 2022 4:53 PM

To: Leslie Mirise <Leslie.Mirise@txdot.gov>; WHAB TxDOT <WHAB TxDOT@tpwd.texas.gov>

Cc: Christine Polito < Christine.Polito@txdot.gov">Christine.Polito@txdot.gov; Dan Perge < Dan.Perge@txdot.gov; Stirling Robertson

<<u>Stirling.Robertson@txdot.gov</u>>; Lillian Salinas <<u>Lillian.Salinas@txdot.gov</u>>; Suzanne Walsh

<Suzanne.Walsh@tpwd.texas.gov>

Subject: RE: CSJ 1014-04-016 FM 1777 Widening - Request for Collaborative Review

The TPWD Wildlife Habitat Assessment Program has received your request and has assigned it project ID # 49798. 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: Leslie Mirise < Leslie.Mirise@txdot.gov > Sent: Friday, December 16, 2022 9:35 PM

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

Cc: Christine Polito < Christine.Polito@txdot.gov">Christine.Polito@txdot.gov; Dan Perge < Dan.Perge@txdot.gov; Stirling Robertson

<Stirling.Robertson@txdot.gov>; Lillian Salinas <Lillian.Salinas@txdot.gov>

Subject: CSJ 1014-04-016 FM 1777 Widening - Request for Collaborative Review

ALERT: This email came from an external source. Do not open attachments or click on links in unknown or unexpected emails.

Hello,

TxDOT requests initial collaborative review for the FM 1777 Widening project in Collin County, Texas. Please see ECOS WPD I screen for the project description. The project includes widening of the existing two-lane facility to four-lane divided (ultimate six) and would extend from SH 66 to FM 6. The following file names for relevant documents are available in ECOS:

- 1. CSJ 1014-04-016_FM 1777_ USFWS Species List_ 20221028.pdf
- 2. CSJ 1014-04-016_FM 1777_TPWD RTEST Species List_20221214.pdf
- 3. APPROVED 1014-04-016 FM 1777 SAS 20221215.pdf
- 4. APPROVED 1014-04-016 FM 1777 SAF 20221216.pdf
- 5. APPROVED 1014-04-016 FM 1777 BMP Form 20221216.pdf
- 6. APPROVED 1014-04-016 FM 1777 EMST Figure 20221216.pdf
- 7. APPROVED 1014-04-016 FM 1777 Observed Veg 20221216.pdf
- 8. APPROVED 1014-04-016 FM 1777 TxNDD 20221109.pdf
- 9. APPROVED 1014-04-016 FM 1777 Photos 20221215.pdf
- 10. APPROVED 1014-04-016 FM 1777 Special Habitat Features 20221216.pdf

The water resources technical documents are in review and will be available soon. As general timeline information, the Draft EA is expected to be published in early 2023 and environmental clearance in August 2023. Please contact me with any questions or if additional information is needed.

Thank you,

Leslie Mirise

Environmental Specialist
Dallas District – DAL-ENV
Texas Department of Transportation
4777 East Highway 80

Mesquite, Texas 75150 (214) 320-6162 office (214) 320-4470 FAX

A Texas Department of Transportation message



End the streak of daily deaths on Texas roadways.

A Texas Department of Transportation message



End the streak of daily deaths on Texas roadways.



125 E 11th St | Austin, Texas 78701 512.463.8588 txdot.gov

May 14, 2024

SECTION 106 REVIEW: DETERMINATION OF NO ADVERSE EFFECT
SECTION 4(f) REVIEW: NOTIFICATION OF INTENT TO RENDER DE MINIMIS SECTION 4(f) FINDING

District: Dallas County: Collin CSJ#: 1014-04-016 Highway: FM 1777

Project Limits: SH 66 to FM 6

Section 4(f) Property: #35, Clinard Farm (NRHP-eligible)

Mr. Justin Kockritz History Programs Texas Historical Commission Austin, Texas 78711

Dear Mr. Kockritz:

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 9, 2019, and executed by FHWA and TxDOT. As a consequence of these agreements, TxDOT's regulatory role for this project is that of the Federal action agency. In accordance with 36 CFR 800 and our Section 106 Programmatic Agreement for Transportation Undertakings (December 2015), this letter continues Section 106 consultation on the NRHP boundaries of, and the effects to, the National Register of Historic Places (NRHP) eligible Clinard Farm (ID #35 in HRSR).

Project Description

See the attachment from TxDOT's Environmental Compliance Oversight System (ECOS) that describes the project, setting, and amount of right-of-way (ROW) and easements necessary for the project.

Survey methods

TxDOT historians originally coordinated the results of a reconnaissance survey with your office in April 2023. SHPO concurred with our findings of eligibility in May 2023 (see attached). However, you asked that we further research the NRHP-eligible Clinard Farm (property #35) to determine NRHP-boundaries and further information to ascertain proper boundaries.

NRHP-Eligible Properties

The Clinard Farm is significant under NRHP Criterion A in the area of Agriculture and retains sufficient integrity to convey its significance. In May 2023, the Clinard Farm was determined **eligible** under Criterion A in the area of Agriculture with a period of significance that extends from 1940 to 1981. Appropriate boundaries for an agricultural property eligible for the NRHP under Criterion A ideally include the domestic and agricultural work zones as well as associated fields. Intensive survey (IS) efforts revealed a larger NRHP-boundary for the farm, as shown on the map page 92 of the IS report.

Determination of Effects

DAL Collin FM 1777 CSJ: 101404016 2 May 2024

Direct Effect:

The recommended NRHP-eligible boundary of the Clinard Farm is comprised of twenty-eight contiguous parcels, totaling approximately 1,230 acres on both sides of FM 1777. Eleven of those parcels extend into the project APE between County Road 590 and Prairie Meadow Drive. At this location, the proposed project would reconstruct FM 1777 from an existing two-lane rural roadway to a four- (six-) lane divided highway. The proposed facility would have a raised grass median, curb-and-gutter drainage, 6- foot-wide sidewalk on the west side, and 10-foot-wide shared-use path on the east side.

Once intensive survey efforts revealed the size and further contributing properties to the farm, TxDOT redesigned the roadway to avoid all contributing resources of the Clinard farm. However, new ROW is required from the property's NRHP-eligible boundaries.

Based on April 2024 design files, new ROW from four of the 11 Clinard Farm parcels located within the APE is required, including two containing built resources that contribute to the NRHP-eligible Clinard Farm (see Table 3). In total, 10.85 acres (0.88 percent) of the approximately 1,230-acre NRHP-eligible Clinard Farm is required as new ROW for the proposed project.

Table 5. I Toposed Noti per official a famili alcel within Ar E				
Collin CAD Property ID	Parcel Acreage	Proposed ROW Acreage	Contributing Resources	Notes
1303002	0.92	0	None	No ROW required
1302995	24.27	0	Resource 41	No ROW required
2747453	57.89	0	None	No ROW required
2124297	8.86	0	Resources 33A-F	No ROW required; pavement edge closer to buildings
1287075	119.97	2.71	Resource 32A	ROW required; no displacements
1287074	4.2	0	Resource 34	No ROW required
1287119	52.6	5.05	None	ROW required; no displacements
2550473	98.31	0	None	No ROW required
2550472	5.01	0	Resources 35A-J	No ROW required; pavement edge closer to buildings
1287128	70.4	2.58	None	ROW required; no displacements
1288626	39.15	0.51	Resource 43	ROW required; no displacements

Table 3. Proposed ROW per Clinard Farm Parcel within APE

The proposed project would not result in displacements or building removals from the property. Specific information regarding potential direct effects to the NRHP-eligible Clinard Farm resources is provided on pages 28-29 of the IS report.

Indirect Effect:

TxDOT considered additional noise and/or visual impacts. FM 1777 will remain at-grade following its current alignment, which has been in place since at least the 1950s. FM 1777 is already a paved and heavily traveled highway with traffic averaging 3,700 vehicles per day in 2021 in the northern Royse City area. Although the project would add capacity to FM 1777, which may result in additional traffic volume, these changes are not likely to impact the overall setting or feeling of the NRHP-eligible properties, nor their abilities to convey their NRHP

DAL Collin FM 1777 CSJ: 101404016 3 May 2024

significance. For these reasons, based on current project plans and the findings of the survey, the project would have no adverse indirect effect on property.

Cumulative Effect:

Increasing suburbanization and traffic volumes are already occurring on the FM 1777 corridor. Although the project will add capacity to FM 1777, it is not expected to alter existing developmental trends in the area. The proposed FM 1777 improvements would improve traffic flow and overall safety but would not have a major impact to NRHP-eligible properties when added to other past, present, and reasonably foreseeable actions. Based on current project plans and the findings of the survey, the project will not have cumulative or reasonably foreseeable adverse effects on the property.

Determination of De Minimis Finding, Property 35

As part of this coordination, TxDOT determined that the proposed project meets the requirements for a Section 4(f) de minimis impact finding under 23 CFR 774. The proposed use of the Section 4(f) property would not adversely affect the activities, features, or attributes that qualify the property for protection under Section 4(f). TxDOT based its determination on the fact that the use for the Clinard Farm amounts to less than 1% of the property's overall acreage and the project will have **no adverse effect** on the NRHP-eligible property.

Conclusion

In accordance with 36 CFR 800 and our Section 106 PA, I hereby request your signed concurrence with TxDOT's finding of **no adverse effect** to the NRHP-eligible Clinard Farm (#35). We additionally notify you that SHPO is the designated official with jurisdiction over Section 4(f) resources protected under the provisions of 23 CFR 774 and that your comments on our Section 106 findings will be integrated into decision-making regarding prudent and feasible alternatives for purposes of Section 4(f) evaluations. Final determinations for the Section 4(f) process will be rendered by TxDOT pursuant to 23 U.S.C. 327 and the afore-mentioned MOU dated December 9, 2019.

We look forward to further consultation with your staff and hope to maintain a partnership that will foster effective and responsible solutions for improving transportation, safety and mobility in the state of Texas. Thank you for your cooperation in this federal review process. If you have any questions or comments concerning these evaluations, please contact me at (409) 673-0787 or Renee.Benn@txdot.gov.

Sincerely. Rence Benn	
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Renee Benn, MS	DS
thru: Linda Henderson, ENV HIST Program Lead:	LCH

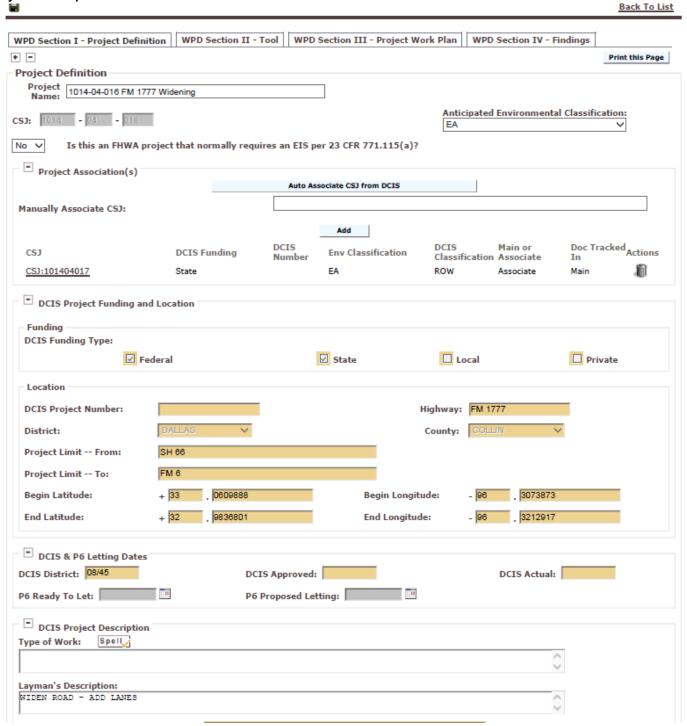
	EOLOGICAL SECTION 106 FINDINGS: T: NRHP-ELIGIBLE #35
NAME:	DATE: Deputy State Historic Preservation Officer

DAL Collin FM 1777 CSJ: 101404016 4 May 2024

NO COMMENTS ON DETERMINATION OF	DE MINIMIS IMPACT UNDER SECTION 4(F) REGULATIONS
NAME:	DATE: on, Chief Deputy State Historic Preservation Officer

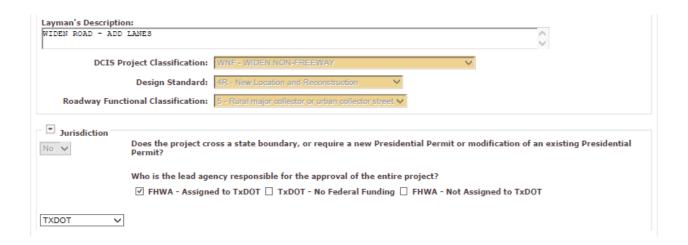
DAL Collin FM 1777 CSJ: 101404016 5

Project Description from ECOS:



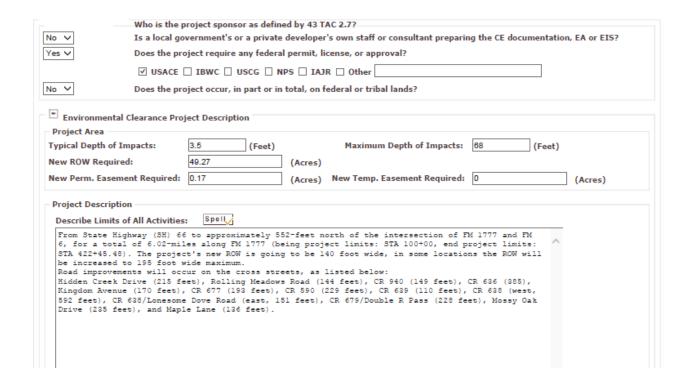
May 2024

DAL Collin FM 1777 CSJ: 101404016 6 May 2024



https://www.dot.state.tx.us/ECOS/apps/ecos/project_definition.jsp?proj_id=14007219&sc... 5/13/2024

CSJ: 101404016 Proj Nm: 1014-04-016 FM 1777 Widening Dist: DALLAS Cnty: COLL... Page 2 of 4



DAL Collin FM 1777 CSJ: 101404016 7 May 2024

Describe Project Setting:

Spell

General character of surrounding area is undeveloped/agricultural land with sparse single-family developments along FM 1777, as well as several newly built large neighborhoods, concentrated near the northern and southern project limits. Three schools are located at the northeast intersection of FM 1777 and SH 66. No substantial traffic generators are in the vicinity of the project area. The only historical markers near FM 1777 are the historical highway 66 (begin project limits), and First Baptist Church of Josephine (located over 900-feet Northwest of the northern project limits in the city of Josephine).

General vegetation within and surrounding the project area is maintained grass along FM 1777 ROW, cultivated agricultural land/row crops, and according to the EMST mapper, a mix of post oak savanna grassland, Pineywoods bottomland/riparian hardwood following the streams, and disturbed/tame blackland prairie grassland.

FM 1777 Stream crossings:

- Unnamed Tributary to Sabine Creek (STA 223+11.42)
- Sabine Creek Tributary D-1 (STA 256+88.00)
- Sabine Creek Tributary D-1 (STA 275+83.58) - Sabine Creek (from STA 302+63.00 to 304+63.00)
- Sabine Creek Tributary B (STA 325+89.97)

DAL Collin FM 1777 CSJ: 101404016 8 May 2024

Describe Existing Facility: Spell

https://www.dot.state.tx.us/ECOS/apps/ecos/project_definition.jsp?proj_id=14007219&sc... 5/13/2024

CSJ: 101404016 Proj Nm: 1014-04-016 FM 1777 Widening Dist: DALLAS Cnty: COLL... Page 3 of 4

Existing facility is a two travel lane road, one travel lane in each direction (north and south). Existing lanes are each 10-feet wide, no median, with intermittent turn lanes. ROW is typically 60-feet, max. 90-feet, min. 60-feet. There are no shoulders, no sidewalks or shared use paths along the extent of FM 1777, and the existing drainage is bar ditch/culvert.	^
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escribe Proposed Facility: Spell	
roposed facility is four (ultimate six) 12-foot wide travel lanes, two in each direction(three ltimate) (north and south), intermittent turn lanes, an 18-foot raised grass median, curb and utter drainage, a 6-foot wide sidewalk on the west side, and a 10-foot wide shared use path on he east side. Proposed ROW will be typically 140-feet, max. 195-feet, min. 140-feet. In some ocations right-turn-lanes were added in several areas that have increased the ROW to 195 feet ide. Proposed realignment of the FM 1777 road would be located between county road (CR) 636 and ounty road (CR) 677, to avoid displacements of 4(f) historic structures.	^