Draft Environmental Assessment

Kaufman County Outer Loop (KCOL), Dallas District

Project Limits, From SH 205 to South of I-20
January 2026

CSJ Number(s): 0918-11-109

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 July 17, 2025, and executed by FHWA and TxDOT.

Table of Contents

1 Introduction 1
2 Project Description 1
2.1 Existing Facility 1
2.2 Proposed Facility 2
2.3 Logical Termini and Independent Utility 3
2.3.1 Logical Termini 3
2.3.2 Independent Utility 3
2.4 Planning Consistency 4
3 Purpose and Need 4
3.1 Need 4
3.2 Supporting Facts and Data 4
3.3 Purpose 5
4 Alternatives 6
4.1 Build Alternative(s) 6
4.2 No Build Alternative 6
4.3 Preliminary Alternatives Considered but Eliminated from Further Consideration 6
4.3.1 Reasonable Alternative 1 7
4.3.2 Reasonable Alternative 2 8
4.3.3 Reasonable Alternative 3 8
4.3.4 Reasonable Alternative 4 8
5 Affected Environment and Environmental Consequences 11
5.1 Right of Way Property Acquisition 12
5.2 Land Use 12
5.3 Farmlands 13
5.4 Utility Relocation 14
5.5 Community Impacts 15
5.5.1 Community Study Area 15
5.5.2 Displacements 15
5.5.3 Access and Travel Patterns 16
5.5.4 Community Cohesion 16

5.5.5 Limited English Proficiency....17
5.6 Visual/Aesthetic Impacts....17
5.7 Cultural Resources....18
5.7.1 Archeology....19
5.7.2 Historic Properties....20
5.8 Protected Lands....21
5.8.1 Section 4(f)....21
5.8.2 Section 6(f)....21
5.8.3 Chapter 26....21
5.9 Water Resources....21
5.9.1 Clean Water Act Section 404....21
5.9.2 Clean Water Act Section 401....25
5.9.3 Executive Order 11990 Wetlands....26
5.9.4 Rivers and Harbors Act....26
5.9.5 Clean Water Act Section 303(d)....26
5.9.6 Clean Water Act Section 402....27
5.9.7 Floodplains....28
5.9.8 Wild and Scenic Rivers....28
5.9.9 Coastal Barrier Resources....28
5.9.10 Coastal Zone Management....28
5.9.11 Edwards Aquifer....28
5.9.12 International Boundary and Water Commission....29
5.9.13 Drinking Water Systems....29
5.10 Biological Resources....29
5.10.1 Impacts to Vegetation....29
5.10.2 Executive Orders 13112 and 13751 on Invasive Species....30
5.10.3 Executive Memorandum and Environmentally and Economically Beneficial Landscaping....30
5.10.4 Impacts to Wildlife....30
5.10.5 Migratory Bird Protections....31
5.10.6 Fish and Wildlife Coordination Act....32

5.10.7 Bald and Golden Eagle Protection Act of 2007 32
5.10.8 Magnuson-Stevens Fishery Conservation Management Act 32
5.10.9 Marine Mammal Protection Act 32
5.10.10 Threatened, Endangered, and Candidate Species 32
5.11 Air Quality 34
5.11.1 Transportation Conformity 34
5.11.2 Hot-Spot Analysis 34
5.11.3 Carbon Monoxide Traffic Air Quality Analysis 35
5.11.4 Mobile Source Air Toxics 35
5.11.5 Congestion Management Process 35
5.11.6 Construction Air Emissions 36
5.12 Hazardous Materials 36
5.13 Traffic Noise 37
5.14 Induced Growth 41
5.14.1 Study Area 42
5.14.2 Time Frame for Assessing Indirect Impacts 43
5.14.3 Identified Areas Subject to Induced Growth in the AOI 43
5.14.4 Determine if Growth is Likely to Occur in the Induced Growth Areas 44
5.14.5 Regional and Local Growth Trends 44
5.14.6 Identify Resources Subject to Induced Growth Impacts 47
5.14.7 Identify Mitigation If Applicable 47
5.14.8 Build Alternative 47
5.15 Construction Phase Impacts 48
5.15.1 Construction Noise 48
5.15.2 Fugitive Dust and Air Pollution 48
5.15.3 Light Pollution 49
5.15.4 Construction Vibration Impacts 49
5.15.5 Temporary Lane, Road, or Bridge Closures (Including Detours) 49
5.16 Greenhouse Gas and Climate Change 49
6 Agency Coordination 50
7 Public Involvement 50

8 Post-Environmental Clearance Activities and Design/Construction Commitments 52
8.1 Post-Environmental Clearance Activities 52
8.2 Design/Construction Commitments 54
9 Conclusion 55
10 References 56
11 Appendices 59

List of Tables

Table 2-1: Other Major Roadways 2
Table 3-1: Population Growth in the Study Area 5
Table 3-2: Employment Growth in the Study Area 5
Table 4-1: Summary of the Reasonable Alternatives and Screening Criteria for Evaluation 8
Table 5-1: Water Features 23
Table 5-2: Impaired Assessment Unit 26
Table 5-3: Traffic Noise Levels dB(A) Leq 38
Table 5-4: Noise Contours 41
Table 5-5: Local Jurisdictions within the AOI 42
Table 5-6: Total Acreage of Potentially Developable and Undevelopable Land Within the AOI 43
Table 5-7: Historical and Projected Population Growth 45

Acronyms

AADT	Annual Average Daily Traffic
ACT	Antiquities Code of Texas
AOI	Area of Influence
APE	Area of Potential Effects
BG	Block Group
BMP	Best Management Practice
CFR	Code of Federal Regulations
CGP	Construction General Permit
CMAQ	Congestion Mitigation and Air Quality Improvement
CMP	Congestion Management Process
CO	Carbon Monoxide
CR	County Road
CWA	Clean Water Act
dB(A)	A-weighted Decibel
DFW	Dallas Fort Worth
EA	Environmental Assessment
EMST	Ecological Mapping Systems of Texas
EO	Executive Order
EPA	Environmental Protection Agency
ESA	Endangered Species Act
ETJ	Extraterritorial Jurisdiction
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FM	Farm-to-Market Road
FONSI	Finding of No Significant Impact
FPPA	Farmland Protection Policy Act
FTA	Federal Transit Administration
GHG	Greenhouse Gas
IBWC	International Boundary Water Commission
ISA	Initial Site Assessment
IP	Individual Standard Permit
KCOL	Kaufman County Outer Loop
LCP	Lead-Containing Paint
LEP	Limited English Proficiency
Leq	Average/Equivalent Sound Level
MBTA	Migratory Bird Treaty Act
MOU	Memorandum of Understanding
MPH	Miles per Hour

MS4	Municipal Separate Storm Sewer System
MSAT	Mobile Source Air Toxics
MTP	Metropolitan Transportation Plan
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NCTCOG	North Central Council of Governments
NEPA	National Environmental Policy Act of 1969
NHPA	National Historic Preservation Act
NOA	Notice of Availability
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWP	Nationwide Permit
PCN	Pre-construction Notification
PM	Particulate Matter
PS&E	Plans, Specifications, and Estimates
RGP	Regional General Permit
ROE	Right-of-Entry
ROW	Right of Way
RPZ	Runway Protection Zone
RTEST	Rare, Threatened, Endangered Species of Texas
SAL	State Antiquities Landmark
SGCN	Species of Greatest Conservation Need
SH	State Highway
SHPO	State Historic Preservation Office
SWP3	Storm Water Pollution Prevention Plan
TAC	Texas Administrative Code
TCEQ	Texas Commission on Environmental Quality
TERP	Texas Emissions Reduction Plan
THC	Texas Historical Commission
TIP	Transportation Improvement Program
TPDES	Texas Pollutant Discharge Elimination System
TPWC	Texas Parks and Wildlife Code
TPWD	Texas Parks and Wildlife Department
TWDB	Texas Water Development Board
TxDOT	Texas Department of Transportation
TXNDD	Texas Natural Diversity Database
U.S.	United States
U.S.C.	United States Code
USACE	United States Army Corps of Engineers
USCB	United States Census Bureau

USDOT	United States Department of Transportation
USFWS	United States Fish and Wildlife Service
VPD	Vehicles Per Day
VMT	Vehicle Miles Traveled

1 Introduction

Kaufman County, in coordination with the Texas Department of Transportation (TxDOT) as the lead federal agency, is proposing the construction of a four-lane new location, controlled-access freeway from Farm to Market Road (FM) 148 to the south to State Highway (SH) 205 to the north, in Kaufman County, Texas. The distance of the proposed Kaufman County Outer Loop (KCOL) project is approximately 8.3 miles. The proposed project would construct overpasses, continuous frontage roads, and exit and entrance ramps. The proposed project location is shown on Figure 1 in **Appendix A**.

The purpose of this environmental assessment (EA) is to thoroughly examine the potential environmental impacts of the proposed project and determine if they necessitate the preparation of an Environmental Impact Statement (EIS). The proposed project is partially funded by the Federal Highway Administration (FHWA), requiring compliance with FHWA's National Environmental Policy Act (NEPA) regulations, as well as adhering to relevant TxDOT rules for environmental project review and conducting NEPA studies on behalf of FHWA, as outlined in Title 43 Texas Administrative Code (TAC), Part 1, Chapter 2.

TxDOT is responsible for carrying out the required environmental review, consultation, and other actions in compliance with applicable federal environmental laws for this proposed project, as outlined in 23 United States Code (U.S.C.) 327. The fulfillment of these obligations is supported by a Memorandum of Understanding (MOU) dated July 17, 2025, executed by FHWA and TxDOT. TxDOT has conducted an independent evaluation of all parts of this EA that were prepared by a contractor and has determined that this EA meets the standards under NEPA regulations in 40 Code of Federal Regulations (CFR) Subchapter A, and FHWA's and TxDOT's NEPA procedures.

This Draft EA addresses the potential environmental impacts for the proposed project and will undergo a period of public review and comment following a scheduled public hearing. See **Project Location Map** and **Project Photos in Appendix A** and **Appendix B**, respectively. During this phase, TxDOT will carefully evaluate all the comments received before reaching a final decision. Should TxDOT find that the proposed project does not lead to significant adverse effects, a Finding of No Significant Impact (FONSI) will be prepared and endorsed. The FONSI will then be released to the public, making it accessible to all stakeholders.

2 Project Description

2.1 Existing Facility

The proposed project site is approximately 5 miles west of downtown Terrell in a semi-rural area. There are no existing facilities; the proposed project would take place in a new location. Travel patterns near the Study Area generally follow nearby limited access facilities such as I-20, I-635, United States Highway (US) 80 and SH 205. Most traffic uses these roadways to commute into downtown Dallas and surrounding northern cities such as Plano, Garland, Frisco, and Richardson.

SH 205, Colquitt Road (County Road 233 [CR 233]) Samuels Road (CR 240) and FM 548 are two lane roads within the northern portion of the Study Area. FM 557 and CR 305 are within the southern portion of the Study Area. Other existing arterials within the Study Area include FM 1392, FM 148, and University Drive. **Table 2-1** provides a summary of the roadway characteristics currently within or near the Study Area.

Table 2-1: Other Major Roadways

Facility	Functional Classification*	Number of Lanes*	Speed Limit (MPH)**	2021 AADT (VPD)***
US 80	Principal Arterial	4 lanes (divided)	65-70	41,500
US 80 Westbound Frontage Road	Major Collector	2 lanes	40-55	1,700
US 80 Eastbound Frontage Road	Major Collector	2 lanes	40-55	1,200
I-20	Interstate	4 lanes (divided)	65-70	40,000
FM 548	Minor Arterial	2 lanes (undivided)	40-55	7,000
FM 1641	Minor Arterial	2 lanes (undivided)	55	7,600
FM 148	Major Collector	2 lanes (undivided)	55	5,200
FM 148	Minor Arterial	4 lanes (undivided)	55	13,500
SH 205	Minor Arterial	2 lanes (undivided)	60	11,500
Spur 557	Principal Arterial	4 lanes (divided)	70	39,500
Spur 557 Northbound Frontage Road	Principal Arterial	1 lane	45	3,500
Spur 557 Southbound Frontage Road	Principal Arterial	1 lane	55	4,200

**TxDOT Statewide Planning Map*
***Miles Per Hour (MPH)*
***Annual Average daily Traffic (AADT), Vehicles Per Day (VPD)

2.2 Proposed Facility

The proposed project would include a 4-lane divided highway with 12-foot travel lanes, 10-foot outside shoulders and 8-foot inside shoulders, and a grassy median. The proposed project would also include northbound and southbound frontage roads. The frontage roads would consist of two 12-foot travel lanes with 10-foot outside shoulders and 8-foot inside shoulders, along with a 10-foot shared use path

on the outside of the frontage road. Northbound and southbound bridge connectors would provide entrance and exit ramps for I-20 and US 80. Bridge crossings over existing corridors will occur at the intersections of I-20, US 80, CR 239, CR 1392, CR 240/ Samuels Road, and CR 233/Colquitt Road. A proposed typical section is included in **Appendix C** and a schematic (plan view) of the proposed project is included in **Appendix D**.

The total proposed project length would be approximately 8.3 miles. The proposed right of way (ROW) would vary from approximately 180 to approximately 500 feet. Approximately 595 acres of additional ROW would be required for the proposed project. Design speeds are 70 miles per hour (mph) for the main lanes, 50 to 60 mph for the frontage roads, and 50 to 60 mph for the ramps. The proposed project will require an interstate access justification request (IAJR) to be approved by FHWA.

2.3 Logical Termini and Independent Utility

2.3.1 Logical Termini

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 logical termini for the proposed project are SH 205 on the north and I-20 on the south. To improve regional mobility and reduce congestion, the proposed facility must connect back to the existing highway network at these established corridors. SH 205 and I-20 were identified as logical boundaries for the proposed project due to their regional significance and ability to support transitions between the proposed facility and the existing transportation system. The transition zone south of I-20 at FM 148 facilitates a return to grade, providing a seamless connection to the existing transportation network. These termini allow the proposed project to function independently and meet transportation needs without requiring additional improvements beyond the proposed project limits.

2.3.2 Independent Utility

Federal regulations require that a project has 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 that the project does 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 would provide the system linkage, connectivity, and capacity needed to serve the forecasted population growth and resulting travel demand. The proposed project would also provide a safe and high-capacity facility to move people through the Study Area. Because the proposed project would operate as a standalone facility, it cannot and does not irretrievably commit federal funds for other future transportation projects.

Federal law prohibits a project from restricting consideration of alternatives for other reasonably foreseeable transportation improvements. This means that a project must not dictate or restrict any

future roadway alternatives. The proposed project has been planned and designed to function independent of any other improvements. It would provide a complete and functional connection to existing SH 205 and I-20. The proposed project would enhance regional connectivity and address congestion without any additional infrastructure improvements.

2.4 Planning Consistency

The proposed project was listed as a Regionally Significant Arterial (RSA) in the North Central Texas Council of Government (NCTCOG's) Metropolitan Transportation Plan (MTP) 2045 Update. The proposed KCOL is not designated for any funding in the 2022-2026 Transportation Improvement Program (TIP); furthermore, no special funding sources are indicated in the MTP. The estimated construction cost of the proposed project is $1.2 billion.

3 Purpose and Need

3.1 Need

The proposed project is needed to address the lack of adequate regional connectivity and limited mobility between Kaufman County and the Dallas–Fort Worth metroplex, where existing north-south corridors lack sufficient capacity to meet current and projected travel demand, resulting in congestion, delayed emergency response, and operational inefficiencies.

One of the project's primary goals is to integrate with other planned outer loop systems in the region, supporting regional transportation and land use planning objectives. Currently, the absence of a continuous, high-capacity route hinders this integration and limits consistency with these regional goals.

3.2 Supporting Facts and Data

According to the United States Census Bureau (USCB), Kaufman County and the cities of Forney, Terrell, and Talty experienced robust population growth between 2010 and 2020. Kaufman County's population increased by approximately 41 percent from 103,350 persons in 2010 to 145,310 persons in 2020. The population of Forney increased by approximately 60 percent from 14,661 persons in 2010 to 23,455 persons in 2020. The population of Terrell increased by approximately 10 percent from 15,816 persons in 2010 to 17,465 persons in 2020. Population growth in the area is shown in **Table 3-1**. According to NCTCOG, Kaufman County's population is projected to increase by approximately 178 percent from a census-documented population of 145,310 in 2020 to a forecasted population of 403,257 by 2050. Residential construction and new developments planned in the county would impact travel within as well as throughout the DFW area.

The NCTCOG also projects strong employment growth for Kaufman County; according to NCTCOG, employment in Kaufman County is projected to increase by approximately 542 percent from 29,483 estimated jobs in 2020 to 189,354 jobs in 2050. Employment growth for the area is shown in **Table 3-2**. Kaufman County is expected to continue to grow in both population and employment; as such, there is a

need to improve north-south mobility, provide safe and efficient transportation that meets current and forecasted demand, and provide connectivity throughout the county. The need to accommodate increasing traffic capacity is supported through analysis of the future traffic demand that is anticipated to utilize the facility. Employment is still expected to grow in the county through 2050, and even more so in Forney and Terrell with increases forecasted in the 400 percent range.

Table 3-1: Population Growth in the Study Area

Area	Population in 2010	Population in 2020	Percent Change 2010-2020	Forecasted Population in 2050	Percent Change 2020-2050
Kaufman County	103,350	145,310	40.6	403,257	177.5
Dallas County	2,368,139	2,613,539	10.4	3,070,902	17.5
City of Forney	14,661	23,455	60.0	50,363	114.7
City Terrell	15,816	17,465	10.4	22,297	27.7

Source: NCTCOG, 2025 and USCB 2025

Table 3-2: Employment Growth in the Study Area

Texas County	Employment in 2010	Employment in 2020	Percent Change 2010-2020	Forecasted Employment in 2050	Percent Change 2020-2050
Kaufman County	22,621	29,483	23.3	189,354	542.2
Dallas County	1,433,663	1,704,290	15.9	3,289,159	93.0
City of Forney	3,434	5,153	33.4	26,177	408.0
City Terrell	10,541	12,140	13.2	65,988	443.6

Source: NCTCOG, 2025
Note: 2020 employment numbers were affected by the 2019 Coronavirus (COVID-19) pandemic.

Traffic growth rates were projected to determine the traffic volumes for the proposed project design years of 2048 and 2058 after reviewing the historical traffic volumes along with population and employment growth, as well as the expected land use developments within the proposed project area,

3.3 Purpose

The purpose of the proposed action is to improve regional mobility and connectivity of travelers in Kaufman County as well as regional travel in the DFW Metroplex.

4 Alternatives

4.1 Build Alternative(s)

The Build Alternative, described in Section 2.2, satisfies the proposed project's purpose and need. The development of KCOL would improve mobility and connectivity by providing an alternative north/south route for traffic around Terrell; therefore, increasing access to surrounding areas and reducing congestion along I-20 and US 80. The proposed project would also improve the overall function of the transportation system in Kaufman County and meet demands of the forecasted growth. Because the Build Alternative satisfies the proposed project's purpose and need, it is the recommended alternative.

4.2 No Build Alternative

The No Build Alternative serves as both the baseline against which the Build Alternative is evaluated and as an actual option within the proposed project limits. However, this alternative would not lead to any improvements in traffic mobility, access, or safety, thus failing to meet the purpose and need of the proposed project.

By adopting the No Build Alternative, the proposed project improvements would not be implemented, and approximately 595 acres of existing land uses would not be converted to transportation use. Although no other proposed project-related impacts would occur, this option would not meet the anticipated traffic demand or address the increasing mobility and safety concerns around the west side of Terrell. Consequently, anticipated benefits of the proposed project would remain unrealized, leading to reduced mobility and safety, which would be further exacerbated by the continued population growth and development in Kaufman County.

Despite not meeting the proposed project's purpose and need, the No Build Alternative is carried forward throughout this document as the baseline for comparison in accordance with NEPA requirements. In this EA, the No Build Alternative is evaluated alongside the Build Alternative to assess the full scope of potential impacts and benefits. While the No Build Alternative is not recommended due to its inability to meet the purpose and need, its inclusion allows for a comprehensive analysis of the proposed improvements and their implications on traffic mobility, access, and safety within the proposed project area.

4.3 Preliminary Alternatives Considered but Eliminated from Further Consideration

During the development of alternatives for the Feasibility Study (2022 - 2024), the design team held biweekly stakeholder meetings with representatives from the City of Terrell and Kaufman County and coordinated with the Rockwall County project team, as well as NCTCOG, to ensure consistency and connectivity across the county-wide corridor designs. The design team reviewed the range of preliminary roadway alignments determined during the feasibility study. A total of 62 preliminary roadway alignments were developed for the proposed project. For all 62 preliminary roadway alignments, the

northern terminus would be SH 205 and the southern terminus would be I-20. The project team conducted field reconnaissance from publicly accessible locations and developed a constraints map to inform stakeholder meetings and detailed evaluations of the different alignments. The 62 preliminary roadway alignments were presented at a public meeting held on November 17, 2022 and evaluated based on factors such as: engineering analysis, mobility and regional connectivity, existing and future land use, displacements and ROW requirements, environmental and natural resource constraints, impacts of community and cultural resources, as well as overall cost and stakeholder support.

Of the 62 preliminary roadway alignments, four were found to be reasonable build alternatives: Reasonable Alternative 1, Reasonable Alternative 2, Reasonable Alternative 3, and Reasonable Alternative 4. A preliminary conceptual design of the four Reasonable Alternatives was developed using information gathered during field reconnaissance and detailed research of existing and proposed developments within the Study Area. The four Reasonable Alternatives were further evaluated based on their ability to meet the proposed project Purpose and Need and their potential to adversely impact the human and natural environment. Specific criteria used during the evaluation process include:

- Displacement of residential and commercial properties
- Impacts to community facilities
- Impacts to threatened and endangered species habitat (measured in acres)
- Impacts to riparian corridors (measured in acres)
- Impacts to water features (measured in acres and linear feet)
- Impacts to the 100-year floodplain (measured in acres)
- Impacts to cultural resources, including archeological sites and historic properties
- Engineering factors such as constructability, cost, and connectivity to other regional corridors

The Reasonable Build Alternatives are summarized below.

4.3.1 Reasonable Alternative 1

This alternative closely follows the proposed alignments shown in the Kaufman County and City of Terrell thoroughfare plans. It follows the existing FM 548 alignment before heading south near Colquitt Road. This is the longest of the four reasonable alternatives that were considered and has the most floodplain and wetland impacts, crossing the 100-year floodplain twice and affecting more than 250 acres of wetland areas. Reasonable Alternative 1 would impact one community facility, a place of worship located along FM 548. This reasonable alternative would also displace four businesses and 17 residential properties within an existing neighborhood along FM 548. Furthermore, Reasonable Alternative 1 would impact the AirPark East runway protection zone (RPZ), thus requiring modifications to AirPark East's aircraft operating and safety procedures.

4.3.2 Reasonable Alternative 2

This alternative has the fewest structural impacts, of the four alternatives that were considered. Reasonable Alternative 2 would cross the 100-year floodplain closer to perpendicular, resulting in fewer impacts to the 100-year floodplain and wetlands, when compared to the other three alternatives; it would impact approximately 5 acres of wetlands. Furthermore, Reasonable Alternative 2 would not impact the AirPark East RPZ or impact any community facilities. Since Reasonable Alternative 2 would have fewer impacts to established communities, businesses, AirPark East, and environmental resources, it is considered the least impactful alternative.

4.3.3 Reasonable Alternative 3

This alternative is the shortest of the four reasonable alternatives being considered and is a straighter path from SH 205 to FM 1392. Reasonable Alternative 3 would not impact the AirPark East RPZ or impact other community facilities. However, Reasonable Alternative 3 would impact the High Point Special Utility District Pump Station 2 and would cross the 100-year floodplain at more of a skew, resulting in more impacts to the 100-year floodplain and wetlands. This alternative would also impact approximately 100 acres of wetlands.

4.3.4 Reasonable Alternative 4

Reasonable Alternative 4 is shorter than reasonable alternatives 1 and 2. This alternative would cross the floodplain at a skew, resulting in higher impacts to both the 100-year floodplain and wetlands. This alternative would impact approximately 5.5 acres of wetlands; however, it would not impact community facilities or encroach of the AirPark East RPZ.

The criteria for evaluation of reasonable alternatives are summarized in **Table 4-1** below.

Table 4-1: Summary of the Reasonable Alternatives and Screening Criteria for Evaluation

Screening Category and Evaluation Criteria		No Build Alternative	Reasonable Alternative 1	Reasonable Alternative 2	Reasonable Alternative 3	Reasonable Alternative 4
Purpose & Need	Improves mobility and north-south connectivity	Does not improve	Improves mobility and connectivity but less favorable location to connect to Rockwall Outer Loop	Improves mobility and connectivity in better location to connect to Rockwall Outer Loop	Improves mobility connection to Rockwall Outer Loop project	Improves mobility and connectivity but less favorable location to connect to the Rockwall Outer Loop.
	Land Use and Economic Development	Does not improve access and opportunity	Provides future access and opportunity	Provides future access and opportunity	Provides future access and opportunity	Provides future access and opportunity

Screening Category and Evaluation Criteria		No Build Alternative	Reasonable Alternative 1	Reasonable Alternative 2	Reasonable Alternative 3	Reasonable Alternative 4
		for development	for development on both sides of KCOL, of FM 548	for development on both sides of KCOL, near SH 205	for development on both sides of KCOL, near SH 205	for development only on one side of KCOL, near SH 205
	Meets Purpose & Need	No	Yes	Yes	Yes	Yes
Engineering	Total Segment Length	0	10.2 miles	8.23 miles	8.87 miles	8.3 miles
	Total Bridge Length	0	1.85 miles	4.86 miles	1.95 miles	4.88 miles
	Airport Impact	N/A	Adverse impact to AirPark East	No impact to AirPark East	No impact to AirPark East	No impact to AirPark East
	Number of Major Utility Conflicts	N/A	2 major utility conflicts with gas pipeline.	4 major utility conflicts with gas pipeline, power transmission line, and water line	5 major utility conflicts with gas pipeline, power transmission line, and pump station	4 major utility conflicts with gas pipeline, power transmission line, and water line
Displacements and ROW	Residential Displacements	No displacements	17	4	8	4
	Business Displacements	No displacements	4 business structures displaced	2 business structures displaced	2 business structures displaced	2 business structures displaced
	Amount of New ROW Required	0 acres	568.50 acres	504.99 acres	494.75 acres	494.06 acres
Community Impacts and Cultural Resources	Number of Community Facilities Affected	No impacts	Adverse impact to a place of worship: Calvary Chapel	No impacts	No impacts	No impacts
Environment and Natural Resources	Acres of Wetlands	No impact	275 acres	4.96 acres	141 acres	5.45 acres
	Number of Crossings requiring USACE Section 404 Permit Authorization	No impact	<20 crossings requiring multiple individual standard permits (IP) and nationwide	14 crossings requiring a non-notifying nationwide permit and a nationwide	19 crossings requiring multiple IPs and nationwide permits with pre-	15 crossings requiring an IPs and nationwide permits with pre-construction notifications

Screening Category and Evaluation Criteria		No Build Alternative	Reasonable Alternative 1	Reasonable Alternative 2	Reasonable Alternative 3	Reasonable Alternative 4
			permits with pre-construction notifications	permit with a preconstruction notification	construction notifications	
	Total Acres 100 Year Floodplain Crossed	No impact	1,286 acres	34.91 acres	840 acres	36.99 Acres
Cost	Total Cost of Land	No costs associated with land or improvements	$4.37 Million	$2.96 Million	$3.59 Million	$3.36 Million
	Total Cost of Improvements		~$95.8 Million	~$90.26 Million	~$90.55 Million	~$90.57 Million
Stakeholder, Agency, and Public Input	City of Terrell	Does not support	Support	Support	Support	Support
	High Point Special Utility District	Support	Support	Support	Does not Support	Support
	Public Input	Support	Does not support	Support	Support	Support
	Conforms to Local and Regional Planning	No	Yes	Yes	Yes	Yes

At the Public Meeting held on June 6, 2024, TxDOT and Kaufman County presented the four Reasonable Alternatives and a summary of the analysis results. Reasonable Alternatives 1 and 3 were eliminated from further consideration due to public and stakeholder concerns about potential adverse impacts on established communities associated with bisecting neighborhoods and bisecting platted subdivisions currently under construction, thus affecting a substantial number in both residential and commercial displacements. Reasonable Alternative 1 was eliminated for further consideration due to public comments about impacts to residential properties and impacts to the AirPark East airport, at the northern terminus as well as adverse impacts to the floodplain and water resources. Reasonable Alternative 3 was eliminated from further consideration due to impacts to the High Point Special Utility District's Water Pump Station 2, and the associated additional costs that would be incurred to relocate the water pump station. Reasonable Alternative 2 and Reasonable Alternative 4 were further evaluated and refined to reduce the number of residential displacements and to align with public and stakeholder feedback. Reasonable Alternative 2 would have the least impacts to established businesses and residential neighborhoods among all the alternatives and would avoid dividing displacing a community facility/place of worship. Furthermore, Reasonable Alternative 2 would provide better connection to the Rockwall Outer Loop, without creating adverse environmental impacts.

Following the public meeting held on June 6, 2024, and after further evaluation of Reasonable Build Alternatives 2 and 4 and consideration of public comments, TxDOT and Kaufman County decided to eliminate refined Reasonable Alternative 4 from further consideration due to increased adverse impacts on wetlands and floodplains. Reasonable Alternative 2 would have the least impacts to these water resources. Furthermore, Reasonable Alternative 4 did not align with community and stakeholder goals because the connection point with the Rockwall Outer Loop was not favorable for future land use and economic opportunities. Due to additional public comments and stakeholder feedback, Reasonable Alternative 2 was further refined by shifting the alignment to the west between I-20 and US 80, to allow for more developable land on the east side of the alignment. North of US 80, the alignment was shifted to avoid a potential residential displacement. The modified Reasonable Alternative 2 was carried forward as the Build Alternative for further consideration in this EA.

5 Affected Environment and Environmental Consequences

In support of this EA, the following documents were prepared and are currently available for review at the TxDOT Dallas District Office located at 4777 E. Highway 80 Mesquite, Texas 75150-6643:

- Congestion Management Process (CMP) Disclosure Statement
- Mobile Source Air Toxics (MSAT) Technical Report
- Transportation Conformity Report Form (in progress)
- Species Analysis Form
- Species Analysis Summary Spreadsheet
- Documentation of Texas Parks and Wildlife Department (TPWD) Best Management Practices (BMPs)
- Surface Water Analysis Form
- Water Features Delineation Report
- Community Impact Assessment Technical Report Form
- Hazardous Materials Initial Site Assessment (ISA)
- Induced Growth Technical Report
- Archeological Background Study
- Antiquities Permit Application Form – Archeology
- Texas Historical Commission (THC) Permit
- Archeological Survey Interim Report
- Project Coordination Request for Historical Studies Project

- Historical Studies Research Design
- Historical Resources Survey Report and Intensive Survey Report
- Traffic Noise Analysis Report
- Farmland Conservation Impact Rating Form

5.1 Right of Way Property Acquisition

The proposed ROW width varies from approximately 180 to 500 feet. The proposed project would require approximately 595 acres of proposed ROW. The proposed ROW would be necessary to accommodate the ultimate facility, including proposed pavement width, side slope grading, existing terrain, cross drainage structures, utilities, and property access. TxDOT would be responsible for these property acquisitions. The Schematic Layout in **Appendix D** provides further detail.

The proposed project would potentially displace one single-family residence, which includes an accessory dwelling unit (ADU), a barn, and three sheds located at 9625 FM 148, Terrell, Texas. Additionally, the proposed project would potentially displace three secondary structures: a barn or storage shed at 9601 N FM 148 and two sheds at 7719-7079 and 7807-7785 Colquitt Rd. Two operational commercial properties at 6086 and 6094 W US Hwy 80 would potentially be displaced; one operates as an adult entertainment store, Dreamers Video, and the latter operates as a cable utility company, Friendship Cable Utility Company. A vacant commercial property located at 6068/6070 West U.S. Highway 80 may also be subject to displacement. The property has remained unoccupied and non-operational for over two years, having previously functioned as a barbecue restaurant. The potential commercial displacements are not unique to the Study Area and provide between 2 and 12 jobs within the Study Area.

Under the No Build Alternative, the proposed project would not be built, therefore no ROW acquisition would be required.

TxDOT will provide relocation assistance. The ROW acquisition and relocation process will be conducted in accordance with the Federal Uniform Relocation and Real Property Acquisition Policies Act of 1970.

5.2 Land Use

The proposed project is located in a developing area outside of Terrell, Texas, within Kaufman County. The land use in the proposed project area is predominantly rural residential and agricultural, with some commercial development concentrated near major roadways and intersections. Residential areas primarily consist of scattered single-family homes on large lots. However, the area is experiencing rapid growth, with several planned residential subdivisions and commercial developments underway.

Developed and undeveloped lands are present within the proposed project area. Developed land includes single-family residences and retail and commercial facilities. Undeveloped lands comprise

vacant (not utilized), agriculture (ranch and pasture), woodlands, disturbed prairies, fence row vegetation, streams, and ponds.

Land use near the proposed project termini includes a mix of rural residential properties and small-scale commercial businesses, such as retail establishments, gas stations, and auto repair shops. The central portion of the proposed project area remains largely agricultural, interspersed with open space and undeveloped tracts of land. The area is experiencing rapid growth and development, due to its proximity to Terrell and major transportation corridors; this is leading to the conversion of agricultural land into residential and commercial uses. Community facilities near the proposed alignment include schools, government offices, cemeteries, and places of worship. The Build Alternative would not impact public facilities because there are no police stations, fire stations or hospitals adjacent to the proposed project. Police and fire departments are located within the city limits of Terrell, approximately 3.5 miles from the proposed project.

According to Kaufman County's Future Land Use Plan, residential and commercial developments are anticipated along the proposed corridor. Land use within the proposed ROW would shift from primarily agricultural, residential, and open space to transportation use. The Build Alternative would directly convert approximately 595 acres of undeveloped land, from agricultural uses to highway ROW for transportation uses, altering the current rural landscape to support regional transportation needs. The Build Alternative would improve access and result in potential indirect impacts on surrounding land use, such as increased residential and commercial development.

The No Build Alternative, in contrast, would not require the acquisition of additional ROW and would maintain the existing land use patterns and access in the area.

5.3 Farmlands

The Farmlands Protection Policy Act (FPPA) of 1981 requires a farmland impact evaluation for applicable, federally funded projects. The purpose of the FPPA is to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to non-agricultural uses. The FPPA protects prime, unique, or statewide/locally important farmland. It is TxDOT's policy to comply with the FPPA in accordance with the Natural Resources Conservation Service (NRCS) policy for implementing the act and for soliciting approval of transportation projects through the NEPA process.

Approximately 287.25 acres of prime farmland soils and an additional 29.02 acres of farmland of statewide importance are located within the proposed project limits (NRCS 2018). The combined scores of the relative value of the farmland and the Farmland Conservation Impact Rating analysis completed by TxDOT do not warrant further consideration for protection and no additional sites need to be evaluated.

The proposed project was not anticipated to negatively impact agricultural services or farm support infrastructure.

Since the proposed project's FPPA rating did not meet the threshold for additional protection measures, no further coordination was necessary, and no mitigation was required. Coordination documents, including the NRCS-CPA-106 Form, are included in **Appendix F**.

The No Build Alternative would not require acquisition of ROW and therefore would not result in impacts to farmlands subject to the FPPA.

5.4 Utility Relocation

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

Several utilities are present within the proposed project limits. Based on the proposed design, utility relocations would be required throughout the proposed project; however, these relocations would have minimal impacts to residences and businesses. Utility crossings and potential parallel conflicts include water lines, gas service lines, natural gas pipelines, sewer lines, fiber optic cables, and overhead electric transmission and distribution lines. Utility agreements and notices to owners would be required for this proposed project. Conflicting utilities would be either adjusted or relocated prior to the construction of the proposed project using standard TxDOT procedures. Access to private utility services will be maintained as part of the proposed project. Specific adjustments will be identified during the preparation of the construction plans.

It has not yet been determined whether the dislocated utilities will be re-installed within the highway ROW, or to a location outside the highway ROW. However, the potential impacts resulting from re-installation of the displaced utilities within the highway ROW have been considered as part of the overall proposed project footprint impacts (e.g., construction noise, potential disturbance to archeological resources, and potential impacts to species habitat) within this EA. To the extent that the owner of any displaced utility determines to reinstall the displaced utility at a location outside of highway 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 highway ROW and ensuring that the design and construction meet all regulatory and environmental compliance requirements [see 43 TAC 21.37(a)(9), (g)(1)), and (g)(4); 43 TAC 21.38(e)(2)].

Under the No Build Alternative, current conditions would remain; no ROW impacts would occur therefore no impacts to existing utilities. The No Build Alternative would not result in utility relocations.

5.5 Community Impacts

The community impacts assessment evaluated both the potential benefits and adverse impacts the proposed project may pose to the surrounding community and also considered impacts to community cohesion.

5.5.1 Community Study Area

The Community Study Area (CSA) for the proposed project was chosen based on potential project impacts, surrounding roadways, and population demographics from USCB data, and was defined using census geography boundaries, major roadways, neighborhoods, businesses, traffic patterns, land use, community facilities, economic activity centers, and overall population characteristics. The roadways that provide access within and across the CSA include FM 548 and Valley View Road to the north and northwest; SH 205, Edwards Road, Kuban Road, and CR 245 to the east; FM 2932 to the west; and FM 987 and FM 2758 to the south and southeast. US 80 and I-20 are major east-west arterials that provide access across the CSA and serve as alternate routes through the area.

The CSA is primarily rural with dispersed-urban development. Agricultural land, pasture, and grasslands make up about 60 percent of the area, while 38 percent consists of improved or developed land, including residential neighborhoods, industrial sites, and a general aviation airport. The population in Kaufman County is growing rapidly, and between 2020 and 2023, it increased by approximately 27.8 percent.

5.5.2 Displacements

The proposed project would potentially displace one single-family residence, which includes an accessory dwelling unit (ADU) and a barn, and three sheds located at 9625 FM 148, Terrell, Texas. Additionally, the proposed project would potentially displace three secondary structures: a barn or storage shed at 9601 N FM 148 and two sheds at 7719-7079 and 7807-7785 Colquitt Rd. Two operational commercial properties at 6086 and 6094 W US Hwy 80 would potentially be displaced; one operates as an adult entertainment store (Dreamers Video) and the latter operates as a cable utility company (Friendship Cable Utility Company). A vacant commercial property located at 6068/6070 West U.S. Highway 80 may also be subject to displacement. The property has remained unoccupied and non-operational for over two years, having previously functioned as a barbecue restaurant. The potential commercial displacements are not unique to the CSA and provide between 2 and 12 jobs within the CSA. For more information on potential displacements refer to the Community Impacts Assessment Technical Report Form available at the TxDOT Dallas District office.

TxDOT will provide relocation assistance. The ROW acquisition and relocation process will be conducted in accordance with the Federal Uniform Relocation and Real Property Acquisition Policies Act of 1970.

Under the No Build Alternative no displacements would occur.

5.5.3 Access and Travel Patterns

The proposed project is a new location roadway designed to improve access, connectivity, and travel patterns within Kaufman County, providing residents, businesses, and travelers with additional transportation options. This proposed project addresses local congestion issues by redirecting traffic from existing, overburdened roadways and providing a direct north-south route through the CSA. The proposed project would incorporate new frontage roads, ramps, and access roads to ensure that surrounding communities retain essential connectivity to SH 205, US 80, and I-20, benefiting emergency responders, residents, and businesses alike by enhancing overall mobility and travel efficiency.

The proposed project would alter access and travel patterns along certain segments, requiring some travelers to use turnarounds at designated points to reach specific properties. However, these modifications are anticipated to reduce overall travel times and improve safety. Pedestrian and shared-use paths along the corridor would increase access for non-motorized users, enhancing travel options for pedestrians and cyclists. Construction-phase BMPs will be employed to minimize disruption to traffic, with signage and detours implemented to maintain access. The proposed project will comply with TxDOT's Bicycle Accommodation Design Guidance. TxDOT's Bicycle Accommodation Design Guidance implements US Department of Transportation (USDOT) and FHWA policy regarding bicycle and pedestrian accommodations.

Under the No Build Alternative, projected increases in population and employment would result in higher travel demand. Without improvements to the existing roadway network, this increased demand would lead to greater traffic congestion and reduced mobility. Consequently, access to emergency services, businesses, and employment centers would become less efficient, as the current infrastructure would be insufficient to accommodate future transportation needs.

5.5.4 Community Cohesion

The proposed project is located within an area with relatively low levels of community cohesion, characterized by its rural and agricultural landscape interspersed with dispersed urban areas. Community cohesion is localized to the residential neighborhoods and retail establishments within the CSA near Forney and Talty on the west side, and Terrell and McLendon-Chisholm on the east side. The central portion of the CSA is largely undeveloped, dominated by agricultural and rural uses that do not collectively create any distinct community cohesiveness. There are no pedestrian or bicycle facilities, and most properties are currently accessed by cars or trucks. The CSA does not have residences immediately adjacent to each other or connected by public or private gathering areas; as such, there is not a strong level of existing community cohesion.

The proposed project corridor is designed to enhance regional connectivity without dividing or isolating communities. By introducing a controlled-access north-south freeway with frontage roads, the proposed project will support existing and future development while accommodating Kaufman County's rapid growth. Design refinements have aimed to avoid separating established neighborhoods and

subdivisions under development. While the new roadway would change the existing levels of separation and may be perceived as a visual or physical barrier, especially during construction, it will ultimately improve travel efficiency, reduce congestion, and strengthen access between residential areas, businesses, and community facilities. Shared-use paths for pedestrians and cyclists will promote alternative transportation and foster community cohesion. Overall, the proposed project will improve mobility and access across the CSA without isolating any geographic areas or population groups.

Under the No Build Alternative, no direct impacts to community cohesion would occur; however, future development and growth would continue to influence cohesion based on the connectivity provided by the existing transportation network as well as by any future projects that occur.

5.5.5 Limited English Proficiency

The community impacts assessment identified LEP populations within the CSA, primarily Spanish speakers, with additional Asian and Pacific Island language speakers. To ensure these populations can fully participate in project-related public engagement, TxDOT has provided materials in Spanish and continues to offer accommodations for other language requests, as needed. Public meeting notices, presentations, and informational materials were all translated into Spanish, and a translation widget was included on the project website for broader language access.

TxDOT has committed to providing in-person interpreters and translation services at future public hearings and meetings upon request, ensuring that LEP populations have equal access to project updates, feedback opportunities, and other relevant information. These steps fulfill federal guidelines under Title VI of the Civil Rights Act of 1964, ensuring meaningful access to project information for all residents. If a request for translations services is received for future public involvement events, TxDOT will make every reasonable effort to accommodate persons with special communication or mobility needs. Section 7.0 of the EA summarizes public involvement activities conducted for the project.

Under the No Build Alternative, there would be no project-related displacements or impacts to access, travel patterns, or community cohesion.

5.6 Visual/Aesthetic Impacts

Section 136 of the Federal Aid Highway Act (FAHA) of 1970 (Public Law 91-605) requires consideration of aesthetic values in the highway planning process.

The proposed project would include a new location alignment with elevated bridge sections that would alter existing views at these specific areas. Obstructed views occur at grade-separated roadways and overpasses that would be approximately 15 to 20 feet above ground. The KCOL overpasses would be constructed at Colquitt Road/CR 233, Samuels Road, FM 1392, a future arterial, US 80, CR 238, Sage Hill Parkway, and I-20. Overpasses would also be constructed over Little High Point Creek and Terry Creek and the adjacent floodplains.

The view towards the new roadway would be nondescript and span to the other side of the facility. The views from the road would generally be of open fields and farmland. Parts of the city of Terrell would be visible, though partially obscured by scattered tree cover. The proposed project would change the views and setting from the existing conditions within the project limits where there is currently no roadway. The proposed bridges would block existing views, resulting in moderate visual impacts. The overall benefit from the bridges would outweigh the potential visual impacts by minimizing floodplain and waters of the U.S. impacts. Considering the overall benefits from the proposed bridge structures, it is anticipated that the improvements would outweigh the overall visual impacts resulting from the proposed project.

The main visual impact of the proposed project is the construction of a new highway within a mostly undeveloped rural area. Aesthetic treatments will be applied to help mitigate any adverse visual impacts. The proposed project will apply aesthetic treatments to the proposed structures. Design concepts would be developed to help blend the project into the adjacent landscape and communities. Additional aesthetic design concepts could be incorporated into the proposed project if additional funding from local governments, interest groups, and organizations could be secured. Additional features such as railings and lighting would be at the discretion of the local jurisdictional areas along the proposed project corridor. Aesthetic improvements associated with the proposed project will follow current TxDOT aesthetic guidelines and will be equal to or improve the existing conditions.

The No Build Alternative would not change the existing visual and aesthetic qualities of the proposed project area.

5.7 Cultural Resources

Cultural resources are structures, buildings, archeological/historic 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 National Historic Preservation Act (NHPA), among others, apply to transportation projects such as this one. In addition, state laws such as the Antiquities Code of Texas (ACT) apply to this project. Compliance with these laws often requires consultation with the THC/State Historic Preservation Office (SHPO) and/or federally recognized tribes to determine the proposed project's effects on cultural resources. Review and coordination of this project followed approved procedures for compliance with federal and state laws.

Evaluation of impacts to cultural resources was conducted under Section 106 of the National Historic Preservation Act of 1966 (NHPA) in accordance with the Programmatic Agreement (PA) among FHWA, TxDOT, the Texas SHPO, and the Advisory Council on Historic Preservation (ACHP) Regarding the Implementation of Transportation Undertakings.

At the time of this EA, not all parcels that intersect the proposed project area were field delineated for cultural resources due to lack of right-of-entry (ROE). Fieldwork will be completed after ROW acquisition.

Under the No Build Alternative, construction of the proposed project would not occur; therefore, there would be no project-related impacts to cultural resources.

5.7.1 Archeology

The purpose of the archeological survey is to ensure compliance with Section 106 of the NHPA, as amended, and the ACT. An inventory of archeological resources (as defined by 36 CFR 800.4) was conducted within the proposed project area to identify and evaluate any identified resources for their eligibility for inclusion in the National Register of Historic Places (NRHP), as per Section 106 (36 CFR Part 800), or for designation as State Antiquities Landmarks (SAL) under the ACT and TAC, Title 13, Chapter 26 (13 TAC 26).

The Archeological Background Study was completed in May 2024 (TxDOT 2024), which recommended that an archeological survey be conducted throughout the proposed ROW, within the area of potential effects (APE). The APE is approximately 8.2 miles (13.2 kilometers) long and 500 feet (152.4 meters) wide, with a total area of approximately 600 acres (242.8 hectares), and potential depths of impact between 2 feet (ft; 0.6 meters) below ground surface and 50 feet (15.2 m) below ground surface. Recommended investigations consisted of an intensive pedestrian survey supplemented by shovel testing. Mechanical excavations were recommended in areas determined to contain deep deposits along the drainage crossings. According to the Atlas, no cemeteries, Official Texas Historical Markers, Recorded Texas Historic Landmarks, historic highways, or NRHP-listed properties or historic districts have been recorded within the 1-mile (1.6-kilometer) search radius.

Project archeologists conducted an intensive archeological survey of the proposed project area between September 17, 2024, and October 10, 2024, with additional investigations conducted between January 29, 2025, and February 7, 2025, to identify possible cultural resources within the APE. The intensive archeological survey consisted of a pedestrian visual inspection and photographic documentation of the existing ROW and proposed ROW parcels exhibiting heavy disturbances. Within the parcels recommended for survey, in areas where ROE was granted, the investigations included visual inspections of the proposed ROW APE, supplemented with the excavation of 553 shovel tests and a total of 42 trenches. The archeological investigations performed for the proposed project were conducted under Texas Antiquities Permit Number 31919, issued August 28, 2024. No archeological sites were identified within the APE, and no artifacts were collected as this was a non-collection survey. No archeological resources were identified that meet eligibility requirements for designation as a SAL according to 13 TAC 26, or for listing in the NRHP under 36 CFR 60.4.

Details on the archeology study can be found in the Archeological Survey Report available for review at the TxDOT Dallas District office. Subsequent surveys and reporting will be required; thorough investigation of areas not surveyed during these investigations as a result of the lack of ROE, shall be completed after ROW is acquired, and before construction begins.

TxDOT initiated consultation with federally recognized tribes on March 31, 2025. The Comanche Nation responded on April 17, 2025, that the proposed project would not affect historic properties. No other tribes objected to the proposed project or provided another response. The comment period ended on May 28, 2025. THC has reviewed the draft report and concurs with TxDOT's recommendations that the survey of the 557.04 acres is adequate and no additional consultation is necessary for this portion of the APE, and that once ROE is given for the remaining 20.63 acres, survey should be conducted. See **Appendix F** for tribal and THC coordination documentation.

If unanticipated archeological deposits are encountered during construction, work in the immediate area will cease and TxDOT archeological staff will be contacted to initiate post-review discovery procedures.

Under the No Build Alternative, construction of the proposed project would not occur; therefore, there would be no project-related impacts to archeological resources.

5.7.2 Historic Properties

A historic resources reconnaissance survey of architectural resources located along the proposed 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 proposed project is let for construction. The APE was defined as existing ROW where no new ROW or easements are proposed, 150 feet from proposed ROW and easements along existing roadways, and 300 feet from proposed ROW and easements along new location roadway.

A total of 80 resources were surveyed from October 28, 2024, through November 1, 2024, including 46 historic-age resources and 34 non-historic-age resources. Fifty-three resources were evaluated for NRHP eligibility, including the 46 historic age resources and seven potential project displacements that are non-historic age. The report concluded that no historic properties are affected as a result of the proposed undertaking and that the project activities would not constitute a USDOT Section 4(f) use of historic properties, as defined by 23 CFR 774. Historical Resources Survey Report and Intensive Report are available for review at the TxDOT Dallas District.

TxDOT historians emailed the Kaufman County Historical Commission (CHC) in December 2024 during the reconnaissance phase of the survey and have not received a response to date. Coordination for concurrence with non-archeological Section 106 findings of eligibility and effects was completed on May 13, 2025. Pursuant to Stipulation X, Appendix 6 “Undertakings with the Potential to Cause Effects per 36 CFR 800.16(i)” of the Section 106 PA and the MOU, TxDOT historians determined that there are no historic, non-archeological properties in the APE. In compliance with the ACT and the MOU, TxDOT historians determined project activities have no potential for adverse effects. Individual project coordination with SHPO is not required. The Section 106 documentation is included in **Appendix F**.

Under the No Build Alternative, there would be no changes to existing conditions; therefore, no impacts to historic resources would occur.

5.8 Protected Lands

No public parks, recreation areas, wildlife or waterfowl refuges, significant historic sites, or scientific study areas are located adjacent to or in proximity to the proposed project. No lands purchased or developed with the Land and Water Conservation Fund (LWCF) program are located adjacent to the proposed project. Consequently, no Section 4(f), Section 6(f), or Chapter 26 properties are present in the proposed project area. Therefore, the proposed project would not result in impacts to protected lands.

The No Build Alternative would not result in impacts to protected lands.

5.8.1 Section 4(f)

Section 4(f) protects publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, and any land from a historic site of national, State, or local significance. There are no Section 4(f) properties present in the proposed project area.

5.8.2 Section 6(f)

Section 6(f) protects parks and recreation areas improved by Land and Water Conservation Funds. There are no Section 6(f) properties present in the proposed project area.

5.8.3 Chapter 26

Chapter 26 of the Texas Parks and Wildlife Code (TPWC) protects the taking of public land designated and used prior to the arrangement of the project as a park, recreation area, scientific area, wildlife refuge, or historic site. There are no Chapter 26 properties present in the proposed project area.

5.9 Water Resources

5.9.1 Clean Water Act Section 404

This proposed project will involve regulated activity in jurisdictional waters and therefore will require authorization under Section 404. Table 5-1 lists the waters that are potentially jurisdictional waters in which a regulated activity is anticipated to take place; actions within jurisdictional waters are regulated by the US Army Corps of Engineers (USACE). It also indicates whether the impacts are anticipated to be authorized under Section 404 by a non-reporting Nationwide Permit (NWP) (i.e., no pre-construction notification required), or if it is anticipated that a NWP with pre-construction notification (PCN), IPs, Letter of Permission (LOP), or Regional General Permit (RGP) will be required. At the time of this EA, some water features were desktop delineated due to the lack of ROE. Fieldwork for the desktop delineated areas will be completed after ROW acquisition.

Field visits for properties that received ROE were conducted on October 17-20 and November 20-22, 2023, and January 24-26, July 24, August 2, and August 15, 2024. Refer to the Water Features Map in **Appendix E-1** for the location of water features within the proposed project limits. The Water Features Delineation Report is available for review at the TxDOT Dallas District office.

Based on proposed project activities and potential impacts, it is anticipated that an NWP 14 with PCN would be needed. Potential impacts are unlikely to require an IP under Section 404. If it is later determined that an IP under Section 404 is needed, compliance with the Environmental Protection Agency's (EPA's) Section 404(b)(1) Guidelines would be confirmed prior to submittal of the IP application.

The activity will comply with all permit general and regional conditions applicable as well as any special conditions set forth by the USACE. Appropriate measures would be taken to maintain normal downstream flows and minimize flooding. Temporary fills will consist of clean materials and will be placed in a manner that would not be eroded by expected high flows. Temporary fills will be removed in their entirety and the affected area returned to preconstruction elevations and revegetated as appropriate. If the proposed project involves stream modification, any stream channel alterations—including bank stabilization—will be limited to the minimum necessary to construct or protect the structure and its immediate surroundings.

Under the No Build Alternative, construction of the proposed project would not occur; therefore, there would be no project-related impacts on Waters of the U.S., and compliance with Section 404 of the CWA would not be necessary.

Table 5-1: Water Features

Number (Name) of Water Feature	Type of Water Feature	Location of Water Feature (Appendix E-1 Water Features Map)	Covered by Non-Reporting Nationwide Permit under Section 404?	Nationwide Permit with Pre-Construction Notification, Individual Standard Permit, Letter of Permission, or Regional General Permit Required
4*	Potential Emergent Wetland	Sheet 1 of 8	No	Yes
17*	Potential Emergent Wetland	Sheet 1 of 8	Yes	No
26*	Potential Forested Wetland	Sheet 1 of 8	Yes	No
40*	On-Channel Pond	Sheet 1 of 8	Yes	No
45*	Potential Emergent Wetland	Sheet 1 of 8	Yes	No
62	Intermittent Stream	Sheet 2 of 8	No	Yes
65	Emergent Wetland	Sheet 2 of 8	No	Yes
82	Emergent Wetland	Sheet 2 of 8	No	Yes
83*	Potential Emergent Wetland	Sheet 2 of 8	No	Yes
87	Emergent Wetland	Sheet 2 of 8	No	Yes
88	On-Channel Pond	Sheet 2 of 8	No	Yes
89*	Potential Forested Wetland	Sheet 2 of 8	No	Yes
110*	Potential Scrub Shrub Wetland	Sheet 3 of 8	Yes	No
114*	Potential Forested Wetland	Sheet 4 of 8	Yes	No
116*	Potential Intermittent Stream	Sheet 4 of 8	Yes	No
121*	Perennial Stream	Sheet 5 of 8	Yes	No
128*	Potential Ephemeral Stream	Sheet 6 of 8	No	Yes
134	Emergent Wetland	Sheet 6 of 8	No	Yes
135	On-Channel Pond	Sheet 6 of 8	No	Yes

Number (Name) of Water Feature	Type of Water Feature	Location of Water Feature (Appendix E-1 Water Features Map)	Covered by Non-Reporting Nationwide Permit under Section 404?	Nationwide Permit with Pre-Construction Notification, Individual Standard Permit, Letter of Permission, or Regional General Permit Required
139	On-Channel Pond	Sheet 6 of 8	No	Yes
153	On-Channel Pond	Sheet 6 of 8	Yes	No
171*	Potential Intermittent Stream	Sheet 7 of 8	No	Yes
172	Emergent Wetland	Sheet 7 of 8	No	Yes
174*	Intermittent Stream	Sheet 7 of 8	No	Yes
175*	Potential Emergent Wetland	Sheet 7 of 8	No	Yes
182*	Potential Intermittent Stream	Sheet 7 of 8	No	Yes
183*	Potential Forested Wetland	Sheet 7 of 8	No	Yes
186*	Potential Intermittent Stream	Sheet 7 of 8	No	Yes
179*	On-Channel Pond	Sheet 7 of 8	No	Yes
180*	Potential Intermittent Stream	Sheet 7 of 8	No	Yes
181*	Potential Forested Wetland	Sheet 7 of 8	No	Yes
184*	Potential Emergent Wetland	Sheet 7 of 8	No	Yes
185*	Potential Emergent Wetland	Sheet 7 of 8	No	Yes
178	Perennial Stream	Sheet 7 of 8	No	Yes
188*	Potential Emergent Wetland	Sheet 7 of 8	No	Yes
192*	Potential Intermittent Stream	Sheet 7 of 8	No	Yes
203	Intermittent Stream	Sheet 8 of 8	No	Yes
208	Emergent Wetland	Sheet 8 of 8	No	Yes
212	Intermittent Stream	Sheet 8 of 8	No	Yes
221	Forested Wetland	Sheet 8 of 8	No	Yes
224	Emergent Wetland	Sheet 8 of 8	No	Yes

Number (Name) of Water Feature	Type of Water Feature	Location of Water Feature (Appendix E-1 Water Features Map)	Covered by Non-Reporting Nationwide Permit under Section 404?	Nationwide Permit with Pre-Construction Notification, Individual Standard Permit, Letter of Permission, or Regional General Permit Required
225	On-Channel Pond	Sheet 8 of 8	Yes	No
226*	Potential Intermittent Stream	Sheet 8 of 8	No	Yes
227*	Potential Emergent Wetland	Sheet 8 of 8	No	Yes
234*	Potential Scrub Shrub Wetland	Sheet 8 of 8	No	Yes
248*	Potential Intermittent Stream	Sheet 8 of 8	Yes	No
250*	Potential Intermittent Stream	Sheet 8 of 8	Yes	No
253*	Potential Scrub Shrub Wetland	Sheet 8 of 8	Yes	No

*Denotes desktop delineated feature

5.9.2 Clean Water Act Section 401

For projects requiring an NWP under Section 404 and covered by the Texas Commission on Environmental Quality's (TCEQ) blanket 401 water quality certification, TxDOT complies with Section 401 of the Clean Water Act (CWA) by implementing TCEQ's conditions for NWPs, regardless of whether the NWP is non-reporting or requires the submission of a PCN. For projects that need authorization under an NWP not covered by TCEQ's blanket 401 certifications, or for projects requiring an IP, LOP, or RGP under Section 404, TxDOT will coordinate Section 401 water quality certification with TCEQ. TCEQ will then either approve, deny, or issue a waiver for the Section 401 certification. This decision from TCEQ must be submitted to the USACE before TxDOT can confirm use of the NWP or before a decision on an IP, LOP, or RGP can be made.

Under the No Build Alternative, construction of the proposed project would not occur; therefore, there would be no project-related impacts on Waters of the U.S., and compliance with Section 401 of the CWA would not be necessary.

5.9.3 Executive Order 11990 Wetlands

The proposed project is federally funded and therefore is subject to Executive Order (EO) 11990, Protection of Wetlands; furthermore, the proposed project would involve construction in wetlands.

The proposed project includes a roadway on new location for the purpose of providing regional connectivity in Kaufman County. The Build Alternative is constrained by existing and proposed residential and commercial development, proximity to an expansive floodplain and stream crossings, and existing utility corridors, therefore, there is no practicable alternative to construction in wetlands. The proposed project design avoids impacts on wetlands to the maximum extent practicable. Measures to minimize harm to wetlands will include the use of stormwater BMPs during construction. Additionally, measures taken to avoid and minimize harm to wetlands include the use of bridges and elevated roadway sections to span water features where practicable.

Under the No Build Alternative, construction of the proposed project would not occur; therefore, no proposed project-related impacts on wetlands would occur.

5.9.4 Rivers and Harbors Act

Based on the proposed project scoping analysis, it was determined that neither the Build nor the No Build Alternative would have an impact on this resource category or subject matter. The proposed project does not include construction activities in or over a navigable Water of the U.S.; therefore, Sections 9 and 10 of the Rivers and Harbors Act of 1899 do not apply.

5.9.5 Clean Water Act Section 303(d)

This proposed project is located within five linear miles (not stream miles) of, and is within the watershed of, or drains to King's Creek Cedar Creek Reservoir, an impaired assessment unit under Section 303(d) of the federal CWA (TCEQ 2022). Table 5-2 summarizes the impaired assessment unit of the King's Creek-Cedar Creek Reservoir.

Table 5-2: Impaired Assessment Unit

Watershed	Segment Name	Segment Number	Assessment Unit Number
King's Creek-Cedar Creek Reservoir	King's Creek	0818C	0818C_01

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 proposed 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 Build Alternative and associated activities would be implemented, operated, and maintained using BMPs to control the discharge of pollutants from the proposed project site.

Additional wetland and stream protection BMPs could include, but may not be limited to the following:

- Establish and/or maintain buffers around known or discovered recharge features.
- Locate, design, construct, and maintain stream crossings to provide maximum erosion protection.
- Maintain existing road ditches, culverts, and turnouts to ensure proper drainage and minimize the potential for the development of ruts and mud holes and other erosion-related problems.
- Stabilize, seed, and mulch eroded roadsides and new road cuts with native grasses and legumes, where feasible, in a timely manner to minimize impacts to water bodies.
- Implement erosion and sediment controls where appropriate. Maintain protective vegetative covers over all compatible areas, especially on steep slopes. Where necessary, gravel, fabrics, mulch, riprap, or other materials that are environmentally safe and compatible with the location may be used, as appropriate, for erosion control in problem areas.
- Water quality protection BMPs would have multiple levels of oversight to ensure their continued proper function. In addition to contractor inspectors who are responsible for daily monitoring of BMPs, TxDOT inspectors would conduct weekly inspections and would submit compliance reports to the project engineer.

The No Build Alternative would not result in impacts to Section 303(d) waters.

5.9.6 Clean Water Act Section 402

Since the Texas Pollutant Discharge Elimination System (TPDES) 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 proposed 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 [NOI] 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 proposed projects that need authorization under the CGP. These documents require the proposed project contractor to comply with the CGP and SWP3, and to complete the appropriate authorization documents.

Under the No Build Alternative, as construction of the proposed project would not occur, there would be no proposed project-related alteration on the amount of runoff generated within the proposed project area. Due to the current growth and development trends within Kaufman County, any construction activities resulting in changes in runoff quantities and water quality would be permitted in compliance with applicable local, state, and federal regulations.

5.9.7 Floodplains

This proposed project is federally funded and therefore is subject to EO 11988, Floodplain Management. However, the proposed project would not involve a significant encroachment in the floodplain. A review of Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs) indicated that the proposed project area crosses multiple FEMA flood zones (FEMA 2024). These flood zones are identified as Zone A 100-year flood zone (special flood hazard areas inundated by the 100-year flood with no base flood elevations determined), and Zone AE 100-year flood zone (special flood hazard areas inundated by the 100-year flood with base flood elevations determined).

Within the proposed project, flood zones comprise a total of approximately 49.7 acres as follows: 49.4 acres of Zone A 100-year flood zone and 0.3 acres of Zone AE 100-year flood zone. The Environmental Resources Map included in **Appendix E-3** displays the floodplain areas crossed by the proposed project.

Under the No Build Alternative, as construction of the proposed project would not occur, there would be no proposed project-related encroachment of the floodplain. Therefore, therefore, coordination with the local floodplain administrator would not be required.

5.9.8 Wild and Scenic Rivers

Based on proposed project scoping analysis, it was determined that both the Build and the No Build Alternatives would not have an impact on wild and scenic rivers. This proposed project would not involve work within the designated segment of the Rio Grande; therefore, coordination with the National Park Service would not be required.

5.9.9 Coastal Barrier Resources

The Coastal Barrier Resources Act of 1982 does not apply.

5.9.10 Coastal Zone Management

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

5.9.11 Edwards Aquifer

The proposed project is not located within the Edwards Aquifer Recharge Zone. Therefore, the EPA Edwards Aquifer MOU and the TCEQ Edwards Aquifer Rules do not apply.

5.9.12 International Boundary and Water Commission

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

5.9.13 Drinking Water Systems

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. The Texas Water Development Board (TWDB) Water Data Interactive map was utilized to identify any known water wells within the proposed project limits (TWDB 2023). Based on a review of the data, there are no registered water wells identified within the proposed project limits.

5.10 Biological Resources

5.10.1 Impacts to Vegetation

Per the 2021 MOU TPWD, a habitat assessment of the proposed project limits was performed and potential impacts to vegetation/habitat were determined (TPWD 2021). The proposed project would impact approximately 419.1 acres of Blackland Prairie: Disturbance or Tame Grassland; 64.0 acres of Native Invasive: Deciduous Woodland; 29.0 acres of Urban landscapes; 20.6 acres of Pineywoods: Bottomland Temporarily Flooded Hardwood Forest; 18.1 acres of Native Invasive: Mesquite Shrubland; 14.0 acres of Pineywoods: Bottomland Herbaceous Wetland; 12.3 acres of Pineywoods: Small Stream and Riparian Herbaceous Wetland; 11.6 acres of Row Crops; and 3.7 acres of Central Texas: Floodplain Herbaceous Vegetation communities within the new construction areas in the proposed ROW. Refer to Appendix E-2 for the Mapped and Field Verified Ecological Mapping Systems of Texas (EMST) Vegetation Map for the location of these features.

Potential impacts to vegetation would be confined to the existing and proposed ROW and easements. Impacts to vegetation will be avoided or minimized by limiting disturbance to construct the proposed project. The removal of native vegetation, particularly mature native trees and shrubs will be avoided to the greatest extent practicable. Seeding and replanting with TxDOT-approved seed mixes containing native species will be used in the revegetation of disturbed areas.

The majority of the proposed project area is classified as Blackland Prairie: Disturbance or Tame Grassland system in the EMST and likely contain important native grasses such as little bluestem (*Schizachyrium scoparium*), silver bluestem (*Bothriochloa laguroides ssp. torreyana*), Indiangrass (*Sorghastrum nutans*), Texas wintergrass (*Nassella leucotricha*), hairy grama (*Bouteloua hirsuta*), and threeawn species (*Aristida spp.*); however, non-native grasses such as bermudagrass (*Cynodon dactylon*), kleingrass (*Panicum coloratum*), King Ranch bluestem (*Bothriochloa ischaemum var. songarica*), and Johnsongrass (*Sorghum halepense*) are common (TPWD 2016). These areas have historically, and continue to be, used for cattle grazing throughout the proposed project area. While the

exact duration of these activities is undetermined, aerial imagery suggests agricultural and possibly ranching activity dating back to the 1930s.Texas Natural Diversity Database (TXNDD) data obtained from TPWD in November 2023, were reviewed along with the TPWD Rare, Threatened, and Endangered Species of Texas (RTEST) list for Kaufman County, accessed on September 17, 2024 (TPWD 2024). The TXNDD data were searched for element of occurrence records within 1.5 and 10 miles of the proposed project. Within 1.5 miles of the proposed project is one record for the Vertisol Blackland Prairie: Little Bluestem-Indiangrass Series, and one record for the Topeka purple-coneflower (*Echinacea atrorubens*). Within 10 miles of the proposed project are two records of Topeka purple-coneflower, three records of Vertisol Blackland Prairie, and one record of Mollisol Blackland Prairie. No proposed construction will occur on any of the records identified within the 1.5 mi or 10 mi radius. Each of these occurrences are located outside of the proposed project area and would not be impacted by the proposed project. The record for the Vertisol Blackland Prairie is located along existing ROW northeast of the proposed project south of SH 205. Aerial imagery reveals portions of the area being used for agriculture purposes, storage of abandoned sheds and cars, and a utility easement.

Under the No Build Alternative, the proposed project would not proceed, resulting in no construction-related impacts on vegetation. Existing land use and activities would, however, continue to have periodic effects on vegetation communities.

5.10.2 Executive Orders 13112 and 13751 on Invasive Species

This proposed project is subject to and will comply with federal EO 13112 on Invasive Species (as amended by EO 13751 on Safeguarding the Nation From the Impacts of Invasive Species). The department implements this EO on a programmatic basis through its Roadside Vegetation Management Manual and Landscape and Aesthetics Design Manual.

5.10.3 Executive Memorandum and Environmentally and Economically Beneficial Landscaping

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

5.10.4 Impacts to Wildlife

Wildlife species expected to inhabit the proposed project area are likely adapted to both a rural environment as well as an urban, developed environment. Mammalian species that likely inhabit the area include the coyote (*Canis latrans*), Virginia opossum (*Didelphis virginiana*), raccoon (*Procyon lotor*), and eastern fox squirrel (*Sciurus niger*). Various avian species likely to inhabit the area include species such as the Northern Mockingbird (*Mimus polyglottos*), Mourning Dove (*Zenaida macroura*), Blue Jay (*Cyanocitta cristata*), Great Blue Heron (*Ardea herodias*), Turkey Vulture (*Cathartes aura*), American Crow

(*Corvus brachyrhynchos*), and Red-tailed Hawk (*Buteo jamaicensis*). Various waterfowl species could utilize the aquatic habitat. Amphibian and reptilian species would also utilize the different available habitats. The species would include various snakes, turtles, lizards, and frogs native to north-central Texas. Examples would be the Texas rat snake (*Elaphe obsoleta lindheimeri*), red-eared slider (*Trachemys scripta*), western ribbon snake (*Thamnophis proximus*), and northern cricket frog (*Acris crepitans*).

The TXNDD data were searched for element of occurrence records of wildlife species within 1.5 and 10 miles of the proposed project. Within 10 miles of the proposed project are multiple records of the southern crawfish frog (*Lithobates areolatus areolatus*), and one record of a colonial wading bird colony. No proposed construction will impact any of the records identified within the 1.5 mi or 10 mi radius.

The presence or evidence of the following wildlife species was observed during field reconnaissance: raccoon, striped skunk, white-tailed deer, Mourning Dove, Turkey Vulture, Black Vulture (*Coragyps atratus*), Great Blue Heron, American Crow, various songbird species, red-eared slider (*Trachemys scripta elegans*), water moccasin (*Agkistrodon piscivorus*), leopard frogs (*Rana sphenocephala*), and unidentified shells of freshwater mussel species.

Substantial impacts on wildlife are not anticipated. The proposed project is the construction of a roadway in a new location and would result in habitat fragmentation. Some mortality to individual species that are less mobile such as reptiles and amphibians may occur during the initial construction. Due to vehicle strikes, an increase in wildlife mortality would likely occur to wildlife attempting to cross the roadway. The proposed culverts, bridges, and associated structures would allow wildlife to cross under the roadway more safely. More mobile species such as mammals and avian species would most likely disperse to more desirable suitable habitats. Wildlife that does currently inhabit adjacent urban development and existing transportation structures (culverts, utility poles, etc.) would be temporarily impacted due to potential structure displacements/relocations and roadway structure reconstruction and relocation. It is likely that some wildlife species would recolonize the available habitat once construction of the proposed project is complete.

Under the No Build Alternative, the proposed project would not be constructed; thus, there would be no proposed project-related impacts to wildlife.

5.10.5 Migratory Bird Protections

The proposed project will comply with applicable provisions of the Migratory Bird Treaty Act (MBTA) and TPWC Title 5, Subtitle B, Chapter 64, Birds. It is TxDOT's policy to avoid removal and destruction of active bird nests except through federal or state approved options. In addition, it is TxDOT's policy to implement where appropriate and practicable:

- Use measures to prevent or discourage birds from building nests on man-made structures within portions of the proposed project area planned for construction and

- Schedule vegetation clearing activities outside the typical nesting season.

Additional preemptive and preventive measures that may be applied, where appropriate and practicable, are described in TxDOT's guidance – Avoiding Migratory Birds and Handling Potential Violations (TxDOT 2023f).

5.10.6 Fish and Wildlife Coordination Act

The proposed 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 applicable permit.

5.10.7 Bald and Golden Eagle Protection Act of 2007

The proposed project area does include suitable habitat for the Bald Eagle; however, no nests were observed during field activities. Based on limited ROE, additional fieldwork would be required to determine whether the proposed project is within 660 feet of an active or inactive Bald or Golden Eagle nest. Coordination with the U.S. Fish and Wildlife Service (USFWS) may be required.

5.10.8 Magnuson-Stevens Fishery Conservation Management Act

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

5.10.9 Marine Mammal Protection Act

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

5.10.10 Threatened, Endangered, and Candidate Species

The proposed project must comply with federal and state regulations for protecting and managing threatened and endangered fish, wildlife, and plant species. The Endangered Species Act of 1973 (ESA) affords protection for federally listed threatened and endangered species and, where designated, critical habitat for these species. In general, the ESA protects both the species and their habitat. Details concerning state endangered or threatened animal species are contained in Chapters 67 and 68 of the TPWC and Sections 65.171 - 65.176 of Title 31 of the TAC. Details concerning endangered or threatened plant species are contained in Chapter 88 of the TPWCC and Sections 69.01 - 69.9 of the TAC.

The USFWS Official Species List from the Information for Planning and Consultation (IPaC) was obtained on June 25, 2025 (**Appendix F**), for the proposed project. The TPWD Annotated County Lists of Rare Species data, accessed on January 15, 2025 (TPWD 2025), was also obtained for the proposed project.

Federal and State Listed Species

The USFWS Official Species List includes six federally listed threatened, endangered, proposed threatened, or proposed endangered species that could potentially occur within the proposed project area. These species include the tricolored bat (*Perimyotis subflavus*), Piping Plover (*Charadrius melodus*), Rufa Red Knot (*Calidris canutus rufa*), Whooping Crane (*Grus americana*), alligator snapping turtle (*Macrochelys temminckii*), and monarch butterfly (*Danaus plexippus*). Though not included on the USFWS Official Species List, the Louisiana pigtoe (*Pleurobema riddellii*) is included as federally proposed threatened, Texas fawnsfoot (*Truncilla macrodon*) as federally threatened, Texas heelsplitter (*Potamilus amphichaenus*) as federally proposed endangered, and the Black Rail (*Laterallus jamaicensis*) is included as federally threatened on TPWD's RTEST list for Kaufman County.

The proposed project may affect but is unlikely to adversely affect tricolored bat due to habitat removal; however, the proposed project is not required to consult with USFWS at this time as the species is not yet listed and the proposed project is unlikely to result in jeopardy to this species. Should the species become listed during the lifecycle of the proposed project, the proposed project would require re-evaluation to determine if consultation with USFWS is necessary.

The proposed project may affect but is unlikely to adversely affect the alligator snapping turtle due to habitat alteration; however, the proposed project is not required to consult with USFWS as the species is not yet listed and the proposed project is unlikely to result in jeopardy to this species. Should the species become listed during the lifecycle of the proposed project, the proposed project would require re-evaluation to determine if consultation with USFWS is necessary.

The proposed project may affect the monarch butterfly due to the presence of and impacts to potential habitat. The proposed project is not required to consult with USFWS as the species is not yet listed and the proposed project is unlikely to result in jeopardy to this species. Should the species become listed during the lifecycle of the proposed project, the proposed project would require re-evaluation to determine if consultation with USFWS is necessary.

Federally listed Texas heelsplitter, federally proposed and state listed Louisiana pigtoe, and Texas fawnsfoot are not anticipated to be affected by this proposed project. Perennial streams, Big Brushy Creek and Terry Creek, within the proposed project area are categorized as Group 5 or ungrouped streams in the USFWS-TPWD protocol (April 2024), which assumes the streams to not be occupied by state or federally listed species. Freshwater Mussel BMPs, including survey/relocation of all live native mussels will be implemented prior to construction in compliance with USFWS-TPWD Protocol.

For federally listed species, either USFWS has not designated critical habitat or, if critical habitat has been designated, there is no critical habitat within the proposed project area.

Refer to **Appendix F** for additional information on the IPaC, Species Analysis Spreadsheet, and Species Analysis Form.

Species of Greatest Conservation Need (SGCN)

The TPWD RTEST included an additional 44 species listed as SGCN (**Appendix F**). Suitable habitat was identified within the proposed project area for 37 SGCN species, ROE was not provided for many of the parcels within the proposed project area. Areas where ROE was not provided would need to be assessed after ROW is acquired. If suitable habitat is observed in those areas, it may result in a change to effect/impact determinations.

As discussed in Section 5.10.4 *Impacts to Wildlife,* more mobile species such as mammals and avian species would most likely disperse to more desirable suitable habitats. Wildlife that does currently inhabit adjacent urban development and existing transportation structures (culverts, utility poles, etc.) would be temporarily impacted due to potential structure displacements/relocations and roadway structure reconstruction and relocation. It is likely that some wildlife species would recolonize the available habitat once construction of the proposed project is complete.

Under the No Build Alternative, the proposed project would not be constructed; thus, there would be no effects to federally and state-listed threatened, endangered, or candidate species and SGCNs.

5.11 Air Quality

5.11.1 Transportation Conformity

The proposed project is located in Kaufman County, which is within the Dallas-Fort Worth area that has been designated by EPA as severe nonattainment area for the 2008 ozone national ambient air quality standards (NAAQS) and serious nonattainment for the 2015 ozone NAAQS; therefore, the transportation conformity rules apply. Conformity for older standards is satisfied by conformity to the more stringent 2008 and 2015 ozone NAAQS, as applicable.

Both NCTCOG's financially constrained Mobility 2045 Update (NCTCOG 2022) and 2025-2028 TIP were found to conform to the Texas State Implementation Plan (SIP) (TCEQ 2024) by FHWA and Federal Transit Administration (FTA) on October 18, 2024. The proposed action is consistent with the Mobility 2045 Update and the Draft 2025–2028 TIP, as amended. All projects in the NCTCOG's TIP that are proposed for federal or state funds were initiated in a manner consistent with federal guidelines in 23 CFR 450 and 49 CFR 613.200 Subpart B.

Per the TxDOT-TCEQ MOU, TCEQ will be afforded the opportunity to review and comment on the Draft EA. TxDOT will provide TCEQ with a Notice of Availability (NOA) notifying them that the environmental documents are available for review. The NOA will provide information on how to access the document electronically or request a hard copy.

5.11.2 Hot-Spot Analysis

The proposed project is not located within a carbon monoxide (CO) or particulate matter (PM) nonattainment or maintenance area; therefore, a project-level hot-spot analysis is not required.

5.11.3 Carbon Monoxide Traffic Air Quality Analysis

Traffic data for the estimated time of completion (ETC) year 2028 and design year 2048 is 28,300 vehicles per day and 74,800 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 proposed project do not exceed 140,000 vehicles per day; therefore, a Traffic Air Quality Analysis was not required.

5.11.4 Mobile Source Air Toxics

A qualitative mobile source air toxics (MSAT) assessment has been conducted relative to the Build and No Build Alternative. As documented in the Mobile Source Air Toxics Disclosure Statement, all proposed project alternatives may result in increased exposure to MSAT emissions in certain locations, although the concentrations and duration of exposure are uncertain. Due to this uncertainty, the health effects from these emissions cannot be estimated. However, 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. Detailed information of this qualitative analysis can be found in the Mobile Source Air Toxics Disclosure Statement available for review at the TxDOT Dallas District office (TxDOT 2024).

5.11.5 Congestion Management Process

The proposed project is adding single-occupant vehicle (SOV) capacity, is a proposed project with FHWA/FTA involvement, and is within the Dallas-Fort Worth Transportation Management Area; therefore, a CMP analysis is required. The 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 proposed project was developed from the NCTCOG's CMP, which meets all requirements of 23 CFR 450.320 and 500.109, as applicable. The CMP was adopted by the NCTCOG in August 2021.

The project-level CMP analysis is available for review at the NCTCOG. The CMP Disclosure Statement prepared for the proposed project is available for review at the TxDOT Dallas District office.

Committed congestion reduction strategies and operational improvements within the study boundary will consist of modal options, system reliability, and roadway infrastructure improvements including addition of new lanes, shared-use path for bicyclists and pedestrians, turn lanes, and intersection improvements. 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 Mobility 2045 Update (NCTCOG 2022). The congestion reduction strategies considered for this proposed 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 available for review at the NCTCOG.

5.11.6 Construction Air Emissions

During the construction phase of this proposed 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 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 proposed project will have any significant impact on air quality in the area. The No Build alternative would not meet TxDOT and NCTCOG goals for congestion reduction goals through CMAQ, the CMP and the Mobility 2045 Update (NCTCOG 2022); would not result in increased exposure to MSAT emissions along the proposed new roadway; or increase construction emission; however, over time, traffic volumes increase, and traffic congestion could worsen within the existing roadway system.

5.12 Hazardous Materials

A Hazardous Materials ISA report was completed to summarize potential hazardous materials within and adjacent to the proposed project corridor. The ISA included a site reconnaissance and environmental regulatory database search for the proposed project area. The ISA, completed in January 2025, is maintained in the TxDOT Dallas District project files.

The ISA identified three sites determined to pose a low environmental risk:

- **Map Key 5: Samuels Farms (6701 Samuels Rd, Terrell)** – This site is located just east of the US 80/SP 557 interchange and adjacent to the proposed ROW for the new CR 240/Samuels Rd alignment. The site has a 2,000-gallon diesel aboveground petroleum storage tank (AST) installed in 1991. There have been no reported spills or releases, and the tank is not near the proposed ROW. Based on no reported release and proposed work activity, this site is considered a low environmental risk.
- **Map Key 7: Doan Agricultural Services** – The facility is listed on the state superfund database and is located on the southwest side of the Airpark, about six miles northwest of Terrell and

1,100 feet from the proposed project limits on SH 205. Due to its distance, it is considered a low environmental risk.

- **BBQ Restaurant at 6070 W US 80 (Former Gas Station, PST 36652)** – This site is within the proposed ROW at the US 80/SP 557 interchange. The facility was previously a Texaco Service Station with a petroleum storage tank (PST) registration. Underground storage tanks (USTs) were installed in 1973 and removed in 1998. There were no reported releases, and the site was most recently a barbecue restaurant. The KCOL NB frontage road (STA 383+00 to 385+00) will be built over this site at a raised grade. Based on no reported releases and proposed construction, this site is considered a low environmental risk.

Several automobile salvage, sales, heavy equipment, repair/maintenance facilities were observed on historic aerials and during the site visit. None of these facilities are associated with a regulatory listing. Any abandoned vehicles, debris, contaminated surface soils, etc. that may be present on these sites will be handled during the ROW acquisition process.

Additional sites determined to pose a low environmental risk were identified during the site visit between July 23-24, 2025. Site Survey locations were given a number beginning with SS# (see **Appendix B**).

The proposed project would also include the demolition of buildings as well as bridges and bridge class culverts. Asbestos-containing Materials (ACMs) and lead-containing paint (LCP) may be present in the structures. Asbestos and LCP inspections, notification, and removal, as applicable, would be addressed prior to demolition in accordance with regulatory requirements.

Based on the review and assessment of these sites, no further investigation is warranted for hazardous materials. Any unexpected hazardous materials or petroleum contamination encountered during construction will be handled per applicable federal and state regulations under TxDOT Standard Specifications.

Under the No Build Alternative, the proposed project would not be constructed, and proposed project-related hazardous materials impacts would not occur.

5.13 Traffic Noise

A traffic noise analysis was prepared in accordance with TxDOT's (FHWA-approved) Traffic Noise Policy (TxDOT 2019) for the proposed project. Details on the traffic noise analysis can be found in the Traffic Noise Technical Report available for review at the TxDOT Dallas District office.

Existing noise levels at selected receiver locations were measured to characterize the existing noise environment along the new location sections of the proposed project. Existing noise levels were modeled along the existing roadway sections where the proposed project would transition into US 80 and I-20.

Traffic Noise Overview

Traffic noise is primarily generated by a vehicle's tires, engine, and exhaust, measured in decibels (dB) and adjusted to reflect how the human ear perceives it using A-weighting (dB(A)). Because traffic noise levels are variable, the equivalent continuous sound level (Leq) is used to represent the average noise level.

Traffic Noise Analysis Methodology

FHWA traffic noise modeling software (TNM 2.5) was used to calculate existing and predicted traffic noise levels, considering factors such as vehicle number, type, speed, road alignment, and terrain. Traffic data was provided by HDR, and the existing noise model was validated by comparing measured sound levels with modeled predictions. The differences were within the +/- 3 dB(A) tolerance allowed by FHWA.

Results

Existing and predicted traffic noise levels were modeled at receiver locations that may be impacted by traffic noise and potentially benefit from noise abatement. The receiver locations are listed in **Table 5-3** and shown in the Environmental Resources Map included in **Appendix E-3**. These locations include residential areas only.

Table 5-3: Traffic Noise Levels dB(A) Leq

Representative Receiver	NAC Category	NAC Level	Existing 2028	Predicted 2048	Change (+/-)	Noise Impact (Yes/No)
R1 Single Family Residential	B	67	56	62	+6	No
R2 Single Family Residential	B	67	53	60	+7	No
R3 Single Family Residential	B	67	58	64	+6	No
R4 Single Family Residential	B	67	51	56	+5	No
R5 Single Family Residential	B	67	55*	57	+2	No
R6 Single Family Residential	B	67	55*	61	+6	No
R7 Single Family Residential	B	67	55*	65	+10	No
R8 Single Family Residential	B	67	38	64	+26	**Yes**

Representative Receiver	NAC Category	NAC Level	Existing 2028	Predicted 2048	Change (+/-)	Noise Impact (Yes/No)
R9 Single Family Residential	B	67	36	55	+19	**Yes**
R10 Single Family Residential	B	67	36	64	+28	**Yes**
R11 Single Family Residential	B	67	55*	61	+6	No
R12 Single Family Residential	B	67	55*	61	+6	No
R13 Single Family Residential	B	67	55*	62	+7	No
R14 Single Family Residential	B	67	55*	54	-1	No
R15 Single Family Residential	B	67	55*	51	-4	No
R16 Single Family Residential	B	67	55*	54	-1	No
R17 Single Family Residential	B	67	55*	50	-5	No
R18 Single Family Residential	B	67	55*	56	+1	No
R19 Single Family Residential	B	67	55*	62	+7	No
R20 Single Family Residential	B	67	55*	66	+11	**Yes**
R21 Single Family Residential	B	67	55*	66	+11	**Yes**
R22 Single Family Residential	B	67	55*	63	+8	No
R23 Single Family Residential	B	67	55*	65	+8	No
R24 Single Family Residential	B	67	55	62	+7	No
R25 Single Family Residential	B	67	54	60	+6	No

Representative Receiver	NAC Category	NAC Level	Existing 2028	Predicted 2048	Change (+/-)	Noise Impact (Yes/No)
R26 Single Family Residential	B	67	56	62	+6	No
R27 Single Family Residential	B	67	60	65	+5	No
R28 Single Family Residential	B	67	61	66	+5	**Yes**
R29 Single Family Residential	B	67	51	60	+9	No
R30 Single Family Residential	B	67	46	53	+7	No
R31 Single Family Residential	B	67	49	54	+5	No
R32 Single Family Residential	B	67	52	56	+4	No
R33 Single Family Residential	B	67	49	61	+12	**Yes**
R34 Single Family Residential	B	67	47	52	+5	No
R35 Single Family Residential	B	67	48	53	+5	No
R36 Single Family Residential	B	67	59	63	+4	No

*Existing noise level near new location roadway determined using on site noise measurements.
Abbreviations: NAC, Noise Abatement Criteria; dB(A), A-weighted decibel; Leq (average/equivalent sound level).

Existing and predicted traffic noise levels were modeled at receiver locations that may be impacted by traffic noise and potentially benefit from noise abatement. These locations include residential areas, parks, and a church.

- **R20 through R23**: These receivers, located in the Northspur subdivision, would benefit from a continuous noise barrier (2,328 feet long, 12 feet high) that could reduce noise levels by at least 5 dB(A). However, the abatement's square footage exceeds the reasonable cost-reasonableness criterion, so no abatement measures are proposed.
- **R8 through R10, R28, and R33**: These isolated residences do not meet the requirement of benefiting at least two receptors, making noise abatement infeasible. Therefore, no abatement measures are proposed for these locations.

No feasible and reasonable noise abatement measures are proposed for the proposed project based on current traffic noise levels and abatement criteria.

To avoid noise impacts that may result from future development of properties adjacent to the proposed 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 (2048) noise impact contours.

Table 5-4 shows the projected noise contours for land use planning purposes.

Table 5-4: Noise Contours

Location	Land Use	Impact Contour	Distance from Right of Way
Contour 1 – East of proposed Outer Loop, approx. 0.68 miles south of CR 233	NAC category B & C	66 dB(A)	Within ROW
	NAC category E	71 dB(A)	Within ROW
Contour 2 – West of proposed Outer Loop, approx. 0.5 miles south of the FM 1392 and CR 239 intersection	NAC category B & C	66 dB(A)	100 feet
	NAC category E	71 dB(A)	Within ROW
Contour 3 – West of proposed Outer Loop, approx. 0.5 miles south of US 80	NAC category B & C	66 dB(A)	40 feet
	NAC category E	71 dB(A)	Within ROW
Contour 4 – West of proposed Outer Loop, approx. 0.4 miles north of IH 20	NAC category B & C	66 dB(A)	Within ROW
	NAC category E	71 dB(A)	Within ROW

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

No Build Alternative

Under the No Build Alternative, the proposed project would not be constructed. If the No Build Alternative were implemented, future traffic noise levels would be similar to existing conditions or would increase with increasing traffic on adjacent existing roadways.

5.14 Induced Growth

The CEQ defines direct effects as those effects that are “caused by the action and occur at the same time and place.” Direct effects are predictable and are a direct result of the proposed project. In addition to direct effects, major transportation proposed projects may also have indirect effects on land use and the environment. As defined in 40 CFR §1508.8, “indirect impacts are caused by the action and are

later in time or farther removed in distance but are still reasonably foreseeable." Induced growth could be included as an indirect impact of a proposed project. Induced growth for transportation, as referenced in National Cooperative Highway Research Program (NCHRP) Report 466, occurs when there is a change in access due to the proposed project and creates favorable conditions for development or redevelopment of an area.

The TxDOT Induced Growth Impacts Analysis Decision Tree determined an induced growth analysis would be required as the proposed project could benefit population and employment growth within the area. The Induced Growth Impacts Analysis is based on TxDOT's Guidance Induced Growth Analysis (TxDOT 2023), which utilizes NCHRP and American Association of State Highway and Transportation Officials (AASHTO) methodologies. The Induced Growth Analysis Report is available at the TxDOT Dallas District office for review.

Based on available data, project complexity, and semi-rural project setting, planning judgment and cartographic techniques were used for the analysis. The planning judgment used experience, professional literature, data collected from knowledgeable persons, and assessment of local conditions to formulate a logical and qualitative analysis. Additionally, the available comprehensive plans from the surrounding cities and towns, zoning and land use data, as well as jurisdictional and neighborhood boundary data were referenced to inform the induced growth analysis. Geographic information system (GIS) maps and cartographic data were used to complete quantitative and visual analyses of the Study Area, also referred to as the area of influence (AOI). The AOI is located within Kaufman and Rockwall Counties, Texas.

5.14.1 Study Area

The AOI covers approximately 100,767-acre and was initially using the boundaries of the 2020 U.S. Census block groups (BGs) within 5 miles of the proposed KCOL alignment. The BGs were then narrowed down to only include large tracts of vacant land and clearly demarcate neighborhood boundaries and established existing developments within the AOI. See **Appendix G**, **Figure 1** for the AOI.

Table 5-5 shows the local government jurisdictions located within the AOI.

Table 5-5: Local Jurisdictions within the AOI

Municipalities	County
City of Crandall and Extraterritorial Jurisdiction (ETJ)	Kaufman County
City of Dallas ETJ	Rockwall County
City of Forney and ETJ	Kaufman County
City of Heath and ETJ	Rockwall County and Kaufman County
City of Kaufman and ETJ	Kaufman County

Municipalities	County
City of Mesquite ETJ	Dallas County
City of McLendon-Chisholm and ETJ	Rockwall County
Town of Poetry and ETJ	Kaufman County
City of Post Oak Bend and ETJ	Kaufman County
City of Rockwall and ETJ	Rockwall County
Town of Talty and ETJ	Kaufman County
City of Terrell and ETJ	Kaufman County

5.14.2 Time Frame for Assessing Indirect Impacts

Since the KCOL is listed within the NCTCOG MTP 2050 Update, this study time frame would be from 2025 to 2050.

5.14.3 Identified Areas Subject to Induced Growth in the AOI

Vacant land and undevelopable areas (e.g., waterbodies, floodplains, parklands, and existing development) were identified to determine where induced growth could occur in the AOI and where development would be limited. Future land use plans and local planning regulations were reviewed to identify projected areas of growth, areas of redevelopment, and policies that may encourage or restrict development. The City of Forney, City of Heath, City of McLendon-Chisholm, City of Rockwall, City of Terrell, and Rockwall and Kaufman counties have adopted future land use plans summarized in the Induced Growth Analysis Report.

The total acreage of potentially developable and undevelopable land in the AOI is presented in **Table 5-6** and illustrated in **Appendix G, Figure 3**.

Table 5-6: Total Acreage of Potentially Developable and Undevelopable Land Within the AOI

Land Type	Acres	Percent of AOI
Total AOI	**100,743.4**	-
Undevelopable Land	30,803	30.6
Planned Development	28,276	28.1
Developable Land	41,685	41.4

Source: NCTCOG, USBS

Developed areas in the AOI include existing and planned development (i.e., cleared lands and projects under construction), which is mostly in the southern, central, and northwest portions of the AOI, in the cities of Forney and Terrell. Approximately 30,803 acres (31 percent) of the land in the AOI is considered undevelopable because it is within mapped floodplains, and it is within areas of existing or planned development. Development is limited due to the presence of mapped floodplains and the need to add fill material to raise building foundations and most roadways above the base flood elevation, which has a cumulative effect on the downstream areas of the watershed, potentially causing flooding to worsen both in water depth, velocity, and extent. For these reasons along with the additional costs associated with developing within floodplain areas, the likelihood of induced growth within undevelopable lands is low. Approximately 28,276 acres (28 percent) in the AOI is comprised of planned developments known to date; these are in various stages of planning as depicted in **Figure 2** in **Appendix G**. Therefore, the total area of the undevelopable land and planned developments within the AOI is approximately 59,079 acres, which accounts for about 59 percent of the Study Area.

Approximately 41,685 acres (41 percent) within the AOI is considered as land that has the potential to be developed. Most of the developable areas are identified in the future land use plans of the surrounding cities listed in **Table 5-7**. Based on a review of the future land use plans of the jurisdictions included in the AOI, limited areas in the AOI have the potential for induced growth or would have growth potentially accelerated because of the Proposed project.

5.14.4 Determine if Growth is Likely to Occur in the Induced Growth Areas

Improvements in transportation infrastructure that increase mobility or reduce travel times may attract new developments due to the enhanced travel patterns from new connecting roadways that provide access that leads to new areas. In addition to transportation improvements, several factors contribute to where growth may occur including suitability of land, available utilities, physical constraints, favorable planning policies, regional growth and development trends.

5.14.5 Regional and Local Growth Trends

According to the TWDB and NCTCOG, all the jurisdictions are projected to increase in population by 2050. 2050 employment data were unavailable for Crandall, McClendon-Chisolm, Post Oak Bend, Poetry, and Talty, however, because of the rapid growth occurring in Kaufman and Rockwall counties and communities within the AOI, employment is anticipated to increase as population increases. Population and employment estimates and projections for the jurisdictions within the AOI are summarized in **Table 5-7**.

Table 5-7: Historical and Projected Population Growth

Jurisdiction	2010 Census	2020 Census	Projections 2050	Percent Change (2010-2020)	Percent Change (2020-2050)
City of Crandall					
Total Population	2,858	3,860	7,840	35.1	103.1
Employment	444	524	N/A	18.0	N/A
City of Dallas					
Total Population	1,197,816	1,304,379	1,487,373	8.2	14.0
Employment	784,887	894,881	1,681,160	14.0	87.9
City of Forney					
Total Population	14,661	23,455	50,363	60.0	114.7
Employment	3,434	5,153	26,177	50.1	408.0
City of Heath					
Total Population	6,921	9,769	18,968	41.2	94.2
Employment	746	1,466	4,938	96.5	236.8
City of Kaufman					
Total Population	6,703	6,797	15,682	1.4	130.7
Employment	2,594	3,769	21,580	45.3	472.6
City of McLendon-Chisholm					
Total Population	1,373	3,562	N/A	159.4	N/A
Employment	179	185	N/A	3.4	N/A
City of Mesquite					
Total Population	139,824	150,108	191,955	7.4	27.9
Employment	46,497	48,484	142,738	4.3	194.4
City of Post Oak Bend					
Total Population	595	683	N/A	14.8	N/A
Employment	52	15	N/A	-71.2	N/A

Jurisdiction	2010 Census	2020 Census	Projections 2050	Percent Change (2010-2020)	Percent Change (2020-2050)
City of Rockwall					
Total Population	37,490	47,251	84,804	26.0	79.5
Employment	15,660	22,310	104,234	42.5	367.2
City of Terrell					
Total Population	15,816	17,465	22,297	10.4	27.7
Employment	10,541	12,140	65,987	15.2	443.6
Town of Poetry					
Total Population	N/A	1,352	1,866	N/A	38.0
Employment	29	70	N/A	141.4	N/A
Town of Talty					
Total Population	1,535	2,500	N/A	62.9	N/A
Employment	181	175	N/A	-3.3	N/A
Kaufman County					
Total Population	103,350	145,310	403,257	40.6	177.5
Employment	22,621	29,483	189,354	30.3	542.2
Rockwall County					
Total Population	78,337	107,819	245,608	37.6	127.8
Employment	21,363	31,765	134,768	48.7	324.3
Dallas-Fort Worth Metropolitan Area					
Total Population	6,371,773	7,637,387	12,297,157	19.9	61.0
Employment	2,870,129	3,648,851	8,697,133	27.1	138.4

*N/A: Not Available

Sources: 2010 Census, 2020 Census, 2021 Texas Water Development Board (TWDB) Regional Water Plan – Population Projections for 2020-2070, 2023 American Community Survey (ACS) 5-Year Estimates, 2050 NCTCOG Demographic Forecast, and USCB OnTheMap for 2010 and 2020.

Note: 2020 employment numbers were affected by the 2019 Coronavirus (COVID-19) pandemic.

5.14.6 Identify Resources Subject to Induced Growth Impacts

The methodology for assessing induced growth impacts was based on a planning judgment and qualitative analysis approach; therefore, specific resources within the AOI that may be affected because of induced growth are not quantified. The proposed project has the potential for encroachment alteration impacts to floodplains and floodways, water features and surface water quality, wildlife habitat, and the visual and aesthetic environment. The proposed project would likely influence development of the undeveloped land parcels within the AOI, particularly creating opportunities for new development adjacent to the proposed new highway. Overall growth and land development would align with the published future land use plans and would not diverge from existing growth and development trends in the surrounding cities and jurisdictions.

5.14.7 Identify Mitigation If Applicable

As TxDOT and the FHWA do not have the authority to implement zoning or planning regulations, mitigation for indirect effects is within the control of municipal agencies rather than a sponsoring agency. TxDOT and FHWA are obligated to advise state and local agencies with mitigation authority as to what it considers appropriate mitigation. This advice is considered part of the federal agency's National Environmental Policy Act (NEPA) responsibility. Future land development activities would be regulated by each City or Town's development Code and Ordinances. Local regulations have requirements to address environmental and social impacts as part of site design and construction, such that development is in accordance with each jurisdiction's overall objectives. In addition, the agencies that would guide any development of a potential project would require typical mitigation measures. All development (public or private developers) must comply with FEMA flood control regulations and local floodplain administration guidance; the ESA; the MBTA: the CWA, including Section 401 Water Quality Certification requirements and Section 404 permits for projects affecting WOTUS; and other regulations requiring mitigation of effects on specific resources.

5.14.8 Build Alternative

The proposed project would result in substantial vegetation clearing due to the length and location of the alignment through undeveloped areas dominated by open agricultural lands, wooded areas, grasslands, and floodplains. Land clearing, stormwater management, and erosion control BMPs would be implemented before and during construction with the incorporation of permanent BMPs given consideration as part of the final design to manage roadway runoff. TPWD BMPs would be implemented before, during, and after construction to address the potential presence of protected species and their habitats. Clearing would be limited to smaller work areas and should be stabilized or restored as quickly as possible. The design of the proposed project, particularly through floodplain areas would avoid and minimize to the extent feasible and practicable floodplain encroachments. Vegetation clearing would be limited to that necessary for construction with seeding and revegetation plans developed according to TxDOT guidelines. Through context sensitive design solutions, consideration could be given to using

materials and features that would make the roadway and bridge components more compatible with the surrounding environment.

The Build Alternative could influence future land use changes within the AOI; however, new and planned residential developments are more likely to influence changes in land use patterns and induce growth and traffic within the AOI. The proposed project would support future development in the AOI; however, the proposed project would not be a primary factor in making land use decisions in the area. The proposed project is not anticipated to substantially induce growth when compared to the existing growth and development trends within the AOI; therefore, no mitigation for induced growth effects would be required.

Under the No Build Alternative, areas of induced growth would occur due to the amount of undeveloped land near the northern and southern areas of the AOI and the potential for redevelopment elsewhere across the AOI. Furthermore, under the No Build Alternative, there is potential for limited induced growth in the undeveloped areas within the floodplain; however, these would require costly reclamation of the floodplain and additional permitting for local, state, and federal agencies.

5.15 Construction Phase Impacts

During the construction phase of the proposed project, there is the potential for noise, dust, or light pollution; impacts associated with physical construction activity; temporary lane, road, or bridge closures (including detours); and other traffic disruptions. Under the Build Alternative, these potential impacts are discussed as follows:

5.15.1 Construction Noise

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 will be included in the plans and specifications that require the contractor to make every reasonable effort to minimize construction noise through abatement measures such as work-hour controls and proper maintenance of muffler systems.

5.15.2 Fugitive Dust and Air Pollution

As discussed in Section 5.11.6, temporary increases in PM and MSAT emissions may occur during the construction phase of the proposed project. These impacts would be minimized by using fugitive dust control measures, the encouragement of the use of TERP, and compliance with applicable regulatory requirements. Considering the temporary and transient nature of construction-related emissions, as well as the mitigation actions to be utilized, it is not anticipated that emissions from construction of this proposed project will have a significant impact on air quality in the area. Additional discussion on fugitive

dust and air emissions are included in Section 5.11.6 and in the Mobile Source Air Toxics Technical Report which is available for review at the TxDOT Dallas District office.

5.15.3 Light Pollution

Construction normally occurs during daylight hours; however, construction could occur during the night-time hours to minimize impacts to the traveling public during the daylight hours. Due to the close proximity of businesses and residents to the proposed project, if construction were to occur during the night-time hours, it would be of short duration. Construction during the night-time hours would follow any local policies and ordinances established for Light construction activities, such as light limitations.

5.15.4 Construction Vibration Impacts

Construction activities would be limited to the proposed project footprint. Vibration from construction equipment would be of short duration; however, excessive vibration from construction is not anticipated.

5.15.5 Temporary Lane, Road, or Bridge Closures (Including Detours)

During the construction phase, traffic would follow the existing traffic patterns. Traffic control plans would be prepared and implemented in coordination with Kaufman County. Construction that would require cross street closures would be scheduled so only one crossing in an area is affected at one time. If detours are required, clear and visible signage for an alternative route would be displayed. In the event that road closures or detours are required, county and local public safety officials would be notified of the proposed road closures or detours. Detour timing and necessary rerouting of emergency vehicles would be coordinated with the proper local agencies. Motorists would be inconvenienced during construction of the proposed project due to lane and cross-street closures; however, these closures would be of short duration and alternate routes would be provided.

Residents and businesses in the immediate construction area would be notified in advance of proposed construction activity using a variety of techniques, including signage, electronic media, community newspapers, and other techniques. The proposed project would not restrict access to any existing public or community services, businesses, commercial areas, or employment centers.

Under the No Build Alternative, construction would not occur and would not result in noise, dust, or light pollution; impacts associated with physical construction activity; temporary lane or road closures; and other traffic disruptions associated with construction.

5.16 Greenhouse Gas and Climate Change

For a discussion of on-road greenhouse gas (GHG) emissions analyses for Texas, assessment of future Texas climate scenarios or projections and how that might impact the on-road transportation system, and summary of TxDOT strategies and programs that result in GHG reduction and transportation system resiliency and preservation, please refer to TxDOT's Statewide On-Road Greenhouse Gas and Climate

Change Technical Report (https://www.txdot.gov/content/dam/docs/division/env/toolkit/725-01-rpt.pdf.)

6 Agency Coordination

This section identifies all coordination with agencies outside TxDOT that are required to be conducted for the Build Alternative. The list below identifies the agencies requiring coordination and the status of efforts to coordinate the proposed project.

- FEMA (see Section 5.9): Coordination with the FEMA administrator will be conducted prior to construction activities.
- SHPO (see Section 5.7): Coordination with the THC/SHPO regarding historic resources and archeological resources is complete. Coordination letters are included in **Appendix F**.
- TPWD (see Section 5.10): Collaborative review with the TPWD was initiated on March 21, 2025. Coordination with the TPWD is ongoing. 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," which is available on TxDOT's Natural Resources Toolkit at https://www.txdot.gov/inside-txdot/division/environmental/compliance-toolkits/natural-resources.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 BMPs prepared for the project, which is included in **Appendix F**. Freshwater Mussel BMPs, including survey/relocation of all live native mussels will be implemented prior to construction in compliance with USFWS-TPWD Protocol and in future coordination with TPWD. Per the TxDOT-TPWD MOU, TxDOT will provide TPWD with the final draft EA for review and comment. Any additional comments will be addressed per the MOU and included in the final EA.
- Tribal Coordination: Coordination documentation with federally recognized Native American tribes is available in **Appendix F**.
- TCEQ: Per the TxDOT-TCEQ MOU, TxDOT will provide TCEQ with the final draft EA for review and comment. Results of this coordination will be included in the final EA.
- USACE: Impacts to waters of the U.S. will be coordinated with the USACE, permits obtained, and mitigation accomplished, as appropriate.

7 Public Involvement

Kaufman County held an initial public meeting (in person and virtually) for the proposed project on Thursday, November 17, 2022. Public meeting notices were published in five newspapers. Four newspapers published the notice in English; *The Kauman Herald* on Thursday, November 3, 2022;

Terrell Tribune & The Update on Saturday, November 5, 2022, and Wednesday, November 9, 2022; *Rockwall County Herald Banner* on Thursday, November 3, 2022, and *Royce City Herald Banner* on Friday, November 4, 2022. The newspaper Al Dia published the Spanish version of the notice on Wednesday, November 9, 2022.

The legal notice was mailed to elected officials on Friday, October 28, 2022, and to adjacent landowners, public and private stakeholders, businesses, and home-owner associations on Monday, October 31, 2022. The notice was also sent via email to elected officials and various public and private stakeholders.

The in-person public meeting was held in an open house format at the First Baptist Church Terrell Recreation Outreach Center located at 100 W. Brin Street in Terrell, Texas. The virtual public meeting was available at https://www.kaufmanouterloop.com/public-open-house-materials-nov-2022.html from November 17, 2022 through December 10, 2022. The same materials were available at the in-person and virtual public meetings. In total, 181 members of the public attended the in-person meeting and there were 777 unique visits to the virtual public meeting web page. The video presentation received 130 views.

Reasonable Alternative 1 was eliminated for further consideration due to public comments about impacts to residential properties and impacts to the AirPark East airport, at the northern terminus as well as adverse impacts to the floodplain and water resources. Reasonable Alternative 3 was eliminated from further consideration due to impacts to the High Point Special Utility District's Water Pump Station 2, and the associated additional costs that would be incurred to relocate the water pump station.

A second public meeting was held (in person and virtually) for the proposed project on Thursday, June 6, 2024. Public meeting notices were published in five newspapers. Four newspapers published the notice in English; *The Kauman Herald* on Thursday, May 23, 2024; *Terrell Tribune* on Saturday, May 18, 2024; *Rockwall County Herald Banner* on Friday, May 24, 2024, and *Royce City Herald Banner* on Thursday, May 23, 2024. The newspaper Al Dia published the Spanish version of the notice on Wednesday, May 22, 2024.

The legal notice was mailed to elected officials on Thursday, May 16, 2024, and to adjacent landowners, public and private stakeholders, businesses, and home-owner associations on Saturday, May 18, 2024. The notice was also sent via email to elected officials and various public and private stakeholders.

The in-person public meeting was held in an open house format at the Kaufman Civic Center located at 607 E. Fair Street in Kaufman, Texas. The virtual public meeting was available at https://www.kaufmanouterloop.com/public-open-house-materials-june-2024.html from Thursday June 6, 2024 through Friday, June 21, 2024. The same materials were available at the in-person and virtual public meetings. In total, 98 members of the public attended the in-person meeting and there were 398 unique visits to the virtual public meeting web page.

Following the June 6, 2024 public meeting, and after further evaluation of Reasonable Build Alternatives 2 and 4 and consideration of public comments, TxDOT and Kaufman County decided to eliminate refined Reasonable Alternative 4 from further consideration due to increased adverse impacts on wetlands and floodplains. Reasonable Alternative 2 would have the least impacts to these water resources. Due to additional public comments and stakeholder feedback, Reasonable Alternative 2 was further refined by shifting the alignment to the west between I-20 and US 80, to allow for more developable land on the east side of the alignment. North of US 80, the alignment was shifted to avoid a potential residential displacement.

The NOA of the Draft EA will be published in both English and Spanish in various newspapers that serve the proposed project area, including a general circulation newspaper that is published at least six days a week for three consecutive weeks not less than one week or more than two weeks before the public hearing date. The notice will also be available online at www.txdot.gov and www.kaufmanouterloop.com.

A NOA of the Final EA will be issued, and the FONSI will not be signed until 30 days after the NOA of the Final EA. Because the proposed project involves construction of a highway on a new location, a notice of impending construction will 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 ROW, mailed notice, printed notice distributed by hand, or website. This notice will be provided after the environmental decision, but before earthmoving or other activities requiring the use of heavy equipment begin.

8 Post-Environmental Clearance Activities and Design/Construction Commitments

8.1 Post-Environmental Clearance Activities

Activities to be completed after environmental clearance are listed and discussed as follows:

- Utilities: Utility relocations would be required throughout the corridor. Utility agreements and notice to owners would be required for this proposed project prior to construction.
- Traffic Noise: Following the environmental clearance, a Notification of Noise letter will be sent to the Local Officials in the City of Terrell about traffic noise and its potential impacts on the communities adjacent to the proposed project.
- Section 404: The proposed project would require an NWP 14 with a PCN. The PCN will be obtained before construction. The proposed project would comply with all general conditions of the NWP. All mitigation banks with a service area covering the proposed project will be contacted and a quote will be requested for any required mitigation credits for this proposed project.
- Section 401: The Section 401 Certification requirements for NWP 14 would be met by implementing a SWP3. The SWP3 would include at least one BMP for erosion control, sediment

control, and post-construction Total Suspended Solids (TSS) control from the Tier 1 Section 401 Water Quality Certification Conditions for NWPs as published by the TCEQ.

- Section 402: The project contractor will comply with the CGP, SWP3, and complete the appropriate authorization documents.
- Wetlands: The project contractor will minimize impacts to wetlands during construction by keeping the construction footprint as small as possible while enabling construction that meets all requirements for the proposed project's implementation. BMPs would be implemented during construction.
- Floodplains: Notification and coordination with the local floodplain administrator is required because portions of the proposed project are within the 100-year floodplain. This coordination will be completed prior to the start of construction.
- Invasive Species: The project contractor is required to preserve native vegetation to the extent practical. The contractor must adhere to Construction Specification Requirements Specs 162, 164, 192, 193, 506, 730, 751, and 752 to comply with requirements for invasive species, beneficial landscaping, and tree/brush removal commitments.
- Migratory Birds: Before construction begins, the project contractor will use measures to prevent or discourage birds from building nests on man-made structures within portions of the proposed project area planned for construction; and schedule construction activities outside the typical nesting season.
- Threatened, Endangered, and Candidate Species: The following species are proposed for federal listing under the ESA: tricolored bat, alligator snapping turtle, and monarch butterfly. Should any of these species become listed during the lifecycle of the proposed project, the proposed project would require re-evaluation to determine if consultation with USFWS is necessary. BMPs would be implemented per the 2021 MOU for the proposed project. The full BMPs are included on the Documentation of Texas Parks and Wildlife Department BMP form included in **Appendix F**.
    - General Design and Construction BMP
    - Vegetation BMP
    - Stream Crossing BMP
    - Water Quality BMP
    - Dewatering BMP
    - Fish BMP
    - Insect Pollinator BMP
    - Freshwater Mussel BMP
    - Bird BMP

  - Bat BMP
  - Terrestrial Amphibian and Reptile BMP
  - Aquatic Amphibian and Reptile BMP
  - Rare Plant BMP
  - Invasive Species BMP

- Detours: County and local public safety officials would be notified of any road closures or detours during construction. Detour timing and necessary rerouting of emergency vehicles would be coordinated with the proper local agencies during construction.
- Air Quality: Implement fugitive dust control measures contained in standard specifications to minimize potential impacts of PM emissions during construction.
- Hazardous Materials for Building and Bridge/Bridge Class Culvert Demolition: Structures being demolished will need to be assessed and mitigated for asbestos and LCP. Asbestos and LCP inspections, notification, and removal, as applicable, would be addressed prior to demolition in accordance with regulatory requirements.
- Public Involvement: Before construction, a notice of impending construction will be provided to owners of adjoining property and affected local governments and public officials.

8.2 Design/Construction Commitments

- Archeological Resources: Thorough investigation of areas identified for high potential for intact archeological deposits not surveyed during these investigations because of the lack of ROE, shall be completed after ROW is purchased and before construction begins. If unanticipated archaeological deposits are encountered during construction, work in the immediate area will cease, and TxDOT archaeological staff will be contacted to initiate post-review discovery procedures.
- Wetlands: The construction contractor would be required to avoid and minimize unnecessary impacts on wetlands during construction.
- Construction (TPDES): Contractor shall comply with the CGP and SWP3. Complete, post and submit NOI and notice of termination (NOT) to TCEQ and the MS4 operator. Inspect the proposed project to ensure compliance with the CGP.
- Drinking Water Systems: If any unknown wells are encountered during construction activities, they would need to be properly plugged in accordance with state statutes.
- Hazardous Materials: The contractor would take appropriate measures to prevent, minimize, and control the spill of hazardous materials in the construction staging area. 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.

- Vegetation: 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.
- Migratory Birds: Take all appropriate actions to prevent the take of migratory birds, their active nests, eggs or young using proper phasing of the project or other appropriate actions. Refer to **Section 8.1** for applicable BMPs.
- Air Quality: The TERP provides financial incentives to reduce emissions from vehicles and equipment. TxDOT encourages construction contractors to fully use this and other local and federal incentive programs possible to minimize diesel emissions.
- Threatened, Endangered, and Candidate Species: As indicated in **Section 6.0**, the TPWD-recommended BMPs that will be applied to this project are indicated in the Documentation of Texas Parks and Wildlife Department BMP form prepared for the project, which is included in **Appendix F**. If any species on Kaufman County threatened and endangered species list is sighted in the project area during construction, construction would stop, and contractor would notify the TxDOT Area Engineer. Refer to **Section 8.1** for applicable BMPs.

9 Conclusion

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

10 References

Benn, R. (n.d.). *Guide to Assessment of Historic Roads in Texas.* Retrieved from https://ftp.txdot.gov/pub/txdot-info/env/toolkit/420-16-gui.pdf

Cowardin, L. M., Carter, V., Golet, F. C., & LaRoe, E. T. (1979). *Classification of wetlands and deepwater habitats of the United States.* U.S. Department of the Interior, Fish and Wildlife Service. Retrieved from http://www.npwrc.usgs.gov/resource/wetlands/classwet/index.htm

City of Forney *2022. Interactive Zoning Map.* https://forney.maps.arcgis.com/apps/webappviewer/index.html?id=9d3da3c587ed4b0c8ed468b018dcd499

City of Heath 2018. *Future Land Use Map (Heath-Future-Land-Use-Map-2018-11-21.pdf).* https://www.heathtx.com/DocumentCenter/View/1365/Heath-Future-Land-Use-Map-2018-11-21

City of Rockwall 2023. *City Limits, Extraterritorial Jurisdiction, Development Cases, and Zoning.* https://www.rockwall.com/gis

City of Talty 2007. *Land Use Map (Land_Use_Map35b1.pdf).* https://www.taltytexas.com/page/open/1730/0/Land_Use_Map35b1.pdf

City of Terrell 2017. *Future Land Use Map & Zoning Map.* https://terrell.maps.arcgis.com/apps/MapSeries/index.html?appid=6290c12eee144624b706ff5c12cfffc1

Environmental Protection Agency. (2024). *The Antecedent Precipitation Tool (APT).* Retrieved from https://www.epa.gov/wotus/antecedent-precipitation-tool-apt

Federal Emergency Management Agency. (2019). *Flood Insurance Rate Maps for Kaufman County.* Accessed August 2024.

Federal Emergency Management Agency 2012. *National Flood Hazard Layer (NFHL).* Found online at: https://msc.fema.gov/nfhl

Federal Highway Administration. (n.d.). *Auto Road maps from 1927, 1939.* Retrieved from https://www.fhwa.dot.gov/infrastructure/us80map1.cfm

Google Inc. (2024). *Google Earth (Version 7.3)* [Software].

Hart, B. (n.d.). *Kaufman County.* Retrieved from https://www.tshaonline.org/handbook/entries/kaufman-county

Hart, B. (n.d.). *Forney, TX.* Retrieved from https://www.tshaonline.org/handbook/entries/forney-tx

Kaufman County Appraisal District (KCAD) 2024. *BIS Consulting Web App.* https://gis.bisclient.com/kaufmancad/

Kaufman County 2025. *Map Kaufman: Neighborhoods, ETJ, and City Boundaries.* https://gis.kaufmancounty.net/portal/apps/webappviewer/index.html?id=da2d7bb2339b4c67bfe382fc24bb775a

Knight, L., & Knight & Associates. (n.d.). *A Guide to Research and Documentation of Local Texas Bridges.* Retrieved from https://ftp.txdot.gov/pub/txdot-info/env/toolkit/420-08-gui.pdf

Las Lomas Development 2011. *Las Lomas Development Site Plan.* Internal document.

Las Lomas South Development 2022. *Las Lomas South Development Site Plan.* Internal document.

Lichvar, R. W., Banks, D. L., Kirchner, W. N., & Melvin, N. C. (2020). *The National Wetland Plant List: 2020 wetland ratings.* Published in Federal Register November 02, 2021, 86 FR 60449.

McLendon-Chisholm 2021. *Future Land Use Plan (211031-Final-FLUP.pdf).* https://mclendon-chisholm.com/wp-content/uploads/2021/11/211031-Final-FLUP.pdf

Minor, D. (1996). Kaufman, Texas. In *The New Handbook of Texas* (Vol. 3, pp. 1221-1222). Texas State Historical Association.

Munsell® Soil Color Charts. (2022). *Munsell soil color charts: with genuine Munsell color chips.* Grand Rapids, MI: Munsell Color.

National Register Nomination Form. (1979). *Porter Farm.* Retrieved from https://catalog.archives.gov/OpaAPI/media/40970950/content/electronic-records/rg-079/NPS_TX/66000819_NHL.pdf

Northspur Development 2022. *Northspur Development Site Plan.* Internal document.

Perry-Castaneda Library Map Collection, The University of Texas at Austin. (n.d.). *USGS Topographic quad maps of the project area from 1954, 1956, 1958.* Retrieved from http://www.lib.utexas.edu/maps/topo/

Natural Resources Conservation Service (2018), United States Department of Agriculture. (n.d.). *Web Soil Survey.* Retrieved from http://websoilsurvey.nrcs.usda.gov/

Stoltz, J. (1996). Terrell, Texas. In *The New Handbook of Texas* (Vol. 6, pp. 1026-1027). Texas State Historical Association.

Town of Poetry 2024. *Zoning Map.* poetrytexas.org/_files/ugd/95337b_9486806588ae4056ac2b395a34db2a12.pdf

Texas Historical Commission. (n.d.). *Good Roads Movement.* Retrieved from https://www.thc.texas.gov/preserve/projects-and-programs/historic-texas-highways/researchingroads-roadside-architecture/20t-0

Texas Historical Commission. (n.d.). *The Development of Highways in Texas: A Historic Context of the*

Bankhead Highway and Other Historic Named Highways. Retrieved from https://www.thc.texas.gov/public/upload/preserve/survey/highway/Bankhead-history.pdf

Texas Department of Transportation. (n.d.). *Statewide Planning Map. Bridges.* Retrieved from https://www.txdot.gov/apps/statewide_mapping/StatewidePlanningMap.html

Texas Department of Transportation. (2021). *Guidance: TPWD coordination under the 2021 memorandum of understanding (300.02.GUI).* https://ftp.txdot.gov/pub/txdot-info/env/toolkit/300-02-gui.pdf

Texas Parks and Wildlife Department. (2016). *Ecological mapping systems of Texas: Descriptions of ecological systems* (Version 2.1). https://tpwd.texas.gov/landwater/land/programs/landscape-ecology/ems/emst/texasecologicalsystemsdescriptions_2016.pdf

Texas Department of Transportation. (2021). *Best management practices (BMPs) for storm water, sediment, and erosion control* (Publication No. 300.01.BMP). https://www.txdot.gov/content/dam/docs/division/env/toolkit/300-01-bmp.pdf

Weingroff, R. F. (n.d.). *U.S Route 80 The Dixie Overland Highway.* Retrieved from https://www.fhwa.dot.gov/infrastructure/us80.cfm

U.S. Department of Agriculture, Natural Resources Conservation Service. (2010). *Field Indicators of Hydric Soils in the United States, Version 7.0* (L.M. Vasilas, G.W. Hurt, & C.V. Noble, Eds.). USDA, NRCS, in cooperation with the National Technical Committee for Hydric Soils.

U.S. Department of Agriculture, Natural Resources Conservation Service. (2024). *State Soil Data Access Hydric Soil List.* Retrieved from https://www.nrcs.usda.gov/publications/query-by-state.html

U.S. Army Corps of Engineers. (n.d.). *Regulatory Guidance Letter: Ordinary High Water Mark Identification.* Retrieved from https://usace.contentdm.oclc.org/utils/getfile/collection/p16021coll9/id/1253

U.S. Army Corps of Engineers. (1987). *Corps of Engineers Wetland Delineation Manual* (Technical Report Y-87-1). Waterways Experiment Station, Vicksburg, MS.

U.S. Army Corps of Engineers. (2010). *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (Version 2.0)* (J.S. Wakeley, R.W. Lichvar, & C.V. Noble, Eds.). ERDC/EL TR-10-1. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

U.S. Army Corps of Engineers. (2023). *2022 National Wetland Plant List, version 3.6.* U.S. Army Engineer Research and Development Center, Vicksburg, MS. Retrieved from https://cwbi-app.sec.usace.army.mil/nwpl_static/v34/home/home.html

11 Appendices

Appendix A – Project Location Map

Appendix B – Project Photos

Appendix C – Schematics

Appendix D – Typical Sections

Appendix E – Resource-specific Maps

Appendix F – Resource Agency Coordination

Appendix G – Induced Growth Maps

Appendix H – Comment and Response Matrix from the Notice of Availability of Draft EA/Public Hearing or Notice of Availability of Draft EA/Opportunity for Public Hearing

APPENDIX A - PROJECT LOCATION MAP

Project Location

Kaufman County Outer Loop

CSJ: 0918-11-109

Proposed Right-Of-Way

Project Study Area

0 1

Miles

April 2025

Appendix A

APPENDIX B – PROJECT PHOTOS

Photo 1. View of residential property 9625 FM 148 southeast of W I-20 and northwest of N FM 148. Facing northwest towards W I-20. This photo was taken May 24, 2024.

Photo 2. View of residential property northwest of County Road 238 and south of W US Highway 80. Facing northwest towards W US Highway 80. This photo was taken May 24, 2024.

Photo 3. View of residential property 12238 CO Rd 238 west of CO Rd 238 and south of W US Hwy 80. Facing west parallel to US Hwy 80. This photo was taken May 24, 2024.

Photo 4. View of commercial property 6070 W Hwy 80 north of W Hwy 80, taken facing northeast. This site was a former Texaco gas station (see Photo 18). This photo was taken May 24, 2024.

Photo 5. View of commercial property 6068 W Hwy 80, north of W Hwy 80. Facing northwest. This photo was taken May 24, 2024.

Photo 6. View of property behind (north of) 6086 W Hwy 80, facing northeast. This photo was taken May 24, 2024.

Photo 7. View of residential property 7858 CO Rd 239, north of W Hwy 80 and southwest of CO Rd 239. Facing southwest. This photo was taken May 24, 2024.

Photo 8. View of residential property 6701 Samuels Rd, southwest of Samuels Rd and northwest of FM 1392. This site is a PST site. This photo was taken May 24, 2024.

Photo 9. View of residential property, also 6701 Samuels Rd southwest of Samuels Rd and northwest of FM 1392. This site is a PST site. This photo was taken May 24, 2024.

Photo 10. View of residential property 6424 Samuels Rd, northeast of Samuels Rd and northwest of FM 1392. This photo was taken May 24, 2024.

Photo 11. View residential property 14357 FM Rd 1392, northeast of Samuels Rd and northwest of FM 1392. On the corner of the intersecting roads. Facing north. This photo was taken May 24, 2024.

Photo 12. This photo shows a dump site (SS1), with tires, wood debris, and scrap metal. Rusted and empty 55- gallon drums were also present in the pile. This site is located within the proposed ROW at KCOL NBFR STA 608+75.

Photo 13. A tote and scrap metal (SS2) were observed on the 7858 CR 239 property (see Photo 7) but are outside the PROW. Portions of the site are within the proposed ROW along CR 239 between STA 6+00 to STA 9+00.

Photo 14. A destroyed RV (SS3) observed at a property along CR 239 (32.74978, -96.35840). The vehicle had signs of fire damage and the engine still intact. This site is located adjacent to the proposed ROW at KCOL NBFR at STA 417+00.

Photo 15. Remnants of an RV (SS3) were observed on a property along CR 239 (32.74978, -96.35840). This site is located adjacent to the proposed ROW at KCOL NBFR at approximately STA 417+00 .

Photo 16. A house with a potential used car junkyard (SS4) was observed at a property along CR 238 (32.72603, -96.36440). Scrap metal and tires were visible in the yard. This site is located adjacent east of CR 238 improvements.

Photo 17. Photograph of the potential used car junkyard and tractor (SS4) at a property along CR 238 (32.72603, -96.36440). This site is located adjacent east of CR 238 improvements.

Photo 18. Photograph of the abandoned BBQ restaurant at 6070 W US 80 (see Photo 4) formerly a Texaco Service Station. This site is located within proposed ROW at KCOL NBFR STA 383+00 to 385+00. This site is considered a low environmental risk.

Photo 19. Photograph of rubble and wood debris behind the BBQ restaurant. No evidence of hazardous materials or spills was observed.

Photo 20. Trans Pro Transmission, located at 5702 US-80, Terrell, TX 75160, between US80 WBFR STA 1159+00 to 1161+00, is adjacent to the existing US 80 ROW and frontage road improvements. Trans Pro Transmission operates as an active mechanic shop, with multiple vehicles present on and around the property. This site has no reported spills or releases.

Photo 21. Photograph of Wolf Trailers & Repairs, a trailer rental and repair shop (SS6) located at 5764 US 80. This site is located adjacent to the existing ROW and frontage road improvements at US 80 WBFR STA 1157+00.

Photo 22. Photograph of second building of a trailer rental (SS6) and repair shop at Wolf Trailers & Repairs.

Photo 23. Former J&M Truck Sales and Highway 80 Service & Collision, located at 5878 US Hwy 80. This is currently a vacant building. This is not a regulatory site and is not a concern for the project. This site is located adjacent to existing ROW and frontage road improvements at US 80 WBFR STA 1154+00.

Photo 24. This photo represents vegetative communities Blackland Prairie: Disturbance or Tame Grassland and Native Invasive: Mesquite Shrubland. 32.7983394, -96.3515420

Photo 25. This photograph shows existing ROW and overflow from a pond. Notice the amount of water due to a heavy rain event. Photo facing southeast. 32.7975751, -96.3600624

Photo 26. This photograph shows a wetland fringe on a pond within the project area. Photo facing south. 32.7940160, -96.3563548

Photo 27. The photograph shows an ephemeral stream that runs through a cotton field acting as drainage. Water due to recent rain. Photo facing northwest. 32.7919098, -96.3549580

Photo 28. This photo represents an upland pond and surrounding fields. Photo facing north. 32.7806279, -96.3605204

Photo 29. This photo shows intermittent stream, Little High Point Creek, which flows from northeast to southwest in the project area. This stream has tributaries and swales that flow into it. Photo facing southwest. 32.7804913, -96.3580925

Photo 30. This photograph shows an emergent wetland within a transmission line ROW in the project area. The photo is facing northeast at coordinates. 32.7811806, -96.3562126

Photo 31. This photo shows a culvert leading to an emergent wetland, with water present due to a recent heavy rain event. The photo is facing south. 32.7809783, -96.3578676

Photo 32. This photo shows riparian habitat abutting Terry Creek. Trees visible include American elm, sugar hackberry, boxelder, cedar elm, and green ash. The photo is facing southeast. 32.7000976, -96.3578479

Photo 33. This photograph shows an agricultural field. The photo is facing east. 32.7698036, -96.3561523.

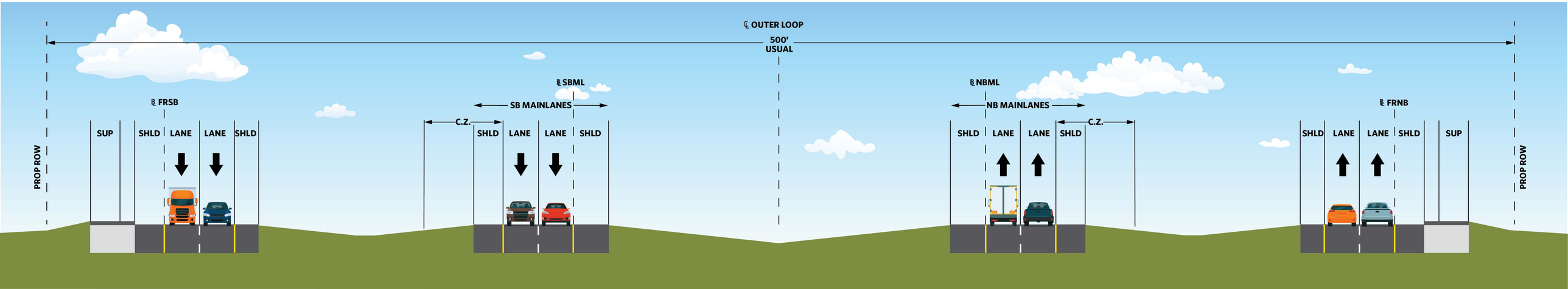
Photo 34. This photograph shows the perennial stream, Terry Creek, which flows from north to south through the project area. 32.7385383, -96.3513695

Photo 35. This photograph shows the perennial stream, Big Brushy Creek, which flows from north to south across the project area. The photo is facing north. 32.6993555, -96.3730363

Photo 36. This photograph shows an emergent wetland extending north out of the project area, surrounded by agricultural fields. The photo is facing north. 32.6994768, -96.3716104

APPENDIX C – TYPICAL SECTIONS

Typical Section



APPENDIX D – SCHEMATIC LAYOUT

KAUFMAN COUNTY OUTER LOOP

Texas Department of Transportation

KAUFMAN COUNTY OUTER LOOP
90% SCHEMATIC

TOTAL LENGTH OF PROJECT = 30.000 MILES
TXDOT ROAD INVENTORY
BEGIN CONTROL SECTION JOB (RIGHT TURN ONLY) 0000-00-000
BEGIN CONTROL SECTION JOB (R LNE)

FUNCTIONAL CLASS: PRINCIPAL ARTERIAL (OTHER FREEWAYS AND EXPRESSWAYS)
TERRAIN: LEVEL

DATE	STATE	DISTRICT	COUNTY	CITY	SHEET NO.	SHEET NO.
11/15/2021	TX	DAL	KAUFMAN	GRUV	11	109

	FUNCTIONAL CLASSIFICATION	%
Planning	Outer Loop	100%
	Urban Freeway	70.98%
	Urban Principal Arterial	29.02%
Frontage Roads	Urban Principal Arterial	100%
	Urban Collector	100%
Direct Connectors	Urban Principal Arterial	100%
Cross Streets	Urban Principal Arterial	42.98%
	Urban Collector	42.98%
	Local Street	42.98%
	Local Street	42.98%
	Local Street

KAUFMAN COUNTY OUTER LOOP

Texas Department of Transportation

KAUFMAN COUNTY OUTER LOOP
90% SCHEMATIC

FROM STATION 0+00
TO STATION 1000+00
TEXAS CONTROL SECTION JOB
(TCSJOB) 0918-00-XXX
FRONTAGE ROADS NOT USED

FUNCTIONAL CLASS: PRINCIPAL ARTERIAL (OTHER FREEWAYS AND EXPRESSWAYS)
TERRAIN: LEVEL

DATE	STATE	DISTRICT	COUNTY	CITY	SHEET NO.	SHEET TOTAL
11/15/2025	TX	DAL	KAUFMAN	GRUE	1/1	1/30

	ALIGNMENT	FUNCTIONAL CLASSIFICATION	DESIGN SPEED
Mainlanes	Outer Loop	Urban Freeway	70 MPH
	Inner Loop	Urban Freeway	70 MPH
Frontage Roads	US 80	Urban Principal Arterial	45 MPH
	SH 205	Urban Principal Arterial	45 MPH
	US 80	Urban Minor Collector	30 MPH
	SH 205	Urban Minor Collector	30 MPH
Cross Streets (Overpass)	Kings Row	Urban Principal Arterial	45 MPH
	Kaufman Street	Local Street	30 MPH
	Kemp Road	Local Street	30 MPH
	Future Arterial	Local Street	45 MPH
	Future Arterial	Local Street	45 MPH
Cross Streets (Underpass)	Kings Row	Urban Principal Arterial	45 MPH
	Kaufman Street	Local Street	30 MPH
	Kemp Road	Local Street	30 MPH
	Future Arterial	Local Street	45 MPH
	Future Arterial	Local Street	45 MPH

SHEET NO.	SHEET TITLE
1	COVER SHEET
2	GENERAL NOTES
3	TYPICAL SECTIONS
4	TYPICAL SECTIONS
5	TYPICAL SECTIONS
6	TYPICAL SECTIONS
7	TYPICAL SECTIONS
8	TYPICAL SECTIONS
9	TYPICAL SECTIONS
10	TYPICAL SECTIONS
11	TYPICAL SECTIONS
12	TYPICAL SECTIONS
13	TYPICAL SECTIONS
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25	TYPICAL SECTIONS
26	TYPICAL SECTIONS
27	TYPICAL SECTIONS
28	TYPICAL SECTIONS
29	TYPICAL SECTIONS
30	TYPICAL SECTIONS

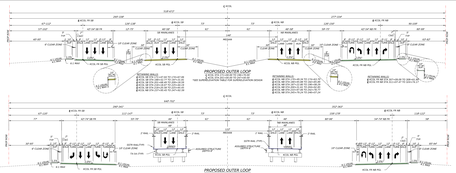
ROLL 1 OF 30

NAD 1983 STATE PLANE FIPS TEXAS NORTH 4202 FEET
SURFACE TO GRID FACTOR: 1.00013.4577

Guidelines for Geometric Design of Roadways
TXDOT ROADWAY DESIGN MANUAL

PRELIMINARY
THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW ONLY. NOT FOR CONSTRUCTION OR BIDDING PURPOSES.

HDR
Firm Registration No. F-754
11111 Preston Road, Suite 300
Dallas, Texas 75230
(214) 692-2400



GENERAL NOTES

1. EXISTING TOPOGRAPHY BASED ON FIELD SURVEY OBTAINED IN MAY 2025.
2. ALIGNMENT AND GRADE SHOWN ARE PRELIMINARY AND ARE SUBJECT TO REVISION FROM FUTURE PUBLIC INVOLVEMENT AND COORDINATION WITH THE TXDOT, KAUFMAN COUNTY, AND LOCAL CITIES.
3. ROADWAY DESIGN CRITERIA IS PER THE TXDOT ROADWAY DESIGN MANUAL (UNLESS NOTED OTHERWISE).
4. ROADWAY CROSS SECTIONS SHOWN ARE TYPICAL. ACTUAL CROSS SECTIONS MAY VARY BASED ON FINAL DESIGN.
5. ROADWAY CROSS SECTIONS SHOWN ARE SUBJECT TO CHANGE BASED ON FINAL DESIGN AND ENVIRONMENTAL CLEARANCE.
6. ROADWAY CROSS SECTIONS SHOWN ARE SUBJECT TO CHANGE BASED ON FINAL DESIGN AND ENVIRONMENTAL CLEARANCE.
7. EXISTING RIGHT OF WAY, UTILITIES, DRAINAGE FEATURES, AND OTHER EXISTING FEATURES ARE BASED ON FIELD SURVEY AND AVAILABLE RECORDS.
8. APPROXIMATE RIGHT OF WAY REQUIREMENTS ARE SHOWN ON THE PLAN AND PROFILE SHEETS.
9. ALL UTILITY CONFLICTS WILL BE RESOLVED BEFORE CONSTRUCTION.
10. ALL UTILITY RELOCATIONS WILL BE COORDINATED WITH THE UTILITY OWNERS.
11. ALL UTILITY RELOCATIONS WILL BE PERFORMED IN ACCORDANCE WITH TXDOT STANDARDS AND SPECIFICATIONS.
12. ALL UTILITY RELOCATIONS WILL BE PERFORMED IN ACCORDANCE WITH TXDOT STANDARDS AND SPECIFICATIONS.
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20. ALL UTILITY RELOCATIONS WILL BE PERFORMED IN ACCORDANCE WITH TXDOT STANDARDS AND SPECIFICATIONS.

LEGEND

EXISTING ROW
PROPOSED ROW
EXISTING EASEMENT
PROPOSED EASEMENT
PROPOSED RAMP
PROPOSED DIRECT CONNECTOR
PROPOSED OUTER LOOP
PROPOSED INNER LOOP
PROPOSED FRONTAGE ROADS
PROPOSED CROSS STREETS
PROPOSED DIRECT CONNECTOR RAMP
PROPOSED OVERPASS
PROPOSED UNDERPASS
PROPOSED BRIDGE
COMMERCIAL DEVELOPMENT
RESIDENTIAL DEVELOPMENT
POND (DETENTION)
CEMETERY
CONFINED ANIMAL FEEDING OPERATION
RAILROAD
RAILROAD SIDING
RAILROAD YARD
CONTROL OF ACCESS
CONTROL OF ACCESS FOR RIGHT TURN ONLY
WATER
WATER (INTERMITTENT)
WETLANDS
WATER (SPRING)

UTILITY LEGEND

ELECTRIC
GAS
TELEPHONE
CABLE TV
FIBER OPTIC
WATER
SEWER
PIPELINE
ELECTRICAL TRANSFORMER BOX
ELECTRIC MANHOLE
ELECTRIC METER
GAS MARKER
GAS METER
MANHOLE
TELEPHONE MANHOLE
TELEPHONE PEDESTAL
TELEPHONE POLE
TELEPHONE POLE WITH TRANSFORMER
TELEPHONE POLE WITH GUY WIRE
TELEPHONE RISER
TELEPHONE VAULT
WATER MANHOLE
WATER METER
WATER VALVE
WATER WELL
SEWER MANHOLE
SEWER VENT
SEWER VENT WITH GUY WIRE

PROPERTY OWNER INFORMATION

PROP_OWNER_1	123 MAIN STREET
PROP_OWNER_2	456 OAK AVENUE
PROP_OWNER_3	789 ELM DRIVE
PROP_OWNER_4	101 PINE COURT
PROP_OWNER_5	202 MAPLE LANE

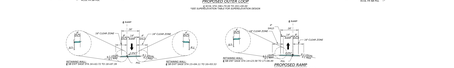
TURN BAY TABLE

Location	Type	Storage (ft)	Taper (ft)	Total (ft)
1	EB	150	50	200
2	WB	150	50	200
3	EB	200	50	250
4	WB	200	50	250
5	EB	150	50	200
6	WB	150	50	200

TURN BAY DETAIL
STORAGE LENGTH
TAPER LENGTH

INTERSECTION

NOTE: SEE TURN BAY LENGTH TABLE FOR STORAGE, TAPER, AND TOTAL LENGTHS



TRAFFIC DIAGRAM

LEGEND
XXX OUTER LOOP TRAFFIC VOLUME
XXX OUTER LOOP TRAFFIC VOLUME NEXT EXIT

Source of OUTER LOOP traffic is Rough Draft and approved by TxDOT on 01/xx/2025

CURVE DATA

ALIGNMENT	CURVE NAME	DELTA	DEGREE	RADIUS	LENGTH	TANGENT	PC STATION	PT STATION	PT NORTHING	PT EASTING
KCOL_EB	KCOL_HRZ_1	12°34'15.44"	4°27'33.00"	1285.92	282.17	141.72	1+97+58.28	2+04+40.45	2034+27.57	2612774.40
	KCOL_HRZ_2	12°34'15.44"	4°27'33.00"	1285.92	282.17	141.72	2+04+40.45	2+12+22.62	2033+79.14	2612744.40
	KCOL_HRZ_3	12°34'15.44"	4°27'33.00"	1285.92	282.17	141.72	2+12+22.62	2+20+04.79	2033+30.71	2612714.40
KCOL_PC_EB	KCOL_PC_EB_1	27°48'47.47"	8°27'33.00"	677.68	328.92	167.72	1+97+58.28	2+26+87.20	2033+30.71	2612714.40
	KCOL_PC_EB_2	27°48'47.47"	8°27'33.00"	677.68	328.92	167.72	2+26+87.20	3+25+76.12	2031+61.57	2612612.12
	KCOL_PC_EB_3	27°48'47.47"	8°27'33.00"	677.68	328.92	167.72	3+25+76.12	4+24+65.04	2029+92.43	2612509.84
KCOL_PC_EB	KCOL_PC_EB_4	27°48'47.47"	8°27'33.00"	677.68	328.92	167.72	4+24+65.04	5+23+53.96	2028+23.29	2612407.56
	KCOL_PC_EB_5	27°48'47.47"	8°27'33.00"	677.68	328.92	167.72	5+23+53.96	6+22+42.88	2026+54.15	2612305.28
	KCOL_PC_EB_6	27°48'47.47"	8°27'33.00"	677.68	328.92	167.72	6+22+42.88	7+21+31.80	2025+01.01	2612203.00

ALIGNMENT	CURVE NAME	DELTA	DEGREE	RADIUS	LENGTH	TANGENT	PC STATION	PT STATION	PT NORTHING	PT EASTING
WB_MAINLANE	WB_MAINLANE_CURVE_1	12°34'15.44"	4°27'33.00"	1285.92	282.17	141.72	1+97+58.28	2+04+40.45	2034+27.57	2612774.40
	WB_MAINLANE_CURVE_2	12°34'15.44"	4°27'33.00"	1285.92	282.17	141.72	2+04+40.45	2+12+22.62	2033+79.14	2612744.40
	WB_MAINLANE_CURVE_3	12°34'15.44"	4°27'33.00"	1285.92	282.17	141.72	2+12+22.62	2+20+04.79	2033+30.71	2612714.40

ALIGNMENT	CURVE NAME	DELTA	DEGREE	RADIUS	LENGTH	TANGENT	PC STATION	PT STATION	PT NORTHING	PT EASTING
WB_MAINLANE	WB_MAINLANE_CURVE_4	12°34'15.44"	4°27'33.00"	1285.92	282.17	141.72	3+25+76.12	3+33+58.29	2031+61.57	2612612.12
	WB_MAINLANE_CURVE_5	12°34'15.44"	4°27'33.00"	1285.92	282.17	141.72	3+33+58.29	3+41+40.45	2031+13.14	2612582.12
	WB_MAINLANE_CURVE_6	12°34'15.44"	4°27'33.00"	1285.92	282.17	141.72	3+41+40.45	3+49+22.62	2030+64.71	2612552.12

ALIGNMENT	CURVE NAME	DELTA	DEGREE	RADIUS	LENGTH	TANGENT	PC STATION	PT STATION	PT NORTHING	PT EASTING
RAMP	RAMP_CURVE_1	90°00'00.00"	8°27'33.00"	677.68	1064.00	677.68	1+97+58.28	3+61+58.28	2029+30.43	2612492.40
	RAMP_CURVE_2	90°00'00.00"	8°27'33.00"	677.68	1064.00	677.68	3+61+58.28	5+25+58.28	2027+96.15	2612372.40
	RAMP_CURVE_3	90°00'00.00"	8°27'33.00"	677.68	1064.00	677.68	5+25+58.28	6+89+58.28	2026+61.87	2612252.40

ALIGNMENT	CURVE NAME	DELTA	DEGREE	RADIUS	LENGTH	TANGENT	PC STATION	PT STATION	PT NORTHING	PT EASTING
DIRECT_CONNECTOR	DIRECT_CONNECTOR_1	90°00'00.00"	8°27'33.00"	677.68	1064.00	677.68	1+97+58.28	3+61+58.28	2029+30.43	2612492.40
	DIRECT_CONNECTOR_2	90°00'00.00"	8°27'33.00"	677.68	1064.00	677.68	3+61+58.28	5+25+58.28	2027+96.15	2612372.40
	DIRECT_CONNECTOR_3	90°00'00.00"	8°27'33.00"	677.68	1064.00	677.68	5+25+58.28	6+89+58.28	2026+61.87	2612252.40

ALIGNMENT	CURVE NAME	DELTA	DEGREE	RADIUS	LENGTH	TANGENT	PC STATION	PT STATION	PT NORTHING	PT EASTING
FM1 1566	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	1+97+58.28	2+04+40.45	2034+27.57	2612774.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	2+04+40.45	2+12+22.62	2033+79.14	2612744.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	2+12+22.62	2+20+04.79	2033+30.71	2612714.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	2+20+04.79	2+27+87.20	2032+82.28	2612684.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	2+27+87.20	2+35+69.36	2032+33.85	2612654.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	2+35+69.36	2+43+51.52	2031+85.42	2612624.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	2+43+51.52	2+51+33.68	2031+36.99	2612594.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	2+51+33.68	2+59+15.84	2030+88.56	2612564.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	2+59+15.84	3+06+98.00	2030+40.13	2612534.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	3+06+98.00	3+14+80.16	2029+91.70	2612504.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	3+14+80.16	3+22+62.32	2029+43.27	2612474.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	3+22+62.32	3+30+44.48	2028+94.84	2612444.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	3+30+44.48	3+38+26.64	2028+46.41	2612414.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	3+38+26.64	3+46+08.80	2027+97.98	2612384.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	3+46+08.80	3+53+90.96	2027+49.55	2612354.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	3+53+90.96	4+01+73.12	2027+01.12	2612324.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	4+01+73.12	4+09+55.28	2026+52.69	2612294.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	4+09+55.28	4+17+37.44	2026+04.26	2612264.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	4+17+37.44	4+25+19.60	2025+55.83	2612234.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	4+25+19.60	4+33+01.76	2025+07.40	2612204.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	4+33+01.76	4+40+83.92	2024+58.97	2612174.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	4+40+83.92	4+48+66.08	2024+10.54	2612144.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	4+48+66.08	4+56+48.24	2023+62.11	2612114.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	4+56+48.24	5+04+30.40	2023+13.68	2612084.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	5+04+30.40	5+12+12.56	2022+65.25	2612054.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	5+12+12.56	5+19+94.72	2022+16.82	2612024.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	5+19+94.72	5+27+76.88	2021+68.39	2611994.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	5+27+76.88	5+35+59.04	2021+19.96	2611964.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	5+35+59.04	5+43+41.20	2020+71.53	2611934.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	5+43+41.20	5+51+23.36	2020+23.10	2611904.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	5+51+23.36	5+59+05.52	2019+74.67	2611874.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	5+59+05.52	6+66+87.68	2019+26.24	2611844.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	6+66+87.68	6+74+69.84	2018+77.81	2611814.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	6+74+69.84	6+82+52.00	2018+29.38	2611784.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	6+82+52.00	6+90+34.16	2017+80.95	2611754.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	6+90+34.16	6+98+16.32	2017+32.52	2611724.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	6+98+16.32	7+05+98.48	2016+84.09	2611694.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	7+05+98.48	7+13+80.64	2016+35.66	2611664.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	7+13+80.64	7+21+62.80	2015+87.23	2611634.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	7+21+62.80	7+29+44.96	2015+38.80	2611604.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	7+29+44.96	7+37+27.12	2014+90.37	2611574.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	7+37+27.12	7+45+09.28	2014+41.94	2611544.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	7+45+09.28	7+52+91.44	2013+93.51	2611514.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	7+52+91.44	8+00+73.60	2013+45.08	2611484.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	8+00+73.60	8+08+55.76	2012+96.65	2611454.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	8+08+55.76	8+16+37.92	2012+48.22	2611424.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	8+16+37.92	8+24+20.08	2011+99.79	2611394.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	8+24+20.08	8+32+02.24	2011+51.36	2611364.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	8+32+02.24	8+39+84.40	2011+02.93	2611334.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	8+39+84.40	8+47+66.56	2010+54.50	2611304.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	8+47+66.56	8+55+48.72	2010+06.07	2611274.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	8+55+48.72	9+03+30.88	2009+57.64	2611244.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	9+03+30.88	9+11+13.04	2009+09.21	2611214.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	9+11+13.04	9+18+95.20	2008+60.78	2611184.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	9+18+95.20	9+26+77.36	2008+12.35	2611154.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	9+26+77.36	9+34+59.52	2007+63.92	2611124.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	9+34+59.52	9+42+41.68	2007+15.49	2611094.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	9+42+41.68	9+50+23.84	2006+67.06	2611064.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	9+50+23.84	9+58+06.00	2006+18.63	2611034.40		
	FM1566_ARRIVAL	7°41'57.84"	10°19'43.00"	554.96	9+58+06.00	10+00+00.00	2005+70.20	2611004.40		

SUPER DATA

CURVE NAME	STATION	CROSS SLOPE
KCOL_EB	1+97+58.28	-2.00%
	2+04+40.45	-2.00%
	2+12+22.62	-2.00%
	2+20+04.79	-2.00%
KCOL_EB	2+26+87.20	-2.00%
	2+34+69.36	-2.00%
	2+42+51.52	-2.00%
	2+50+33.68	-2.00%
KCOL_PC_EB	2+58+15.84	-2.00%
	2+65+98.00	-2.00%
	2+73+80.16	-2.00%
	2+81+62.32	-2.00%
	2+89+44.48	-2.00%
	2+97+26.64	-2.00%
KCOL_PC_EB	3+05+08.80	-2.00%
	3+12+90.96	-2.00%
	3+20+73.12	-2.00%
	3+28+55.28	-2.00%
	3+36+37.44	-2.00%
	3+44+19.60	-2.00%
KCOL_PC_EB	3+52+01.76	-2.00%
	3+59+83.92	-2.00%
	4+07+66.08	-2.00%
	4+15+48.24	-2.00%
	4+23+30.40	-2.00%
	4+31+12.56	-2.00%

CURVE NAME	STATION	CROSS SLOPE
	11+00+00	-2.00%
WB_MAINLANE	10+92+16	-2.00%
	10+84+32	-2.00%
	10+76+48	-2.00%
WB_MAINLANE	10+68+64	-2.00%
	10+60+80	-2.00%
	10+52+96	-2.00%
WB_MAINLANE	10+45+12	-2.00%
	10+37+28	-2.00%
	10+29+44	-2.00%
WB_MAINLANE	10+21+60	-2.00%
	10+13+76	-2.00%
	10+05+92	-2.00%
CURVE NAME	STATION	CROSS SLOPE
KCOL MAINLANE	10+00+00	-2.00%

KAUFMAN COUNTY OUTER LOOP

Texas Department of Transportation

KAUFMAN COUNTY OUTER LOOP
90% SCHEMATIC

FROM STATION 0+00
TO STATION 1000+00
TEXAS CONTROL SECTION JOB
(TCSJOB) 0918-00-XXX
FRONTAGE ROADS NOT USED

FUNCTIONAL CLASS: PRINCIPAL ARTERIAL (OTHER FREEWAYS AND EXPRESSWAYS)
TERRAIN: LEVEL

DATE	STATE	DISTRICT	COUNTY	CITY	SHEET NO.	SHEET TOTAL
11/15/2025	TX	DAL	KAUFMAN	GRUE	1/1	1/30

	ALIGNMENT	FUNCTIONAL CLASSIFICATION	DESIGN SPEED
Mainlanes	Outer Loop	Urban Freeway	70 MPH
	Inner Loop	Urban Freeway	70 MPH
Frontage Roads	US 80	Urban Principal Arterial	45 MPH
	SH 205	Urban Principal Arterial	45 MPH
	US 80	Urban Minor Collector	30 MPH
	SH 205	Urban Minor Collector	30 MPH
Cross Streets (Overpass)	Kings Row	Urban Principal Arterial	45 MPH
	Kaufman Street	Local Street	30 MPH
	Kemp Road	Local Street	30 MPH
	Future Arterial	Local Street	45 MPH
	Future Arterial	Local Street	45 MPH
Cross Streets (Underpass)	Kings Row	Urban Principal Arterial	45 MPH
	Kaufman Street	Local Street	30 MPH
	Kemp Road	Local Street	30 MPH
	Future Arterial	Local Street	45 MPH
	Future Arterial	Local Street	45 MPH

ROLL 1 OF 30

PROJECT LOCATION MAP
KAUFMAN COUNTY

PROJECT LENGTH 10.00 MILES
EXISTING ROW WIDTH VARIABLE WIDTH
NEW ROW REQUIRED
PROPOSED ROW WIDTH VARIABLE WIDTH

NAD 1983 STATE PLANE FIPS TEXAS NORTH 4202 FEET
SURFACE TO GRID FACTOR: 1.00013.4577

Guidelines for Geometric Design of Roadways
TXDOT ROADWAY DESIGN MANUAL

PRELIMINARY
THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW ONLY. NOT FOR CONSTRUCTION OR BIDDING PURPOSES.

HDR
Firm Registration No. F-754
11111 Preston Road, Suite 300
Dallas, Texas 75230
(214) 692-2400

KAUFMAN COUNTY OUTER LOOP

Texas Department of Transportation
DALLAS DISTRICT

KAUFMAN COUNTY OUTER LOOP
90% SCHEMATIC

CONTROLLING PT.
CONTROLLING PT. OF BEGIN
FRONT SKEW DISTANCE
PROJECT LIMITS BEGIN "A" LINE
PROJECT LIMITS END "A" LINE

FUNCTIONAL CLASS: PRINCIPAL ARTERIAL (OTHER FREEWAYS AND EXPRESSWAYS)
ULTIMATE (2045)

DATE	STATE	DISTRICT	COUNTY	CONTROL NO.	SHEET NO.
11/15/2020	TX	DAL	KAUFMAN	0918	13

		FUNCTIONAL CLASSIFICATION	RURAL	URBAN
Mainlanes	Outer Loop	Urban Freeway	75 MPH	70 MPH
	Inner Loop	Urban Freeway	75 MPH	70 MPH
Frontage Roads	NB FR	Urban/Major Collector	40 MPH	35 MPH
	SB FR	Urban/Major Collector	40 MPH	35 MPH
Direct Connectors		Urban/Principal Arterial	40 MPH	35 MPH

Cross Streets	SH205	Urban/Principal Arterial	45 MPH
	FM 2932	Urban/Major Collector	45 MPH
	FM 1392	Urban/Major Collector	45 MPH
	Future Arterial	Local Street	45 MPH
	Future Arterial	Local Street	45 MPH
	Future Arterial	Local Street	45 MPH
	Future Arterial	Local Street	45 MPH
Ramps			30 MPH

| | | |

KAUFMAN COUNTY | Texas Department of Transportation

KAUFMAN COUNTY OUTER LOOP
90% SCHEMATIC

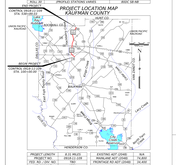
TOTAL LENGTH OF PROJECT = 7.5 MILES
TOTAL LENGTH OF ROADWAY ON EXISTING ROUTE = 0.0 MILES
TOTAL LENGTH OF ROADWAY ON NEW ALIGNMENT = 7.5 MILES
PROJECT BEGINS AT KCOL SB

FUNCTIONAL CLASS: PRINCIPAL ARTERIAL (OTHER FREEWAYS AND EXPRESSWAYS)
TERRAIN: LEVEL

DATE	DISTRICT	COUNTY	CONTROL SECTION JOB	SHEET NO.
11/15/2025	TX	DAL	KAUFMAN	0918	13	109

ROADWAY	FUNCTIONAL CLASSIFICATION	RURAL / URBAN
Divided Loop	Urban Freeway	75 MPH (U.S.)
Ramps	Urban Freeway	75 MPH (U.S.)
	Urban Principal Arterial	45 MPH (U.S.)
Frontage Roads	Urban Principal Arterial	45 MPH (U.S.)
	Urban Collector	30 MPH (U.S.)
Direct Connectors	Urban Principal Arterial	45 MPH (U.S.)
Cross Streets	Urban Principal Arterial	45 MPH (U.S.)
	Urban Minor Arterial	35 MPH (U.S.)
	Local Street	30 MPH (U.S.)
	Future Arterial	45 MPH (U.S.)
	Local Street	30 MPH (U.S.)
Y Streets	FM 1392	45 MPH (U.S.)
	Local Street	30 MPH (U.S.)

REV.	#	REGIONAL BRIDGE ID	BRIDGE ID	FACILITY CARRIED	FEATURE INTERSECTED	STRUCTURE TYPE
ROLL CO OP	1	PROPOSED STRUCTURE 1	256-0000-000-000	KCOL NB	FM 1392	CONCRETE SLAB
ROLL CO OP	2	PROPOSED STRUCTURE 2	256-0000-000-000	KCOL SB	FM 1392	CONCRETE SLAB
ROLL CO OP	3	PROPOSED STRUCTURE 3	256-0000-000-000	KCOL NB	FM 1392	CONCRETE SLAB
ROLL CO OP	4	PROPOSED STRUCTURE 4	256-0000-000-000	KCOL SB	FM 1392	CONCRETE SLAB
ROLL CO	1	PROPOSED STRUCTURE 1	256-0000-000-000	KCOL NB	FM 1392	CONCRETE SLAB
ROLL CO	2	PROPOSED STRUCTURE 2	256-0000-000-000	KCOL SB	FM 1392	CONCRETE SLAB
ROLL CO	3	PROPOSED STRUCTURE 3	256-0000-000-000	KCOL NB	FM 1392	CONCRETE SLAB
ROLL CO	4	PROPOSED STRUCTURE 4	256-0000-000-000	KCOL SB	FM 1392	CONCRETE SLAB


PROJECT LOCATION MAP
KAUFMAN COUNTY
KCOL NB
KCOL SB
FM 1392
FM 1641
FM 2932
FM 2578
FM 2757
FM 2578
FM 2757
FM 2578
FM 2757

KAUFMAN COUNTY OUTER LOOP | Texas Department of Transportation

KAUFMAN COUNTY OUTER LOOP
90% SCHEMATIC

TOTAL CONTROL #
CONTROL SECTION JOB
TXDOT DALLAS DISTRICT
KAUFMAN COUNTY
PROJECT LIMITS: FM 2932 TO SH 205

FUNCTIONAL CLASS: PRINCIPAL ARTERIAL OTHER FREEWAYS AND EXPRESSWAYS
TERRAIN: LEVEL

DATE	STATE	DISTRICT	COUNTY	CONT. SECT. JOB	HIGHWAY NO.
11/15/2025	TX	DAL	KAUFMAN	0918	1-5

	FACILITY	FUNCTIONAL CLASSIFICATION	DESIGN HOURLY VOLUME
Mainlanes	Outer Loop	Urban Freeway	10 MPH 6.0%
	Inner Loop	Urban Freeway	10 MPH 6.0%
Frontage Roads	US 80	Urban Principal Arterial	40 MPH 6.0%
	SH 205	Urban Principal Arterial	40 MPH 6.0%
Direct Connectors	Outer Loop to SH 205	Urban Principal Arterial	40 MPH 6.0%
	SH 205 to Outer Loop	Urban Principal Arterial	40 MPH 6.0%
	Outer Loop to US 80	Urban Principal Arterial	40 MPH 6.0%
	US 80 to Outer Loop	Urban Principal Arterial	40 MPH 6.0%
Cross Streets	FM 2932	Urban Principal Arterial	40 MPH 6.0%
	Lawhon Rd	Urban Principal Arterial	40 MPH 6.0%
	FM 1392	Urban Major Collector	40 MPH 6.0%
	Dawn Hill Drive	Local Street	30 MPH 6.0%
	Dawn Hill Place	Local Street	30 MPH 6.0%
	Future Arterial	Local Street	40 MPH 6.0%
	Future Arterial	Local Street	40 MPH 6.0%
	FM 148	Urban Major Collector	40 MPH 6.0%
	FM 148	Local Street	40 MPH 6.0%

REV.	#	PLANNING	BEGIN STA.	END STA.	DESCRIPTION
ROLL 1	1	PROPOSED	5+00.00	70+00.00	OUTER LOOP
ROLL 1	2	PROPOSED	5+00.00	70+00.00	OUTER LOOP
ROLL 1	3	PROPOSED	70+00.00	135+00.00	OUTER LOOP
ROLL 1	4	PROPOSED	70+00.00	135+00.00	OUTER LOOP
ROLL 1	5	PROPOSED	135+00.00	200+00.00	OUTER LOOP
ROLL 1	6	PROPOSED	135+00.00	200+00.00	OUTER LOOP
ROLL 1	7	PROPOSED	200+00.00	265+00.00	OUTER LOOP
ROLL 1	8	PROPOSED	200+00.00	265+00.00	OUTER LOOP
ROLL 1	9	PROPOSED	265+00.00	330+00.00	OUTER LOOP
ROLL 1	10	PROPOSED	265+00.00	330+00.00	OUTER LOOP

PROJECT LOCATION MAP
KAUFMAN COUNTY

PROJECT LENGTH	R.O.W. WIDTH	EXISTING ART. (D/UD)	NUM. OF STRUCTURES
SEE NO. OF SHEETS	SEE NO. OF SHEETS	SEE NO. OF SHEETS	SEE NO. OF SHEETS

HORIZONTAL: 1" = 100'
VERTICAL: 1" = 10'

NAD 1983 STATE PLANE FIPS TEXAS NORTH 4202 FEET
SURFACE TO GRID FACTOR: 1.000134777

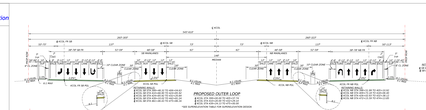
Southern Oaks Addition, Section Two, Lot 1 Block 1, Cabinet A, Slide 147, Plat Records, Kaufman County, Texas

PRELIMINARY
THIS SCHEME SHALL NOT BE USED FOR CONSTRUCTION OR BIDDING PURPOSES

Brad Coleman
12/19/2025
Texas Registered Engineer

ROLL 5 OF 30

HDR
FIRM Registration No. F-754
11111 Preston Road, Suite 300
Dallas, Texas 75230
(214) 692-2400



GENERAL NOTES

1. EXISTING TOPOGRAPHY BASED ON FIELD SURVEY OBTAINED IN MAY 2025.
2. ALL PROPOSED ROADWAY ELEVATIONS ARE TO FINISHED GRADE.
3. ROADWAY IMPROVEMENTS SHOWN FOR THE PROJECTS ARE BASED ON ADOPTED KAUFMAN COUNTY THOROUGHFARE PLAN.
4. PROPOSED OUTER LOOP IS A FREEWAY WITH TWO FRONTAGE ROADS. LOCATION OPTIMIZED.
5. PROPOSED RAMPS CONNECTING OUTER LOOP TO FRONTAGE ROADS AND SAMUELS RD.
6. PROPOSED SAMUELS RD IS A FOUR LANE DIVIDED ARTERIAL THROUGH THE PROJECT LIMITS.
7. PROPOSED SAMUELS RD WILL BE CONSTRUCTED WITH A 4-LANE DIVIDED SECTION WITH A 24' MEDIAN.
8. EXISTING SAMUELS RD WILL BE RECONSTRUCTED TO MATCH PROPOSED SAMUELS RD.
9. PROPOSED SAMUELS RD WILL BE CONSTRUCTED ON NEW ALIGNMENT FROM FM 2932 TO SH 205.
10. EXISTING SAMUELS RD WILL BE RECONSTRUCTED ON EXISTING ALIGNMENT FROM FM 2932 TO SH 205.
11. ALL PROPOSED ROADWAYS WILL BE CONSTRUCTED WITH CONCRETE PAVEMENT.
12. ALL PROPOSED RAMPS WILL BE CONSTRUCTED WITH CONCRETE PAVEMENT.
13. ALL PROPOSED FRONTAGE ROADS WILL BE CONSTRUCTED WITH CONCRETE PAVEMENT.
14. ALL PROPOSED DIRECT CONNECTORS WILL BE CONSTRUCTED WITH CONCRETE PAVEMENT.
15. ALL PROPOSED CROSS STREETS WILL BE CONSTRUCTED WITH CONCRETE PAVEMENT.
16. ALL PROPOSED SIDEWALKS WILL BE CONSTRUCTED WITH CONCRETE PAVEMENT.
17. ALL PROPOSED SHARED USE PATHS WILL BE CONSTRUCTED WITH CONCRETE PAVEMENT.
18. ALL PROPOSED DRIVEWAYS WILL BE CONSTRUCTED WITH CONCRETE PAVEMENT.
19. ALL PROPOSED MEDIANS WILL BE CONSTRUCTED WITH CONCRETE PAVEMENT.
20. ALL PROPOSED CURB RAMPS WILL BE CONSTRUCTED WITH CONCRETE PAVEMENT.
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UTILITY LEGEND

ATMOS ENERGY	220	ATMOS
AT&T DISTRIBUTION/FIBER	230	AT&T
AT&T TRANSMISSION	240	AT&T
CHARTER COMMUNICATIONS	250	CHARTER
PROPOSED ROW	260	PROPOSED
PROPOSED ROW	270	PROPOSED
PROPOSED EASEMENT	280	PROPOSED
PROPOSED EASEMENT	290	PROPOSED
ABBOTT/TOWN OF TOOL	300	ABBOTT
ABBOTT/TOWN OF TOOL	310	ABBOTT
PROPOSED FRONTAGE ROADS	320	PROPOSED
PROPOSED FRONTAGE ROADS	330	PROPOSED
PROPOSED DIRECT CONNECTORS	340	PROPOSED
PROPOSED DIRECT CONNECTORS	350	PROPOSED
PROPOSED SIGNALS AND FLOOD LIGHTS	360	PROPOSED
PROPOSED SIGNALS AND FLOOD LIGHTS	370	PROPOSED
CENTERLINE	380	CENTERLINE
CENTERLINE	390	CENTERLINE
CENTERLINE	400	CENTERLINE
CENTERLINE	410	CENTERLINE
CENTERLINE	420	CENTERLINE
CENTERLINE

KAUFMAN COUNTY OUTER LOOP

Texas Department of Transportation

KAUFMAN COUNTY OUTER LOOP
90% SCHEMATIC

TOTAL LENGTH OF PROJECT = 4.31 MILES
TIGHT SHIELD DISTANCE
EXTENDED SHIELD = 4.6 MILES
PROJECT LIMITS = 4.6 MILES

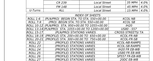
FUNCTIONAL CLASS: PRINCIPAL ARTERIAL, OTHER FREEWAYS AND EXPRESSWAYS
TERRAIN: LEVEL

DATE	STATE	DISTRICT	COUNTY	CONT	SEC	JOB
11/15/2021	TX	DAL	KAUFMAN	0918	53	119

	ROADWAY	FUNCTIONAL CLASSIFICATION	RURAL / URBAN
Mainlanes	Outer Loop	Urban Freeway	70 MPH (4.3%)
	Outer Loop	Urban Freeway	70 MPH (4.3%)
Frontage Roads	US 80	Urban/Major Collector	40 MPH (4.3%)
	US 80	Urban/Major Collector	40 MPH (4.3%)
Direct Connectors	Outer Loop to US 80	Urban/Principal Arterial	50 MPH (4.3%)
Cross Streets	SH 205	Urban/Principal Arterial	45 MPH (4.3%)
	FM 1390	Urban/Major Collector	40 MPH (4.3%)
	FM 1641	Urban/Major Collector	40 MPH (4.3%)
	Dean Kaufman Pkwy	Local Street	30 MPH (4.3%)
	Future Arterial	Local Street	40 MPH (4.3%)
	Future Arterial	Local Street	40 MPH (4.3%)
	FM 148	Urban/Major Collector	40 MPH (4.3%)
Ramps	All Ramps	Local Street	30 MPH (4.3%)

REV.	BY	REASON	BEGIN STA.	END STA.
ROLL 1	JDC	ROADWAY, BRIDGE, DRAINAGE	1000+00.00	1230+00.00
ROLL 1.5	JDC	ROADWAY, BRIDGE, DRAINAGE	1000+00.00	1230+00.00
ROLL 2.0	JDC	ROADWAY, BRIDGE, DRAINAGE	1000+00.00	1230+00.00
ROLL 2.5	JDC	ROADWAY, BRIDGE, DRAINAGE	1000+00.00	1230+00.00
ROLL 3.0	JDC	ROADWAY, BRIDGE, DRAINAGE	1000+00.00	1230+00.00
ROLL 4.0	JDC	PHOTO ESTIMATE	1000+00.00	1230+00.00
ROLL 5.0	JDC	PHOTO ESTIMATE	1000+00.00	1230+00.00
ROLL 6.0	JDC	PHOTO ESTIMATE	1000+00.00	1230+00.00
ROLL 7.0	JDC	PHOTO ESTIMATE	1000+00.00	1230+00.00
ROLL 8.0	JDC	PHOTO ESTIMATE	1000+00.00	1230+00.00

PROJECT LOCATION MAP
KAUFMAN COUNTY



HORIZONTAL SCALE: 1" = 1000'

PROJECT LENGTH	4.31 MILES	EXISTING ARC ZONE	N/A
DES. NO. / JOB NO.	0918-53-119	PROPOSED ARC ZONE	N/A
		PROJECTED ARC ZONE	N/A

NAD 1983 STATE PLANE FIPS TEXAS NORTH 4202 FEET
SURFACE TO GRID FACTOR: 1.000134577

COMBINED SCALE FACTOR = 1.000134577
THE GRID IS GEOGRAPHIC ID:

PRELIMINARY
USE NOTICE: 11-15-21 - 90% PS&E
NOT FOR CONSTRUCTION

Brad Coleman
12/15/2021

ROLL 6 OF 30

HDR
FIRM Registration No. F-754
17111 Preston Road, Suite 300
Dallas, Texas 75248
(214) 453-6400

PLOTTED BY: jcoleman

PROPOSED OUTER LOOP
8 SYS, W/12' INN AND OUT W/ 10' OUTS
12' LEFT SHOULDER, 10' RIGHT SHOULDER
*SEE SUPERELEVATION TABLE FOR SUPERELEVATION DESIGN

KAUFMAN COUNTY OUTER LOOP

Texas Department of Transportation

KAUFMAN COUNTY OUTER LOOP
90% SCHEMATIC

EXISTING CHANNEL AT
PROPOSED CHANNEL AT
TXDOT DALLAS DISTRICT
EXTENDED EQUIP 54"-108"
PROJECT LOCATION

FUNCTIONAL CLASS: PRINCIPAL ARTERIAL OTHER FREEWAYS AND EXPRESSWAYS
TERRAIN: LEVEL

DATE	STATE	DISTRICT	COUNTY	CONTROL SECTION JOB	SHT NO.	SHT TOT
11/15/2025	TX	DAL	KAUFMAN	0918	11	109

	ROADWAY	FUNCTIONAL CLASSIFICATION	DESIGN SPEED
Mainlanes	Outer Loop	Urban Freeway	70 MPH
	Inner Loop	Urban Freeway	70 MPH
Frontage Roads	NB WF	Urban/Major Collector	40 MPH
	SB WF	Urban/Major Collector	40 MPH
	NB EF	Urban/Major Collector	40 MPH
	SB EF	Urban/Major Collector	40 MPH
Direct Connectors	All	Urban/Principal Arterial	50 MPH
Cross Streets	SH205	Urban/Principal Arterial	45 MPH
	FM548 N	Urban/Major Collector	45 MPH
	FM 2932	Urban/Major Collector	45 MPH
	Future Arterial	Local Street	45 MPH
	Future Arterial	Local Street	45 MPH
	FM 148	Local Street	45 MPH
	FM 148	Local Street	45 MPH
Ramps	All	Local Street	30 MPH

INDEX OF SHEETS

NO.	TITLE
1	ROADWAY DESIGN CRITERIA, TYPICAL SECTIONS AND SUMMARY
2	ROADWAY DESIGN CRITERIA, TYPICAL SECTIONS AND SUMMARY
3	ROADWAY DESIGN CRITERIA, TYPICAL SECTIONS AND SUMMARY
4	PROJECT LAYOUT, ROADWAY DESIGN NOTES, TYPICAL SECTIONS
5	PROJECT LAYOUT, ROADWAY DESIGN NOTES, TYPICAL SECTIONS
6	PROJECT LAYOUT, ROADWAY DESIGN NOTES, TYPICAL SECTIONS
7	PROFILE SHEET
8	PROFILE SHEET
9	PROFILE SHEET
10	PROFILE SHEET
11	PROFILE SHEET
12	PROFILE SHEET
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28	PROFILE SHEET
29	PROFILE SHEET
30	PROFILE SHEET

PROJECT LOCATION MAP
KAUFMAN COUNTY

HENDERSON CO.

PROJECT LENGTH	8.21 MILES
EXISTING ROW WIDTH	VARIABLE
EXIST. NO. OF LANES	N/A
EXISTING ADT (2024)	N/A
PROPOSED ADT (2045)	74,000

NAD 1983 STATE PLANE FIPS TEXAS NORTH 4202 FEET
SURFACE TO GRID FACTOR: 1.00013.4577

COORDINATES ARE SHOWN ON THIS SHEET IN THE DIRECT SURFACE/GRID OF:

HORIZONTAL DATUM: NAD83
VERTICAL DATUM: NAVD88

PRELIMINARY
USE FOR DESIGN ONLY - NOT FOR CONSTRUCTION

ROAD CLASS
- FREEWAY
- FRONTAGE ROAD

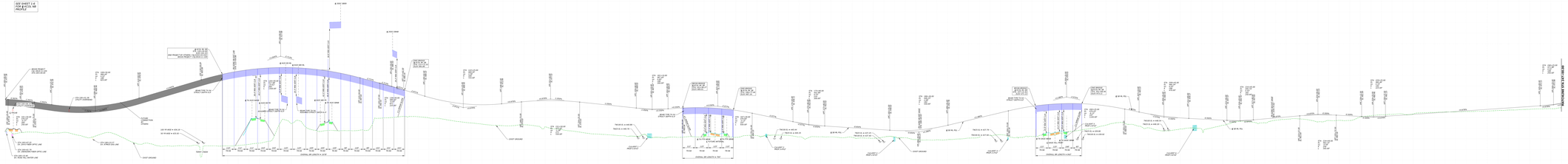
ROLL 7 OF 30

HDR
FIRM Registration No. F-754
11111 Pleasant Road, Suite 300
Dallas, Texas 75238
(214) 692-2400

NOTE: ALL UTILITY INFORMATION SHOWN IS APPROXIMATE AND FOR ILLUSTRATION ONLY.

SEE SHEET 2 FOR PLAN & PROFILE OF KAUFMAN CR 2932

KCOL ML ROAD SB (70 MPH)


BEGIN PROJECT STA 1015+00.00
END PROJECT STA 1433+00.00
KAUFMAN CR 2932
KAUFMAN CR 2932
KAUFMAN CR 2932

KAUFMAN COUNTY OUTER LOOP

Texas Department of Transportation

KAUFMAN COUNTY OUTER LOOP
90% SCHEMATIC

FROM FM 2578
TO FM 1389
FROM US 80
TO IH 20
(REGIONAL LOOP)

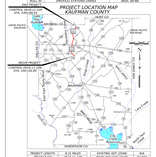
FUNCTIONAL CLASS: PRINCIPAL ARTERIAL OTHER FREEWAYS AND EXPRESSWAYS
TERRAIN: LEVEL

DATE	STATE	DISTRICT	COUNTY	CONTROL SECTION JOB	SHEET NO.	SHEET TOTAL
11/15/2025	TX	DAL	KAUFMAN	0918	11	109

	ROADWAY	FUNCTIONAL CLASSIFICATION	DESIGN SPEED
Mainlanes	Outer Loop	Urban Freeway	70 MPH (U)
	Inner Loop	Urban Freeway	70 MPH (U)
	US 80	Urban Principal Arterial	45 MPH (U)
Frontage Roads	US 80	Urban Principal Arterial	45 MPH (U)
	SH 205	Urban Principal Arterial	45 MPH (U)
	All WF	Urban/Rural Collector	40 MPH (U)
Direct Connectors	All WF	Urban/Principal Arterial	40 MPH (U)
Cross Streets	SH205	Urban/Principal Arterial	45 MPH (U)
	Crandall Rd	Urban/Major Collector	40 MPH (U)
	FM 1392	Urban/Major Collector	40 MPH (U)
	Dale Hill Pkwy	Local Street	30 MPH (U)
	Future Arterial	Local Street	30 MPH (U)
	Future Arterial	Local Street	30 MPH (U)
	FM 148	Urban/Major Collector	40 MPH (U)
	All Other	Local Street	30 MPH (U)

ROCC I.D.	ROADWAY - BEGIN LIMITS	LENGTH
ROCC 10	PROPOSED OUTER LOOP - BEGIN OF PROJECT	0.000 MILES
ROCC 20	PROPOSED OUTER LOOP - FM 2578	2.000 MILES
ROCC 30	PROPOSED OUTER LOOP - US 80	4.000 MILES
ROCC 40	PROPOSED OUTER LOOP - SH 205	2.000 MILES
ROCC 50	PROPOSED OUTER LOOP - FM 1392	2.000 MILES
ROCC 60	PROPOSED OUTER LOOP - FM 148	2.000 MILES
ROCC 70	PROPOSED OUTER LOOP - IH 20	2.000 MILES
ROCC 80	PROPOSED OUTER LOOP - END OF PROJECT	0.000 MILES

PROJECT LOCATION MAP
KAUFMAN COUNTY



PROJECT LENGTH	8.21 MILES	EXISTING ADT (2048)	N/A
EXIST. NO. LNS. (M)	N/A	PROJECTED ADT (2048)	24,000
EXIST. NO. LNS. (F)	N/A	PROJECTED ADT (2068)	34,000

NAD 1983 STATE PLANE FIPS TEXAS NORTH 4202 FEET
SURFACE TO GRID FACTOR: 1.000114577

COORDINATES ARE BASED ON THE COMBINED ADJUSTMENT OF THE CDOT2 SURVEYING NETWORK

LEGEND
- EXISTING ROW
- PROPOSED ROW
- EXISTING CENTERLINE
- PROPOSED CENTERLINE

PRELIMINARY
NOT FOR CONSTRUCTION, R.O.W., OR UTILITY PURPOSES

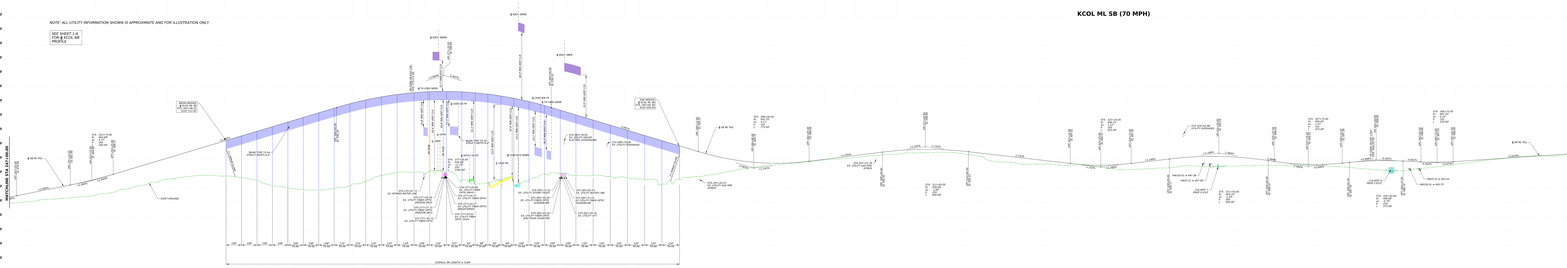
ROLL 8 OF 30

HDR
FIRM Registration No. F-754
11111 Pleasant Road, Suite 300
Dallas, Texas 75238-1232
(214) 692-2400

NOTE: ALL UTILITY INFORMATION SHOWN IS APPROXIMATE AND FOR ILLUSTRATION ONLY.

SEE SHEET 2 B FOR B_CON_NB PROFILE

KCOL ML SB (70 MPH)



KAUFMAN COUNTY OUTER LOOP

Texas Department of Transportation

KAUFMAN COUNTY OUTER LOOP
90% SCHEMATIC

FROM FM 2578
TO FM 1389
FROM US 80
TO IH 20
(REGIONAL LOOP)

FUNCTIONAL CLASS: PRINCIPAL ARTERIAL OTHER FREEWAYS AND EXPRESSWAYS
TERRAIN: LEVEL

DATE	STATE	DISTRICT	COUNTY	CONTROL SECTION JOB	SHEET NO.	SHEET TOTAL
11/15/2025	TX	DAL	KAUFMAN	0918	11	109

	ROADWAY	FUNCTIONAL CLASSIFICATION	DESIGN SPEED
Mainlanes	Outer Loop	Urban Freeway	70 MPH (U)
	Inner Loop	Urban Freeway	70 MPH (U)
	US 80	Urban Principal Arterial	45 MPH (U)
Frontage Roads	US 80	Urban Principal Arterial	45 MPH (U)
	SH 205	Urban Principal Arterial	45 MPH (U)
	All WF	Urban/Major Collector	40 MPH (U)
Direct Connectors	All WF	Urban/Principal Arterial	40 MPH (U)
Cross Streets	SH205	Urban/Principal Arterial	45 MPH (U)
	Crandall Rd	Urban/Major Collector	40 MPH (U)
	FM 1392	Urban/Major Collector	40 MPH (U)
	Dale Hill Pkwy	Local Street	30 MPH (U)
	Future Arterial	Local Street	30 MPH (U)
	Future Arterial	Local Street	30 MPH (U)
	FM 148	Urban/Major Collector	40 MPH (U)
	All Other	Local Street	30 MPH (U)

ROCC I.D.	ROADWAY - BEGIN LIMITS	LENGTH
ROCC 10	PROPOSED OUTER LOOP - BEGIN OF PROJECT	0.000 MILES
ROCC 20	PROPOSED OUTER LOOP - FM 2578	2.000 MILES
ROCC 30	PROPOSED OUTER LOOP - US 80	4.000 MILES
ROCC 40	PROPOSED OUTER LOOP - SH 205	2.000 MILES
ROCC 50	PROPOSED OUTER LOOP - FM 1392	2.000 MILES
ROCC 60	PROPOSED OUTER LOOP - FM 148	2.000 MILES
ROCC 70	PROPOSED OUTER LOOP - IH 20	2.000 MILES
ROCC 80	PROPOSED OUTER LOOP - END OF PROJECT	0.000 MILES

PROJECT LOCATION MAP
KAUFMAN COUNTY

PROJECT LENGTH	8.21 MILES	EXISTING ADT (2048)	N/A
EXIST. NO. LNS. (M)	N/A	PROJECTED ADT (2048)	24,000
EXIST. NO. LNS. (F)	N/A	PROJECTED ADT (2068)	34,000

NAD 1983 STATE PLANE FIPS TEXAS NORTH 4202 FEET
SURFACE TO GRID FACTOR: 1.000114577

COORDINATES ARE BASED ON THE COMBINED ADJUSTMENT OF THE CDOT2 SURVEYING NETWORK

PRELIMINARY
NOT FOR CONSTRUCTION, R.O.W., OR UTILITY PURPOSES

ROLL 8 OF 30

HDR
FIRM Registration No. F-754
11111 Pleasant Road, Suite 300
Dallas, Texas 75238-1232
(214) 692-2400

KAUFMAN COUNTY OUTER LOOP

Texas Department of Transportation

KAUFMAN COUNTY OUTER LOOP
90% SCHEMATIC

FROM FM 2578
TO IH 20
TEXAS DEPARTMENT OF TRANSPORTATION
KAUFMAN COUNTY, TEXAS
CSJ 0918-47-XXX
PROJECT DEVELOPMENT PLAN (PDP)

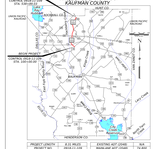
FUNCTIONAL CLASS: PRINCIPAL ARTERIAL OTHER FREEWAYS AND EXPRESSWAYS
TERMINAL LEVEL

DATE	STATE	DISTRICT	COUNTY	SHEET NO.	SHT NO.	SHT NO.
11/15/2025	TX	DAL	KAUFMAN	GEOT	11	109

ROADWAY		FUNCTIONAL CLASSIFICATION	DESIGN SPEED
Mainlanes	Outer Loop	Urban Freeway	70 MPH (U/R)
	Inner Loop	Urban Freeway	70 MPH (U/R)
Frontage Roads	WB SR	Urban/Major Collector	40 MPH (U/R)
	EB SR	Urban/Major Collector	40 MPH (U/R)
	WB FR	Urban/Major Collector	40 MPH (U/R)
	EB FR	Urban/Major Collector	40 MPH (U/R)
Direct Connectors	Direct Connectors	Urban/Principal Arterial	40 MPH (U/R)
Cross Streets	SH205	Urban/Principal Arterial	45 MPH (U/R)
	Crandall Rd	Urban/Major Collector	40 MPH (U/R)
	FM 1390	Urban/Major Collector	45 MPH (U/R)
	Kings Row	Local Street	30 MPH (U/R)
	Dale Hill Pkwy	Local Street	30 MPH (U/R)
	Future Arterial	Local Street	45 MPH (U/R)
	Future Arterial	Local Street	45 MPH (U/R)
	FM 148	Local Street	45 MPH (U/R)
Ramps	All Ramps	Local Street	30 MPH (U/R)

INDEX OF SHEETS	
REV / R - ROADWAY, BRIDGE & UTILITY	11
ROLL PLAN & PROFILE, STA. 5010+00.00 TO 5310+00.00	12
ROLL PLAN & PROFILE, STA. 5310+00.00 TO 5610+00.00	13
ROLL PLAN & PROFILE, STA. 5610+00.00 TO 5910+00.00	14
ROLL PLAN & PROFILE, STA. 5910+00.00 TO 6210+00.00	15
ROLL PLAN & PROFILE, STA. 6210+00.00 TO 6510+00.00	16
ROLL 01 - PAVING SYSTEMS (AMES)	17
ROLL 02 - PAVING SYSTEMS (AMES)	18
ROLL 03 - PAVING SYSTEMS (AMES)	19
ROLL 04 - PAVING SYSTEMS (AMES)	20
ROLL 05 - PAVING SYSTEMS (AMES)	21
ROLL 06 - PAVING SYSTEMS (AMES)	22
ROLL 07 - PAVING SYSTEMS (AMES)	23

PROJECT LOCATION MAP
KAUFMAN COUNTY


KAUFMAN COUNTY OUTER LOOP
SH 205
FM 1390
FM 148
Crandall
Kaufman
Terrell
Forney
Dallas
Rockwall
Collin
Hunt
Van Zandt
Henderson
Rains
Wood
Smith
Gregg
Rusk
Panola
Harrison
Upshur
Marion
Cass
Morris
Titus
Camp
Franklin
Delta
Hopkins
Lamar
Red River
Bowie
Fannin
Grayson
Cooke
Montague
Clay
Wichita
Archer
Baylor
Knox
Haskell
Throckmorton
Young
Jack
Wise
Denton
Parker
Tarrant
Johnson
Ellis
Hill
Navarro
Limestone
Freestone
Anderson
Cherokee
Houston
Trinity
Leon
Madison
Walker
Grimes
Montgomery
Harris
Liberty
Chambers
Galveston
Brazoria
Fort Bend
Waller
Austin
Colorado
Wharton
Matagorda
Jackson
Victoria
Calhoun
Refugio
Aransas
San Patricio
Nueces
Kleberg
Kenedy
Willacy
Cameron
Hidalgo
Starr
Zapata
Webb
Jim Hogg
Brooks
Duval
Jim Wells

KAUFMAN COUNTY OUTER LOOP

Texas Department of Transportation

KAUFMAN COUNTY OUTER LOOP
90% SCHEMATIC

TOTAL LENGTH OF PROJECT = 7.8 MILES
FRONT ENGLISH DISTANCE = 7.800 MILES
BACK ENGLISH DISTANCE = 0.000 MILES
PROJECT LENGTH = 7.800 MILES

FUNCTIONAL CLASS: PRINCIPAL ARTERIAL (OTHER FREEWAYS AND EXPRESSWAYS)
TERRAIN: LEVEL

DATE	STATE	DISTRICT	COUNTY	SHEET NO.	SHEET TOTAL
11/15/2025	TX	DAL	KAUFMAN	GRVZ	53	109

		FUNCTIONAL CLASSIFICATION	DESIGN SPEED
Mainlanes	Outer Loop	Urban Freeway	70 MPH
	Inner Loop	Urban Freeway	70 MPH
Frontage Roads	SH 205	Urban Principal Arterial	45 MPH
	US 80	Urban Principal Arterial	45 MPH
	FM 548	Urban Major Collector	40 MPH
Direct Connectors	Outer Loop to SH 205	Urban Principal Arterial	45 MPH
Cross Streets	SH 205	Urban Principal Arterial	45 MPH
	FM 1390	Urban Principal Arterial	45 MPH
	FM 1392	Urban Major Collector	40 MPH
	FM 2932	Urban Major Collector	40 MPH
	Open Ditch Road	Local Street	30 MPH
	Future Arterial	Local Street	30 MPH
	Future Arterial	Local Street	30 MPH
	FM 548	Urban Major Collector	40 MPH
U-Turns	FM 548	Local Street	30 MPH

REV.	#	INCARNO	BEGIN STA.	END STA.	LENGTH
ROG	1	ROG_SH205	1000+00.00	1010+00.00	1000.00
ROG	2	ROG_FM548	1010+00.00	1020+00.00	1000.00
ROG	3	ROG_FM1390	1020+00.00	1030+00.00	1000.00
ROG	4	ROG_FM1392	1030+00.00	1040+00.00	1000.00
ROG	5	ROG_FM2932	1040+00.00	1050+00.00	1000.00
ROG	6	PROFILE GRADE	1050+00.00	1060+00.00	1000.00
ROG	7	PROFILE GRADE	1060+00.00	1070+00.00	1000.00
ROG	8	PROFILE GRADE	1070+00.00	1080+00.00	1000.00
ROG	9	PROFILE GRADE	1080+00.00	1090+00.00	1000.00
ROG	10	PROFILE GRADE	1090+00.00	1100+00.00	1000.00

PROJECT LOCATION MAP
KAUFMAN COUNTY

PROJECT LENGTH	E.O. ROAD	EXISTING ADT (2024)	NUM. OF LANES
SEE TAB: 'ALL'	SEE TAB: 'ALL'	SEE TAB: 'ALL'	SEE TAB: 'ALL'

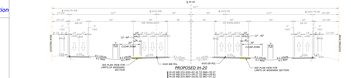
NAD 1983 STATE PLANE FIPS TEXAS NORTH 4202 FEET
SURFACE TO GRID FACTOR: 1.000118377

Questions or Comments?
THE CIVILITY GARDENER, PC

PRELIMINARY
USE WORK MODE: ALL - NOT FOR CONSTRUCTION PURPOSES

ROLL 10 OF 30

HDR
Firm Registration No. F-754
11111 Pleasant Road, Suite 300
Dallas, Texas 75238
(214) 692-2400


PROPOSED 2H-2D
PROPOSED 2H-2D
PROPOSED 2H-2D

KAUFMAN COUNTY OUTER LOOP

Texas Department of Transportation

KAUFMAN COUNTY OUTER LOOP
90% SCHEMATIC

TOSTRUP CHANNEL #1
TOSTRUP CHANNEL #2
TRINITY RIVER & DISTRICT
EXTENDED SCOPE OF LOE
PROJECT MANAGER

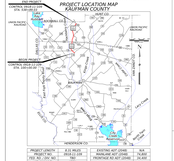
FUNCTIONAL CLASS, PRINCIPAL ARTERIAL, OTHER FREEWAYS AND EXPRESSWAYS
TERRAIN: LEVEL

DATE	STATE	DISTRICT	COUNTY	CSJ	CSJ
11/15/2025	TX	DAL	KAUFMAN	0918	119

	AGENCY	FUNCTIONAL CLASSIFICATION	RANGE
Mainlanes	TXDOT ONE	Urban Freeway	70 MPH - 80 MPH
	TXDOT ONE	Urban Freeway	70 MPH - 80 MPH
Frontage Roads	TXDOT ONE	Urban Principal Arterial	40 MPH - 45 MPH
	TXDOT ONE	Urban Principal Arterial	40 MPH - 45 MPH
Direct Connectors	TXDOT ONE	Urban Freeway	50 MPH - 70 MPH
	TXDOT ONE	Urban Freeway	50 MPH - 70 MPH
	TXDOT ONE	Urban Principal Arterial	40 MPH - 45 MPH
	TXDOT ONE	Urban Principal Arterial	40 MPH - 45 MPH
Cross Streets	SH 205	Urban/Principal Arterial	40 MPH - 45 MPH
	FM 548 RD	Urban/Major Collector	40 MPH - 45 MPH
	FM 1390	Urban/Major Collector	40 MPH - 45 MPH
	Dale Hill Pkwy	Local Street	30 MPH - 35 MPH
	Future Arterial	Local Street	30 MPH - 35 MPH
	Old Gate Rd	Local Street	30 MPH - 35 MPH
	FM 148	Local Street	30 MPH - 35 MPH
	Local Street	Local Street	30 MPH - 35 MPH

REV	BY	REMARKS	REVISED DATE	SUBMITTED DATE
ROLL 1	JC	INITIAL ROLL 1 SUBMITTAL	07/31/25	08/01/25
ROLL 1.5	JC	INITIAL ROLL 1.5 SUBMITTAL	09/30/25	10/01/25
ROLL 2	JC	PROJECT EXTENTS CHANGES	10/31/25	11/01/25
ROLL 2.5	JC	PROJECT EXTENTS CHANGES	11/14/25	11/15/25
ROLL 3		PROJECT EXTENTS CHANGES		12/01/25 TO BE ADD
ROLL 3.5		PROJECT EXTENTS CHANGES		12/31/25 TO BE ADD
ROLL 4		PROJECT EXTENTS CHANGES		01/30/26 TO BE ADD
ROLL 4.5		PROJECT EXTENTS CHANGES		02/27/26 TO BE ADD
ROLL 5		PROJECT EXTENTS CHANGES		03/27/26 TO BE ADD

PROJECT LOCATION MAP
KAUFMAN COUNTY



PROJECT LENGTH	# OF MILES	EXISTING ARC (ZONE)	NEW ARC (ZONE)
102,196.46	19.35	1,000,000 (TX NC)	TBD

HORIZONTAL DATUM

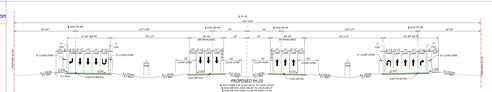
NAD 1983 STATE PLANE FIPS: TEXAS NORTH 4202 FEET
SURFACE TO GRID FACTOR: 1.000013577

COORDINATES SHOWN ON THIS SHEET ARE REFERENCED TO THE DIRECT SURFACE/GRID DC

PRELIMINARY
USE NOTICE: 90% PLS - NOT FOR CONSTRUCTION PURPOSES

ROLL 11 OF 30

HDR
Firm Registration No. F-754
1111 Precinct Road, Suite 300
Lewisville, Texas 75056
(972) 992-1660


PROPOSED IH-20
PROPOSED FRONTAGE ROAD
PROPOSED FRONTAGE ROAD
PROPOSED DIRECT CONNECTOR
PROPOSED DIRECT CONNECTOR
PROPOSED DIRECT CONNECTOR

KAUFMAN COUNTY OUTER LOOP

Texas Department of Transportation

KAUFMAN COUNTY OUTER LOOP
90% SCHEMATIC

EXISTING CHANNEL AT
CROSSING OF
TRINITY RIVER (NORTH)
EXISTING CHANNEL AT
CROSSING OF
TRINITY RIVER (SOUTH)

FUNCTIONAL CLASS: PRINCIPAL ARTERIAL OTHER FREEWAYS AND EXPRESSWAYS
TERMINAL LEVEL

DATE	STATE	DISTRICT	COUNTY	CONTROL SECTION JOB	SHEET NO.	SHEET TOTAL
11/15/2025	TX	DAL	KAUFMAN	0918	12	109

ROADWAY		FUNCTIONAL CLASSIFICATION	DESIGN SPEED
Mainlanes	Outer Loop	Urban Freeway	70 MPH (U)
	Inner Loop	Urban Freeway	70 MPH (U)
Frontage Roads	WB FR	Urban Principal Arterial	40 MPH (U)
	EB FR	Urban Principal Arterial	40 MPH (U)
Cross Streets (Selected)	SH 205	Urban Principal Arterial	45 MPH (U)
	Airport Rd	Urban Principal Arterial	45 MPH (U)
	FM 1390	Urban Principal Arterial	45 MPH (U)
	FM 2932	Urban Principal Arterial	45 MPH (U)
	Future Arterial	Urban Principal Arterial	45 MPH (U)
	Future Arterial	Local Street	45 MPH (U)
	Future Arterial	Local Street	45 MPH (U)
	FM 148	Urban Principal Arterial	45 MPH (U)
	Future Arterial	Local Street	45 MPH (U)

REV	C.S.	ROADWAY	BEGIN STA.	END STA.	DESIGN SPEED
ROLL C1		PROPOSED OUTER LOOP	1000+00.00	1050+00.00	70 MPH
ROLL C2		PROPOSED OUTER LOOP	1050+00.00	1100+00.00	70 MPH
ROLL C3		PROPOSED OUTER LOOP	1100+00.00	1150+00.00	70 MPH
ROLL C4		PROPOSED OUTER LOOP	1150+00.00	1200+00.00	70 MPH
ROLL C5		PROPOSED EXTEND UNRES	1200+00.00	1250+00.00	70 MPH
ROLL C6		PROPOSED EXTEND UNRES	1250+00.00	1300+00.00	70 MPH
ROLL C7		PROPOSED EXTEND UNRES	1300+00.00	1350+00.00	70 MPH
ROLL C8		PROPOSED EXTEND UNRES	1350+00.00	1400+00.00	70 MPH
ROLL C9		PROPOSED EXTEND UNRES	1400+00.00	1450+00.00	70 MPH
ROLL C10		PROPOSED EXTEND UNRES	1450+00.00	1500+00.00	70 MPH
ROLL C11		PROPOSED EXTEND UNRES	1500+00.00	1550+00.00	70 MPH
ROLL C12		PROPOSED EXTEND UNRES	1550+00.00	1600+00.00	70 MPH

PROJECT LOCATION MAP
KAUFMAN COUNTY

PROJECT LENGTH	8.21 MILES	EXISTING ADT (2048)	N/A
EXIST. NO. LNS.	0	PROPOSED NO. LNS.	4
EXIST. ROW	N/A	PROPOSED ADT (2048)	24,400

NAD 1983 STATE PLANE FIPS TEXAS NORTH 4202 FEET
SURFACE TO GRID FACTOR: 1.00013.4577

PRELIMINARY
NOT FOR BIDDING OR CONSTRUCTION
RELEASED FOR REVIEW ONLY

ROLL 12 OF 30

HDR
Engineering No. F-754
1111 Pleasant Road, Suite 300
Garland, Texas 75040
(972) 661-7400

IH20-ML-(70 MPH)

IH20-WB-(70 MPH)

MATCH PGSS WB
ALIGNMENT/PROFILE
℄ PGSS WB STA 1050+00.00
ELEVATION 561.58

BEGIN PROP RCFD
WB PROFILE
℄ PROP WB STA 1050+00.00
ELEVATION 548.68

SEE SHEET 55-57
FOR PROFILE

PGSS PROP RCFD
WB PROFILE
℄ PROP WB STA 1150+21.06
ELEVATION 559.55

MATCH PGSS WB
ALIGNMENT/PROFILE
℄ PROP WB STA 1150+38.00
ELEVATION 559.59

KAUFMAN COUNTY OUTER LOOP

Texas Department of Transportation

KAUFMAN COUNTY OUTER LOOP
90% SCHEMATIC

EXISTING CHANNEL AT
CROSSING OF
TRINITY RIVER (NORTH)
EXISTING CHANNEL AT
CROSSING OF
TRINITY RIVER (SOUTH)

FUNCTIONAL CLASS: PRINCIPAL ARTERIAL OTHER FREEWAYS AND EXPRESSWAYS
TERMINAL LEVEL

DATE	STATE	DISTRICT	COUNTY	CONTROL SECTION JOB	SHEET NO.	SHEET TOTAL
11/15/2025	TX	DAL	KAUFMAN	0918	12	109

ROADWAY		FUNCTIONAL CLASSIFICATION	DESIGN SPEED
Mainlanes	Outer Loop	Urban Freeway	70 MPH (U)
	Inner Loop	Urban Freeway	70 MPH (U)
Frontage Roads	WB FR	Urban Principal Arterial	40 MPH (U)
	EB FR	Urban Principal Arterial	40 MPH (U)
Cross Streets (Selected)	SH 205	Urban Principal Arterial	45 MPH (U)
	Airport Rd	Urban Principal Arterial	45 MPH (U)
	FM 1390	Urban Principal Arterial	45 MPH (U)
	FM 2932	Urban Principal Arterial	45 MPH (U)
	Future Arterial	Local Street	45 MPH (U)
	Future Arterial	Local Street	45 MPH (U)
	Future Arterial	Local Street	45 MPH (U)
	FM 148	Urban Principal Arterial	45 MPH (U)
	Future Arterial	Local Street	45 MPH (U)

REV	C.S.	ROADWAY	BEGIN STA.	END STA.	DESIGN SPEED
ROLL C1		PROPOSED OUTER LOOP	1000+00.00	1050+00.00	70 MPH
ROLL C2		PROPOSED OUTER LOOP	1050+00.00	1100+00.00	70 MPH
ROLL C3		PROPOSED OUTER LOOP	1100+00.00	1150+00.00	70 MPH
ROLL C4		PROPOSED OUTER LOOP	1150+00.00	1200+00.00	70 MPH
ROLL C5		PROPOSED EXTEND UNRES	1200+00.00	1250+00.00	70 MPH
ROLL C6		PROPOSED EXTEND UNRES	1250+00.00	1300+00.00	70 MPH
ROLL C7		PROPOSED EXTEND UNRES	1300+00.00	1350+00.00	70 MPH
ROLL C8		PROPOSED EXTEND UNRES	1350+00.00	1400+00.00	70 MPH
ROLL C9		PROPOSED EXTEND UNRES	1400+00.00	1450+00.00	70 MPH
ROLL C10		PROPOSED EXTEND UNRES	1450+00.00	1500+00.00	70 MPH
ROLL C11		PROPOSED EXTEND UNRES	1500+00.00	1550+00.00	70 MPH
ROLL C12		PROPOSED EXTEND UNRES	1550+00.00	1600+00.00	70 MPH

PROJECT LOCATION MAP
KAUFMAN COUNTY

PROJECT LENGTH	8.21 MILES	EXISTING ADT (2048)	N/A
EXIST. NO. LNS.	0	PROPOSED NO. LNS.	4
EXIST. ROW	N/A	PROPOSED ADT (2048)	24,400

NAD 1983 STATE PLANE FIPS TEXAS NORTH 4202 FEET
SURFACE TO GRID FACTOR: 1.00013.4577

PRELIMINARY
NOT FOR BIDDING OR CONSTRUCTION
RELEASED FOR REVIEW ONLY

ROLL 12 OF 30

HDR
Engineering No. F-754
1111 Pleasant Road, Suite 300
Garland, Texas 75040
(972) 661-7400

KAUFMAN COUNTY OUTER LOOP

Texas Department of Transportation

KAUFMAN COUNTY OUTER LOOP
90% SCHEMATIC

TEXOMA DISTRICT
TEXAS DEPARTMENT OF TRANSPORTATION
KAUFMAN COUNTY
CSJ 0196-XX-XXX
PROJECT DEVELOPMENT PLAN

FUNCTIONAL CLASS: PRINCIPAL ARTERIAL OTHER FREEWAYS AND EXPRESSWAYS
TERRAIN: LEVEL

DATE	STATE	DISTRICT	COUNTY	CONT. SECT. JOB	HIGHWAY NO.	SHEET NO.
11/15/2025	TX	DAL	KAUFMAN	0918	34	109

	ROADWAY	FUNCTIONAL CLASSIFICATION	DESIGN HOURLY VOLUME
Mainlanes	Outer Loop	Urban Freeway	7%
	US 80	Urban Freeway	7%
	US 175	Urban Freeway	7%
Frontage Roads	US 80	Urban/Major Collector	8%
	US 175	Urban/Major Collector	8%
Direct Connectors	Outer Loop to US 80	Urban/Principal Arterial	7%
Cross Streets	SH 557	Urban/Principal Arterial	10%
	Old FM 740	Urban/Major Collector	10%
	FM 1392	Urban/Major Collector	10%
	Future Arterial	Local Street	10%
	Gibbs Rd Realign	Local Street	10%
	Future Arterial	Local Street	10%
	Future Arterial	Local Street	10%
	FM 148	Local Street	10%
	Old FM 740	Local Street	10%

REV.	#	INCARNATE WORDS	DATE
ROLL CO. PLANNING			11/15/2025
ROLL CO. PLANNING			11/15/2025
ROLL CO. PROFILES			11/15/2025
ROLL CO. PROFILES			11/15/2025
ROLL CO. PROFILES			11/15/2025
ROLL CO.			11/15/2025
ROLL CO.			11/15/2025
ROLL CO.			11/15/2025
ROLL CO.			11/15/2025
ROLL CO.			11/15/2025

PROJECT LOCATION MAP
KAUFMAN COUNTY

KAUFMAN COUNTY OUTER LOOP
US 80
SH 557
FM 1392
FM 148
Old FM 740
US 175
Gibbs Rd Realign
Future Arterial
Future Arterial
Future Arterial

KAUFMAN COUNTY OUTER LOOP

Texas Department of Transportation

KAUFMAN COUNTY OUTER LOOP
90% SCHEMATIC

EXISTING CONTROL AT:
FM 2727 (SOUTH)
FM 2727 (SOUTH) DISTRICT
EXISTING SCOPE OF USE:
PROJECT SCOPE OF USE:

FUNCTIONAL CLASS: PRINCIPAL ARTERIAL OTHER FREEWAYS AND EXPRESSWAYS
TERRAIN: LEVEL

DATE	STATE	DISTRICT	COUNTY	CONT. SECT. JOB	HIGHWAY NUMBER	SHT. NO.
11/15/2025	TX	DAL	KAUFMAN	0918	11	109

	FUNCTIONAL CLASSIFICATION	DESIGN	CURRENT
Rural Loop	Urban Freeway	75 MPH	0.0%
Mainlanes	Urban Principal Arterial	60 MPH	0.0%
Ramps	Urban Principal Arterial	60 MPH	0.0%
Frontage Roads	Urban Principal Arterial	40 MPH	0.0%
	Urban Minor Collector	30 MPH	0.0%
Direct Connectors	Urban Principal Arterial	40 MPH	0.0%
Cross Street	Urban Principal Arterial	40 MPH	0.0%
	Urban Minor Collector	30 MPH	0.0%
	Rural Minor Collector	40 MPH	0.0%
	Future Arterial	40 MPH	0.0%
	Local Street	30 MPH	0.0%
	Local Street	30 MPH	0.0%
	Local Street	30 MPH	0.0%

REV.	BY	REMARKS	DESIGN	CHECKED	APPROVED
REV. 1	DAL	ADDED SHEETS 11-13, 15-17, 19-20, 22-23, 25-26, 28-29, 31-32, 34-35, 37-38, 40-41, 43-44, 46-47, 49-50, 52-53, 55-56, 58-59, 61-62, 64-65, 67-68, 70-71, 73-74, 76-77, 79-80, 82-83, 85-86, 88-89, 91-92, 94-95, 97-98, 100-101, 103-104, 106-107, 109-110	11/15/25	TM	
REV. 2	DAL	PROFILE SYSTEMS UPDATED	12/15/25	TM	
REV. 3	DAL	PROFILE SYSTEMS UPDATED	12/22/25	TM	
REV. 4	DAL	PROFILE SYSTEMS UPDATED	12/29/25	TM	
REV. 5	DAL	PROFILE SYSTEMS UPDATED	1/5/26	TM	
REV. 6	DAL	PROFILE SYSTEMS UPDATED	1/12/26	TM	
REV. 7	DAL	PROFILE SYSTEMS UPDATED	1/19/26	TM	

PROJECT LOCATION MAP
KAUFMAN COUNTY

KAUFMAN COUNTY OUTER LOOP
FM 2727 (SOUTH)
FM 2727 (SOUTH) DISTRICT
FM 2727 (SOUTH)
FM 2727 (SOUTH) DISTRICT
KAUFMAN COUNTY OUTER LOOP

KAUFMAN COUNTY OUTER LOOP

Texas Department of Transportation

KAUFMAN COUNTY OUTER LOOP
90% SCHEMATIC

TESTING STANDARD #1
TESTING STANDARD #2
TRINITY RAILWAY EXPRESS
EXISTING SIGNS TO BE REMOVED
PROJECT LIMITS (TO BE DETERMINED)

FUNCTIONAL CLASS: PRINCIPAL ARTERIAL, OTHER FREEWAYS AND EXPRESSWAYS
TERRAIN: LEVEL

DATE	STATE	DISTRICT	COUNTY	CONTROL SECTION JOB	HIGHWAY NUMBER
11/15/2021	TX	DAL	KAUFMAN	0918	110

	ALIGNMENT	FUNCTIONAL CLASSIFICATION	DESIGN SPEED
Mainlanes	70-MPH URB	Urban Freeway	70 MPH
	55-MPH URB	Urban Freeway	55 MPH
	55-MPH	Urban Freeway	55 MPH
Frontage Roads	45 MPH	Urban/Major Collector	45 MPH
	35 MPH	Urban/Major Collector	35 MPH
Direct Connectors	50-MPH	Urban/Principal Arterial	50 MPH
Cross Streets	SH205	Urban/Principal Arterial	45 MPH
	FM 148	Urban/Principal Arterial	45 MPH
	FM 1392	Urban/Major Collector	45 MPH
	Sage Hill Pkwy	Local Street	30 MPH
	Future Arterial	Local Street	45 MPH
	Cobb Rd	Local Street	30 MPH
	Ray Rd	Local Street	30 MPH
U-Turns		Local Street	30 MPH

REV	#	HIGHWAY	BEGIN CS	END CS	CONTROL SECTION JOB
ROLL CS OF PROPOSED ROADWAYS					0918
ROLL CS OF PROPOSED FM 148			70.000+00.00	80.000+00.00	0918
ROLL CS OF PROPOSED SAGE HILL PKWY			70.000+00.00	80.000+00.00	0918
ROLL CS OF PROPOSED FUTURE ARTERIAL			70.000+00.00	80.000+00.00	0918
ROLL CS OF PROPOSED CO 239 EAST			70.000+00.00	80.000+00.00	0918
ROLL CS OF PROPOSED CO 239 WEST			70.000+00.00	80.000+00.00	0918
ROLL CS OF PROPOSED RAMPS					0918
ROLL CS OF PROPOSED RAMPS					0918
ROLL CS OF PROPOSED RAMPS					0918
ROLL CS OF PROPOSED RAMPS					0918
ROLL CS OF PROPOSED RAMPS					0918

PROJECT LOCATION MAP
KAUFMAN COUNTY

PROJECT LENGTH	R.O.W. WIDTH	EXISTING ART. ZONE	NEW ART. ZONE
102.700 MILES	300'	0	0

HORIZONTAL DATUM

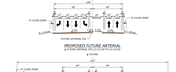
NAD 1983 STATE PLANE FIPS TEXAS NORTH 4202 FEET
SURFACE TO GRID FACTOR: 1.00013.4577

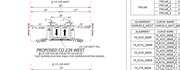
COORDINATES SHOWN ON THESE PLANS ARE GRID AND ARE REFERENCED TO THE DIRECT SURFACE/GRID OF:

PRELIMINARY
NOT FOR CONSTRUCTION, R.O.W., OR UTILITY PURPOSES
RELEASED FOR REVIEW ONLY

ROLL 15 OF 30

HDR
Firm Registration No. F-754
1111 Precinct Road, Suite 300
Lewisville, Texas 75056
(972) 962-7400





GENERAL NOTES

1. EXISTING TOPOGRAPHY BASED ON FIELD SURVEY SEPTEMBER OF MAY 2021.
2. EXISTING UTILITIES SHOWN ARE BASED ON UTILITY MAPS AND OBTAINED FROM KAUFMAN COUNTY.
3. EXISTING STRUCTURES SHOWN ARE BASED ON TXDOT AS-BUILT AND KAUFMAN COUNTY AS-BUILT.
4. ROADWAY CLASSIFICATIONS SHOWN ARE BASED ON TXDOT ROADWAY DESIGN MANUAL.
5. PROPOSED ROADWAY ALIGNMENTS SHOWN ARE BASED ON TXDOT SCHEMATIC.
6. PROPOSED ROADWAY ALIGNMENTS SHOWN ARE BASED ON TXDOT SCHEMATIC.
7. PROPOSED RETAINING WALL LOCATIONS SHOWN ARE BASED ON TXDOT SCHEMATIC.
8. PROPOSED RETAINING WALL LOCATIONS SHOWN ARE BASED ON TXDOT SCHEMATIC.
9. DIRECTION OF FLOW
10. DIRECTION OF FLOW
11. PROPOSED RIGHT-OF-WAY
12. PROPOSED RIGHT-OF-WAY
13. PROPOSED FRONTAGE ROAD
14. PROPOSED FRONTAGE ROAD
15. PROPOSED RETAINING WALL
16. PROPOSED RETAINING WALL
17. PROPOSED SIGNAL ON FRONTAGE ROAD
18. PROPOSED SIGNAL ON FRONTAGE ROAD
19. COMMERCIAL DRIVE ENTRANCE
20. COMMERCIAL DRIVE ENTRANCE
21. PROPOSED CULVERT
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100. PROPOSED CULVERT

LEGEND

- EXISTING RIGHT-OF-WAY
- EXISTING EASEMENT
- EXISTING CONTROLLED ACCESS
- EXISTING CENTERLINE
- PROPOSED CENTERLINE
- PROPOSED ROW
- PROPOSED CONTROLLED ACCESS
- PROPOSED RETAINING WALL
- DIRECTION OF FLOW
- PROPOSED FRONTAGE ROAD
- PROPOSED FRONTAGE ROAD
- PROPOSED RETAINING WALL
- PROPOSED SIGNAL ON FRONTAGE ROAD
- PROPOSED SIGNAL ON FRONTAGE ROAD
- COMMERCIAL DRIVE ENTRANCE
- COMMERCIAL DRIVE ENTRANCE
- PROPOSED CULVERT
- PROPOSED CULVERT
- PROPOSED CULVERT

KAUFMAN COUNTY OUTER LOOP

Texas Department of Transportation

KAUFMAN COUNTY OUTER LOOP
90% SCHEMATIC

CONTRACT NUMBER: 0-7
CONTRACT NUMBER: 0-7
FRONT DRAUG DISTRICT
DISTRICT DISTRICT
PROJECT LENGTH: 8.21 MILES
PROJECT NUMBER: 0-7
PROJECT NUMBER: 0-7

FUNCTIONAL CLASS: PRINCIPAL ARTERIAL OTHER FREEWAYS AND EXPRESSWAYS
TERMINAL LEVEL

DATE	STATE	DISTRICT	COUNTY	CONT. SECT. JOB	HIGH. NO.
11/15/2025	TX	DAL	KAUFMAN	0918	0-7

	ROADWAY	FUNCTIONAL CLASSIFICATION	RURAL / URBAN
Mainlanes	Outer Loop	Urban Freeway	70 MPH 0.0%
	Outer Loop	Urban Freeway	70 MPH 0.0%
Frontage Roads	US 80	Urban Principal Arterial	45 MPH 0.0%
	US 80	Urban Principal Arterial	45 MPH 0.0%
Direct Connectors	Direct Connector	Urban Principal Arterial	40 MPH 0.0%
Cross Streets	SH 205	Urban Principal Arterial	45 MPH 0.0%
	Samuells Rd	Urban Principal Arterial	45 MPH 0.0%
	FM 1390	Urban Major Collector	45 MPH 0.0%
	Dawn Rd	Urban Major Collector	45 MPH 0.0%
	Dale Hill Pkwy	Local Street	45 MPH 0.0%
	Future Arterial	Local Street	45 MPH 0.0%
	Future Arterial	Local Street	45 MPH 0.0%
	FM 148	Local Street	45 MPH 0.0%
Ramps	Direct Connectors	Local Street	40 MPH 0.0%

DESIGN SPEED	MAXIMUM GRADE
70 MPH	4.0%

ROUTE	ROADWAY	BEGIN CONTROL SECTION JOB	LENGTH
ROU LT 0	OUTER LOOP	0918-00-000	42,532.00
ROU LT 0	RAMPS	0918-00-000	5,000.00
ROU LT 0	PROFILE GRADE LINE	0918-00-000	42,532.00
ROU LT 0	PROFILE GRADE LINE	0918-00-000	5,000.00
ROU LT 0	PROFILE GRADE LINE	0918-00-000	42,532.00
ROU LT 0	PROFILE GRADE LINE	0918-00-000	5,000.00
ROU 80	PROFILE GRADE LINE	0918-00-000	42,532.00
ROU 80	PROFILE GRADE LINE	0918-00-000	5,000.00
ROU 80	PROFILE GRADE LINE	0918-00-000	42,532.00
ROU 80	PROFILE GRADE LINE	0918-00-000	5,000.00

PROJECT LOCATION MAP
KAUFMAN COUNTY

SAMUELS RD
SAMUELS RD
SAMUELS RD

KAUFMAN COUNTY OUTER LOOP

Texas Department of Transportation

KAUFMAN COUNTY OUTER LOOP
90% SCHEMATIC

FROM FM 1392
TO COLQUITT RD
(PROJECT LENGTH = 3.600 MILES)

FUNCTIONAL CLASS: PRINCIPAL ARTERIAL OTHER FREEWAYS AND EXPRESSWAYS
TERRAIN: LEVEL

DATE	STATE	DISTRICT	COUNTY	CONTROL SECTION JOB	HIGHWAY NUMBER
11/15/2025	TX	DAL	KAUFMAN	0918	110

ALIGNMENT	FUNCTIONAL CLASSIFICATION	DESIGN SPEED
Outer Loop	Other Freeway	70 MPH (U.S)
Frontage Roads	Other Principal Arterial	45 MPH (U.S)
Ramps	Other Principal Arterial	45 MPH (U.S)
Frontage Roads	Other Principal Arterial	45 MPH (U.S)
Ramps	Other Principal Arterial	45 MPH (U.S)
Direct Connectors	Other Principal Arterial	45 MPH (U.S)
Cross Streets	Other Principal Arterial	45 MPH (U.S)
	Major Collector	45 MPH (U.S)
	Minor Collector	45 MPH (U.S)
	Local Street	45 MPH (U.S)
	Local Street	45 MPH (U.S)
	Local Street	45 MPH (U.S)
Cross Streets	Local Street	45 MPH (U.S)

INDEX OF SHEETS

NO.	DESCRIPTION
1	TITLE SHEET
2	GENERAL NOTES, LEGEND, UTILITY LEGEND, PROPERTY OWNER INFORMATION
3	TYPICAL SECTIONS
4	SUPER DATA, CURVE DATA
5	PLAN SHEET
6	PLAN SHEET
7	PROFILE SHEET
8	PROFILE SHEET
9	PROFILE SHEET
10	PROFILE SHEET
11	PROFILE SHEET
12	PROFILE SHEET

PROJECT LOCATION MAP
KAUFMAN COUNTY

PROJECT LENGTH	3.21 MILES	EXISTING ADT (2018)	N/A
DES. SPD. = 70 MPH	N/A	PROJECTED ADT (2038)	N/A
DES. SPD. = 45 MPH	3.21 MILES	PROJECTED ADT (2058)	N/A

NAD 1983 STATE PLANE FIPS TEXAS NORTH 4202 FEET
SURFACE TO GRID FACTOR: 1.00013.8577

Southern Pacific Transportation Co.
THE DISTRICT EARTHWORK OF

CONSTRUCTION	R.O.W.
1.0 SURFACE	1.0 SURFACE

PRELIMINARY
USE NORMAL SCALE ON 11" X 17" SHEETS
NOT FOR CONSTRUCTION

BASIS OF ELEVATION
BASIS OF COORDINATES

ROLL 17 OF 30

HDR
FIRM Registration No. F-754
11111 Preston Road, Suite 300
Dallas, Texas 75230
(214) 361-7400

4' TOM
4' TOM
4' TOM

KAUFMAN COUNTY OUTER LOOP

Texas Department of Transportation

KAUFMAN COUNTY OUTER LOOP
90% SCHEMATIC

FROM FM 2578
TO FM 1389
FROM DALLAS DISTRICT
TO ATHENS DISTRICT
(PROPOSED SCOPE for 116')

FUNCTIONAL CLASS: PRINCIPAL ARTERIAL OTHER FREEWAYS AND EXPRESSWAYS
TERRAIN: LEVEL

DATE	STATE	DISTRICT	COUNTY	CONTROL SECTION JOB	SHEET NO.	TOTAL SHEETS
11/15/2025	TX	DAL	KAUFMAN	0918	11	109

ROADWAY	FUNCTIONAL CLASSIFICATION	DESIGN SPEED
Outer Loop	Other Freeway	70 MPH
Frontage Road	Urban Principal Arterial	50 MPH
Cross Streets	Urban Principal Arterial	40 MPH
	Urban Principal Arterial	50 MPH
	Urban Principal Arterial	60 MPH
	Urban Principal Arterial	70 MPH
Direct Connectors	Urban Principal Arterial	40 MPH
	Urban Principal Arterial	50 MPH
Cross Streets	Future Arterial	40 MPH
	Future Arterial	50 MPH
	Local Street	25 MPH
	FM 1389	40 MPH
	Local Street	40 MPH
	Local Street	50 MPH

NO.	DESIGNATION	BEGIN STATION	END STATION
1	KCOL	1000+00.00	1170+00.00
2	KCOL	1170+00.00	1340+00.00
3	KCOL	1340+00.00	1510+00.00
4	KCOL	1510+00.00	1680+00.00
5	KCOL	1680+00.00	1850+00.00
6	KCOL	1850+00.00	2020+00.00
7	KCOL	2020+00.00	2190+00.00
8	KCOL	2190+00.00	2360+00.00
9	KCOL	2360+00.00	2530+00.00
10	KCOL	2530+00.00	2700+00.00
11	KCOL	2700+00.00	2870+00.00
12	KCOL	2870+00.00	3040+00.00
13	KCOL	3040+00.00	3210+00.00
14	KCOL	3210+00.00	3380+00.00
15	KCOL	3380+00.00	3550+00.00
16	KCOL	3550+00.00	3720+00.00
17	KCOL	3720+00.00	3890+00.00
18	KCOL	3890+00.00	4060+00.00

PROJECT LOCATION MAP
KAUFMAN COUNTY

PROJECT LENGTH	8.23 MILES	EXISTING ROW (OUter Loop)	N/A
NO. OF LANES	4 MAINLANES	PROPOSED ROW (OUter Loop)	300'
NO. OF CSJ	ONE	PROPOSED ROW (FRONTAGE ROAD)	116'

NAD 1983 STATE PLANE FIPS TEXAS NORTH 4202 FEET
SURFACE TO GRID FACTOR: 1.00013.4577

Questions or Comments
TIM.DIDDIT@KAUFMANCOUNTY.NET

PRELIMINARY
USE FOR DESIGN REVIEW, R.O.W., OR UTILITY COORDINATION PURPOSES ONLY

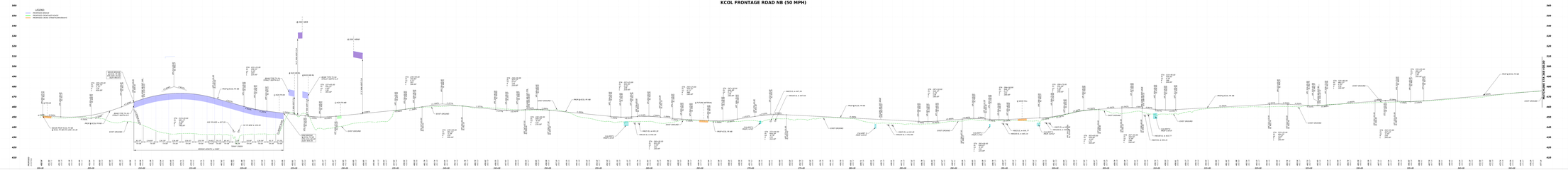
DESIGNED	DRAWN	CHECKED
TIM DIDDIT	TIM DIDDIT	TIM DIDDIT

ROLL 18 OF 30

HDR
FIRM Registration No. F-754
11111 Preston Road, Suite 300
Dallas, Texas 75230
(972) 661-7400

KCOL FRONTAGE ROAD NB (50 MPH)

LEGEND
- PROPOSED BRIDGE
- PROPOSED RETAINING WALLS
- PROPOSED SOUND WALLS
- PROPOSED CROSS STREET/DRIVEWAYS



KAUFMAN COUNTY OUTER LOOP

Texas Department of Transportation

KAUFMAN COUNTY OUTER LOOP
90% SCHEMATIC

TEXOTC2 CHANGE #1
TEXOTC2 ADDENDUM #1
TEXAS TRAFFIC HISTORY
DECEMBER 2020 (v 2.0)
PROJECT HISTORY

FUNCTIONAL CLASS: PRINCIPAL ARTERIAL, OTHER FREEWAYS AND EXPRESSWAYS
TERRAIN: LEVEL

DATE	STATE	DISTRICT	COUNTY	CONTROL SECTION JOB	SHEET NO.	SHEET COUNT
11/15/2025	TX	DAL	KAUFMAN	0918	11	109

	ROADWAY	FUNCTIONAL CLASSIFICATION	DESIGN SPEED
Proposed Roadway	Outer Loop	Other Freeway	75 MPH
	Frontage Road	Urban Principal Arterial	50 MPH
	Frontage Road	Urban Principal Arterial	40 MPH
	Frontage Road	Urban Principal Arterial	30 MPH
	Ramp	Urban Principal Arterial	50 MPH
Cross Street (Connecting Roads)	SH 205	Urban Principal Arterial	45 MPH
	Crandall Rd	Urban Principal Arterial	45 MPH
	FM 1390	Urban Major Collector	45 MPH
	Kings Crossing	Urban Major Collector	45 MPH
	Dean Hill Pkwy	Local Street	45 MPH
	Future Arterial	Local Street	45 MPH
	Future Arterial	Local Street	45 MPH
	FM 148	Local Street	45 MPH
	Future Arterial	Local Street	45 MPH

INDEX OF SHEETS

NO.	DESCRIPTION	SHEET NO.
ROLL 1 of 4	ROADWAY DESIGN SCHEMATIC	SCHEM
ROLL 1 of 4	ROADWAY DESIGN SCHEMATIC	SCHEM
ROLL 1 of 4	ROADWAY DESIGN SCHEMATIC	SCHEM
ROLL 1 of 4	PROFILE GRADE LINE

KAUFMAN COUNTY
OUTER LOOP

Texas Department of Transportation
CONTRACT NO. XXXX-XXX-XXX

KAUFMAN COUNTY OUTER LOOP
90% SCHEMATIC

EXISTING CHANNEL AT
PROPOSED CROSSING
TXDOT DALLAS DISTRICT
EXISTING SCOPE for I-20
PROPOSED SCOPE

FUNCTIONAL CLASS: PRINCIPAL ARTERIAL OTHER FREEWAYS AND EXPRESSWAYS
TERMINAL LEVEL

DATE	STATE	DISTRICT	COUNTY	CONTROL SECTION JOB	SHEET NO.	SHEET NO.
11/15/2025	TX	DAL	KAUFMAN	0918	13	109

ALIGNMENT	FUNCTIONAL CLASSIFICATION	RURAL / URBAN
Outer Loop	Urban Freeway	75 MPH (0.0%)
Ramps	Urban Freeway	75 MPH (0.0%)
	Urban Principal Arterial	55 MPH (0.0%)
Frontage Roads	Urban Principal Arterial	45 MPH (0.0%)
	Urban Major Collector	40 MPH (0.0%)
	Urban Minor Collector	30 MPH (0.0%)
Local (Connector)	Urban/Principal Arterial	40 MPH (0.0%)
Cross Streets	SH205	Urban/Principal Arterial	45 MPH (0.0%)
	FM 2932	Urban/Principal Arterial	45 MPH (0.0%)
	FM 1392	Urban/Major Collector	40 MPH (0.0%)
	Future Arterial	Local Street	40 MPH (0.0%)
	Future Collector	Local Street	30 MPH (0.0%)
	Local Street	Local Street	30 MPH (0.0%)
	FM 740	Local Street	40 MPH (0.0%)
	Local Street	Local Street	30 MPH (0.0%)

INDEX OF SHEETS

NO.	DESCRIPTION
1	ROADWAY SCHEMATIC
2	ROADWAY SCHEMATIC
3	ROADWAY SCHEMATIC
4	ROADWAY SCHEMATIC
5	ROADWAY SCHEMATIC
6	ROADWAY SCHEMATIC
7	ROADWAY SCHEMATIC
8	ROADWAY SCHEMATIC
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16	ROADWAY SCHEMATIC
17	ROADWAY SCHEMATIC
18	ROADWAY SCHEMATIC
19	ROADWAY SCHEMATIC
20	ROADWAY SCHEMATIC

PROJECT LOCATION MAP
KAUFMAN COUNTY

PROJECT LENGTH	8.21 MILES	EXISTING ADT (2046)	N/A
NO. OF LANES	PROPOSED 4 TO 6	PROPOSED ADT (2046)	N/A
DESIGN SPEED	PROPOSED 75 MPH		

HORIZONTAL DATUM

NAD 1983 STATE PLANE FIPS TEXAS NORTH 4202 FEET
SURFACE TO GRID FACTOR: 1.00013.4577

PRELIMINARY
THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW ONLY AND IS NOT TO BE USED FOR CONSTRUCTION, BIDDING OR PERMIT PURPOSES. IT WAS PREPARED BY OR UNDER THE DIRECT SUPERVISION OF:

ENGINEER'S SEAL AND SIGNATURE

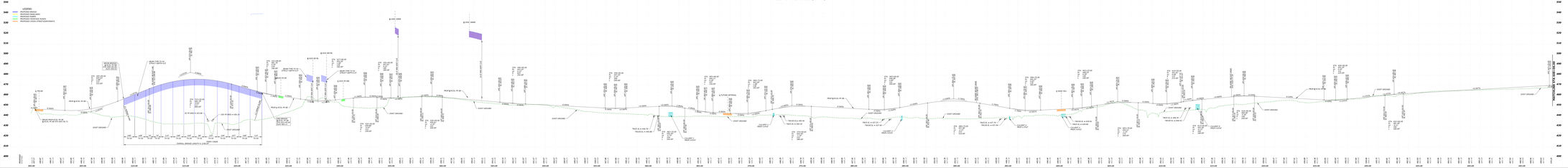
PROPOSED	EXISTING
ROW	ROW
CONTROL OF ACCESS	CONTROL OF ACCESS

ROLL 20 OF 30

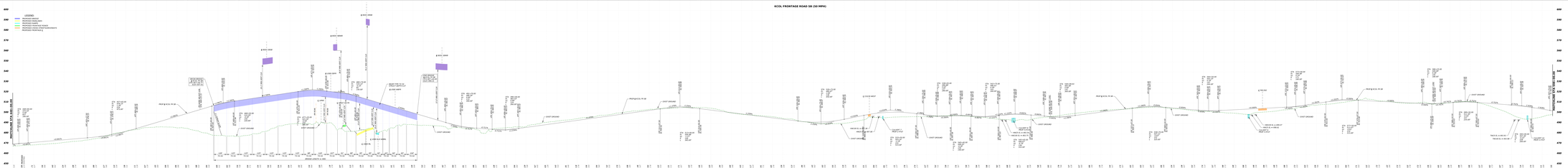
HDR
FIRM Registration No. F-754
11111 Pleasant Road, Suite 300
Dallas, Texas 75238
(214) 346-2400

PLOTTED BY: jpruitt

KCOL FRONTAGE ROAD SB (50 MPH)



KCOL FRONTAGE ROAD SB (50 MPH)



KAUFMAN COUNTY
OUTER LOOP

Texas Department of Transportation
CONTRACT NO. XXXX-XXX-XXX

KAUFMAN COUNTY OUTER LOOP
90% SCHEMATIC

EXISTING CHANNEL AT
PROPOSED CROSSING
TXDOT DALLAS DISTRICT
EXISTING SCOPE for I-20
PROPOSED SCOPE

FUNCTIONAL CLASS: PRINCIPAL ARTERIAL OTHER FREEWAYS AND EXPRESSWAYS
TERMINAL LEVEL

DATE 11/15/2025 | STATE TX | DISTRICT DAL | COUNTY KAUFMAN | CONTROL SECTION JOB 0918 | SHEET NO. 13 | SHEET NO. 109

ALIGNMENT | FUNCTIONAL CLASSIFICATION | RURAL / URBAN
Outer Loop | Urban Freeway | 75 MPH (0.0%)
Ramps | Urban Freeway | 75 MPH (0.0%)
| Urban Principal Arterial | 55 MPH (0.0%)
Frontage Roads | Urban Principal Arterial | 45 MPH (0.0%)
| Urban Major Collector | 40 MPH (0.0%)
| Urban Minor Collector | 30 MPH (0.0%)
Local (Connector) | Urban/Principal Arterial | 40 MPH (0.0%)
Cross Streets | SH205 | Urban/Principal Arterial | 45 MPH (0.0%)
| FM 2932 | Urban/Principal Arterial | 45 MPH (0.0%)
| FM 1392 | Urban/Major Collector | 40 MPH (0.0%)
| Future Arterial | Local Street | 40 MPH (0.0%)
| Future Collector | Local Street | 30 MPH (0.0%)
| Local Street | Local Street | 30 MPH (0.0%)
| FM 740 | Local Street | 40 MPH (0.0%)
| Local Street | Local Street | 30 MPH (0.0%)

INDEX OF SHEETS

NO. | DESCRIPTION
1 | ROADWAY SCHEMATIC
2 | ROADWAY SCHEMATIC
3 | ROADWAY SCHEMATIC
4 | ROADWAY SCHEMATIC
5 | ROADWAY SCHEMATIC
6 | ROADWAY SCHEMATIC
7 | ROADWAY SCHEMATIC
8 | ROADWAY SCHEMATIC
9 | ROADWAY SCHEMATIC
10 | ROADWAY SCHEMATIC
11 | ROADWAY SCHEMATIC
12 | ROADWAY SCHEMATIC
13 | ROADWAY SCHEMATIC
14 | ROADWAY SCHEMATIC
15 | ROADWAY SCHEMATIC
16 | ROADWAY SCHEMATIC
17 | ROADWAY SCHEMATIC
18 | ROADWAY SCHEMATIC
19 | ROADWAY SCHEMATIC
20 | ROADWAY SCHEMATIC

PROJECT LOCATION MAP
KAUFMAN COUNTY

PROJECT LENGTH 8.21 MILES | EXISTING ADT (2046) N/A
NO. OF LANES PROPOSED 4 TO 6 | PROPOSED ADT (2046) N/A
DESIGN SPEED PROPOSED 75 MPH

HORIZONTAL DATUM

NAD 1983 STATE PLANE FIPS TEXAS NORTH 4202 FEET
SURFACE TO GRID FACTOR: 1.00013.4577

PRELIMINARY
THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW ONLY AND IS NOT TO BE USED FOR CONSTRUCTION, BIDDING OR PERMIT PURPOSES. IT WAS PREPARED BY OR UNDER THE DIRECT SUPERVISION OF:

ENGINEER'S SEAL AND SIGNATURE

PROPOSED ROW | EXISTING ROW
PROPOSED CONTROL OF ACCESS | EXISTING CONTROL OF ACCESS

ROLL 20 OF 30

HDR
FIRM Registration No. F-754
11111 Pleasant Road, Suite 300
Dallas, Texas 75238
(214) 346-2400

PLOTTED BY: jpruitt

KAUFMAN COUNTY OUTER LOOP

Texas Department of Transportation

KAUFMAN COUNTY OUTER LOOP
90% SCHEMATIC

EXISTING CHANNEL AT
EXISTING GROUND
FRONT SIDEWALK ENTIRETY
EXISTING EDGE OF TAR
PROJECT LIMITS

FUNCTIONAL CLASS: PRINCIPAL ARTERIAL OTHER FREEWAYS AND EXPRESSWAYS
TERRAIN: LEVEL

DATE	STATE	DISTRICT	COUNTY	CONTROL SECTION JOB	SHEET NO.	SHEET ID
11/15/2025	TX	DAL	KAUFMAN	0918	11	109

ROADWAY	FUNCTIONAL CLASSIFICATION	DESIGN VARIANT
Outer Loop	Urban Freeway	70 MPH (6.0%)
Frontage Rd	Urban Principal Arterial	40 MPH (6.0%)
Ramps

KAUFMAN COUNTY
OUTER LOOP

Texas Department of Transportation

KAUFMAN COUNTY OUTER LOOP
90% SCHEMATIC

FROM 0.3 MILES W OF FM 2932
TO 0.3 MILES E OF FM 2578
PROJECT LENGTH = 8.21 MILES

FUNCTIONAL CLASS: PRINCIPAL ARTERIAL OTHER FREEWAYS AND EXPRESSWAYS
TERRAIN: LEVEL

DATE	STATE	DISTRICT	COUNTY	CONTROL SECTION JOB	SHEET NO.	TOTAL SHEETS
11/15/2025	TX	DAL	KAUFMAN	0918	11	109

	FACILITY	FUNCTIONAL CLASSIFICATION	DESIGN SPEED
Proposed	Outer Loop	Other Freeway	70 MPH (6.0%)
	Ramps	Other Freeway	50 MPH (6.0%)
	NB SAM	Other Freeway	70 MPH (6.0%)
Frontage Roads	SB SAM	Urban Principal Arterial	40 MPH (6.0%)
	SB WB	Urban Principal Arterial	40 MPH (6.0%)
	NB WB	Urban Principal Arterial	40 MPH (6.0%)
Cross Streets (CONNECTS)	FM 2578	Urban Principal Arterial	40 MPH (6.0%)
	FM 2932	Urban Principal Arterial	40 MPH (6.0%)
	FM 1392	Urban Principal Arterial	40 MPH (6.0%)
	Future Arterial	Urban Principal Arterial	40 MPH (6.0%)
	Future Arterial	Local Street	25 MPH (6.0%)
	Future Arterial	Local Street	25 MPH (6.0%)
	FM 148	Local Street	25 MPH (6.0%)
	FM 2578	Local Street	25 MPH (6.0%)
		Local Street	25 MPH (6.0%)

INDEX OF SHEETS	
1 - 4	INDEX, BENCH MARKS, CONTROL DATA
5 - 10	GENERAL NOTES, ESTIMATE QUANTITIES
11 - 22	ROADWAY SCHEMATICS
23 - 24	TYPICAL SECTIONS
25 - 26	PROFILE SHEETS (SAM)
27 - 28	PROFILE SHEETS (WB)
29 - 30	PROFILE SHEETS (NB)
31 - 32	PROFILE SHEETS (SB)
33 - 34	PROFILE SHEETS (RAMPS)
35 - 36	PROFILE SHEETS (RAMPS)
37 - 38	PROFILE SHEETS (RAMPS)
39 - 40	PROFILE SHEETS (RAMPS)
41 - 42	PROFILE SHEETS (RAMPS)
43 - 44	PROFILE SHEETS (RAMPS)
45 - 46	PROFILE SHEETS (RAMPS)
47 - 48	PROFILE SHEETS (RAMPS)
49 - 50	PROFILE SHEETS (RAMPS)
51 - 52	PROFILE SHEETS (RAMPS)
53 - 54	PROFILE SHEETS (RAMPS)
55 - 56	PROFILE SHEETS (RAMPS)
57 - 58	PROFILE SHEETS (RAMPS)
59 - 60	PROFILE SHEETS (RAMPS)
61 - 62	PROFILE SHEETS (RAMPS)
63 - 64	PROFILE SHEETS (RAMPS)
65 - 66	PROFILE SHEETS (RAMPS)
67 - 68	PROFILE SHEETS (RAMPS)
69 - 70	PROFILE SHEETS (RAMPS)
71 - 72	PROFILE SHEETS (RAMPS)
73 - 74	PROFILE SHEETS (RAMPS)
75 - 76	PROFILE SHEETS (RAMPS)
77 - 78	PROFILE SHEETS (RAMPS)
79 - 80	PROFILE SHEETS (RAMPS)
81 - 82	PROFILE SHEETS (RAMPS)
83 - 84	PROFILE SHEETS (RAMPS)
85 - 86	PROFILE SHEETS (RAMPS)
87 - 88	PROFILE SHEETS (RAMPS)
89 - 90	PROFILE SHEETS (RAMPS)
91 - 92	PROFILE SHEETS (RAMPS)
93 - 94	PROFILE SHEETS (RAMPS)
95 - 96	PROFILE SHEETS (RAMPS)
97 - 98	PROFILE SHEETS (RAMPS)
99 - 100	PROFILE SHEETS (RAMPS)
101 - 102	PROFILE SHEETS (RAMPS)
103 - 104	PROFILE SHEETS (RAMPS)
105 - 106	PROFILE SHEETS (RAMPS)
107 - 108	PROFILE SHEETS (RAMPS)
109	PROFILE SHEETS (RAMPS)

PROJECT LOCATION MAP
KAUFMAN COUNTY

NAD 1983 STATE PLANE FIPS TEXAS NORTH 4202 FEET
SURFACE TO GRID FACTOR: 1.00011457277

COORDINATES SHOWN ON THIS SHEET ARE ON THE GRID SYSTEM SHOWN BY THE DISTRICT SURVEYOR OR AS NOTED.

LEGEND
EXISTING ROW
PROPOSED ROW
EXISTING EASEMENT
PROPOSED EASEMENT

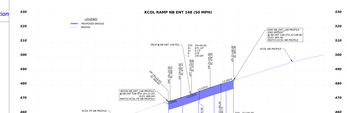
PRELIMINARY
NOT FOR BIDDING, R.O.W., OR UTILITY ADJUSTMENT PURPOSES

ROLL 22 OF 30

HDR
FIRM Registration No. F-754
11111 Preston Road, Suite 300
Dallas, Texas 75230-1232
(214) 692-2400

PLOTTED BY jsmith

KCOL RAMP NB ENT 148 (50 MPH)



KAUFMAN COUNTY OUTER LOOP

Texas Department of Transportation

KAUFMAN COUNTY OUTER LOOP
90% SCHEMATIC

TOLLTAG CONNECTOR
TOLL ZONING PLAN
TOLL ZONING DIAGRAM
EXTENDED RIGHT OF WAY
PROJECT LIMITS

FUNCTIONAL CLASS, PRINCIPAL ARTERIAL, OTHER FREEWAYS AND EXPRESSWAYS
TERMINAL LEVEL

DATE	STATE	DISTRICT	COUNTY	CONTROL SECTION JOB	SHEET NO.
11/15/2025	TX	DAL	KAUFMAN	0918	113

	FACILITY	FUNCTIONAL CLASSIFICATION	RURAL/ URBAN
Planning	Outer Loop	Other Freeway	11 URAN (11)
	SH 205	Other Principal Arterial	14 URAN (14)
	SH 34	Other Principal Arterial	14 URAN (14)
Frontage Roads	SH 205	Other/Minor Collector	16 URAN (16)
	SH 34	Other/Minor Collector	16 URAN (16)
	FM 2932	Other/Minor Collector	16 URAN (16)
Grade Separated Structure	Outer Loop	Other Freeway	11 URAN (11)
Cross Street	SH205	Other/Principal Arterial	14 URAN (14)
	Crandall Rd	Other/Principal Arterial	14 URAN (14)
	FM 1392	Other/Major Collector	17 URAN (17)
	Kings Crossing	Local Street	19 URAN (19)
	Dean Kill Pkwy	Local Street	19 URAN (19)
	Future Arterial	Local Street	19 URAN (19)
	Future Arterial	Local Street	19 URAN (19)
	FM 148	Local Street	19 URAN (19)
	SH 34	Local Street	19 URAN (19)
* Ramps		Local Street	19 URAN (19)

INDEX OF SHEETS

NO.	DESCRIPTION	SHEET NO.
ROLL 1 of 1	ROLLPLOT	ROLL 1 of 1
ROLL 23 OF 30	KCOL RAMP SB EXIT 148 (50 MPH)	ROLL 23 OF 30
ROLL 23 OF 30	KCOL RAMP SB ENT SAGE (50 MPH)	ROLL 23 OF 30
ROLL 23 OF 30	KCOL RAMP SB EXIT SAGE (50 MPH)	ROLL 23 OF 30
ROLL 23 OF 30	KCOL RAMP SB EXIT 205 (50 MPH)	ROLL 23 OF 30
ROLL 23 OF 30	KCOL RAMP SB EXIT COLQ (50 MPH)	ROLL 23 OF 30
ROLL 23	PROFILE SYSTEMS #4	ROLL 23
ROLL 24	PROFILE SYSTEMS #4	ROLL 24
ROLL 25	PROFILE SYSTEMS #4	ROLL 25
ROLL 26	PROFILE SYSTEMS #4	ROLL 26
ROLL 27	PROFILE SYSTEMS #4	ROLL 27
ROLL 28	PROFILE SYSTEMS #4	ROLL 28
ROLL 29	PROFILE SYSTEMS #4	ROLL 29
ROLL 30	PROFILE SYSTEMS #4	ROLL 30

PROJECT LOCATION MAP
KAUFMAN COUNTY

KAUFMAN COUNTY
DALLAS COUNTY
ROCKWALL COUNTY
HENDERSON COUNTY
SH 34
SH 205
FM 148
FM 1392
FM 2932
Crandall Rd
Kings Crossing
Dean Kill Pkwy
Future Arterial
Future Arterial
KCOL RAMP SB EXIT 148
KCOL RAMP SB ENT SAGE
KCOL RAMP SB EXIT SAGE
KCOL RAMP SB EXIT 205
KCOL RAMP SB EXIT COLQ
KCOL RAMP SB EXIT 1392
KCOL RAMP SB EXIT SAM
KCOL RAMP NB EXIT 148
KCOL RAMP NB ENT SAGE
KCOL RAMP NB EXIT SAGE
KCOL RAMP NB EXIT 205
KCOL RAMP NB EXIT COLQ
KCOL RAMP NB EXIT 1392
KCOL RAMP NB EXIT SAM
KCOL RAMP SB ENT 148
KCOL RAMP SB ENT 205
KCOL RAMP SB ENT COLQ
KCOL RAMP SB ENT 1392
KCOL RAMP SB ENT SAM
KCOL RAMP NB ENT 148
KCOL RAMP NB ENT 205
KCOL RAMP NB ENT COLQ
KCOL RAMP NB ENT 1392
KCOL RAMP NB ENT SAM
KCOL MAINLANES
KCOL MAINLANES
KCOL MAINLANES

KAUFMAN COUNTY OUTER LOOP

Texas Department of Transportation

KAUFMAN COUNTY OUTER LOOP
90% SCHEMATIC

FROM FM 2578
TO FM 1641
FROM DALLAS DISTRICT
TO DISTRICT LIMITS
(PROJECT LENGTH 54.116')

FUNCTIONAL CLASS: PRINCIPAL ARTERIAL OTHER FREEWAYS AND EXPRESSWAYS
TERRAIN: LEVEL

DATE	STATE	DISTRICT	COUNTY	CONTROL SECTION JOB	SHEET NO.	SHEET NO.
11/15/2025	TX	DAL	KAUFMAN	0918	11	109

ROADWAY	FUNCTIONAL CLASSIFICATION	DESIGN SPEED
Outer Loop	Urban Freeway	70 MPH (E/S)
Frontage Road EB	Urban Principal Arterial	40 MPH (E/S)
Frontage Road WB	Urban Principal Arterial	40 MPH (E/S)
Cross Street	Urban Principal Arterial	40 MPH (E/S)
Cross Street	Urban Principal Arterial	40 MPH (E/S)
Cross Street	Urban Principal Arterial	40 MPH (E/S)
Cross Streets

KAUFMAN COUNTY OUTER LOOP

Texas Department of Transportation

KAUFMAN COUNTY OUTER LOOP
90% SCHEMATIC

EXISTING CHANNEL AT
FRANCES CREEK
FRONT DALLAS DISTRICT
EXTENDED SCOPE for LSE
PROJECT LOCATION MAP

FUNCTIONAL CLASS: PRINCIPAL ARTERIAL OTHER FREEWAYS AND EXPRESSWAYS
TERMINAL LEVEL

DATE	STATE	DISTRICT	COUNTY	CONTROL SECTION JOB	SHEET NO.	SHEET TOTAL
11/15/2025	TX	DAL	KAUFMAN	0918	11	109

ROADWAY	FUNCTIONAL CLASSIFICATION	DESIGN SPEED
Outer Loop	Urban Freeway	70 MPH (U,R)
Mainlane	Urban Freeway	70 MPH (U,R)
	Urban Freeway	70 MPH (U,R)
Frontage Road	Urban/Major Collector	40 MPH (U,R)
	Urban/Major Collector	40 MPH (U,R)
Direct Connector	Urban/Principal Arterial	40 MPH (U,R)
	Urban/Principal Arterial	40 MPH (U,R)
Cross Street	Urban/Principal Arterial	40 MPH (U,R)
	Urban/Major Collector	40 MPH (U,R)
	Local Street	30 MPH (U,R)
	Future Arterial	40 MPH (U,R)
	Local Street	30 MPH (U,R)
	FM 148	40 MPH (U,R)
	Local Street	30 MPH (U,R)
	Local Street	30 MPH (U,R)

REV.	DESCRIPTION	DATE
REV. 1	ROADWAY DESIGN (U.S. 175 TO FM 148)	4/15/25
REV. 2	ROADWAY DESIGN (FM 148 TO U.S. 80)	4/15/25
REV. 3	ROADWAY DESIGN (U.S. 80 TO FM 2932)	4/15/25
REV. 4	ROADWAY DESIGN (FM 2932 TO U.S. 175)	4/15/25
REV. 5	PROFILE STATIONS (U.S. 175 TO FM 148)	4/15/25
REV. 6	PROFILE STATIONS (FM 148 TO U.S. 80)	4/15/25
REV. 7	PROFILE STATIONS (U.S. 80 TO FM 2932)	4/15/25
REV. 8	PROFILE STATIONS (FM 2932 TO U.S. 175)	4/15/25
REV. 9	PROFILE STATIONS (WBFR)	10/01/25
REV. 10	PROFILE STATIONS (WBML)	10/01/25
REV. 11	PROFILE STATIONS (WBBR)	10/01/25
REV. 12	PROFILE STATIONS (ENT)	10/01/25

PROJECT LENGTH	8.21 MILES	EXISTING ACT (ZONE)	N/A
SEC. NO. / DIV. NO.	N/A	PROPOSED ACT (ZONE)	N/A
SEC. NO. / DIV. NO.	N/A	PROPOSED ACT (ZONE)	N/A

NAD 1983 STATE PLANE FIPS TEXAS NORTH 4202 FEET
SURFACE TO GRID FACTOR: 1.00011457

COORDINATES ARE BASED ON THE NORTH AMERICAN DATUM OF 1983 (NAD83) AS ADJUSTED BY THE 2007.0 SURVEYSCREEN 07.

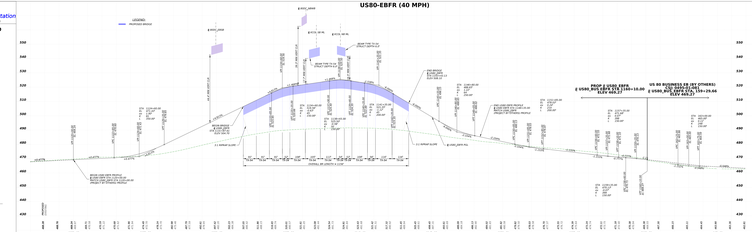
LEGEND
EXISTING RIGHT OF WAY
PROPOSED RIGHT OF WAY

PRELIMINARY
NOT FOR BIDDING OR CONSTRUCTION
NOT FOR RIGHT OF WAY ACQUISITION

ROLL 25 OF 30

HDR
FIRM Registration No. F-754
17111 Preston Road, Suite 300
Dallas, Texas 75248
(972) 960-7400

US80-EBFR (40 MPH)



KAUFMAN COUNTY OUTER LOOP

Texas Department of Transportation

KAUFMAN COUNTY OUTER LOOP
90% SCHEMATIC

(SECTION 2 PHASE 2)
(SECTION 3 PHASE 1)
TXDOT DALLAS DISTRICT
KAUFMAN COUNTY
(REGIONAL TOLL LANE)

FUNCTIONAL CLASS: PRINCIPAL ARTERIAL OTHER FREEWAYS AND EXPRESSWAYS
TERMINAL LEVEL

DATE	STATE	DISTRICT	COUNTY	SHEET NO.	TOTAL SHEETS
11/15/2025	TX	DAL	KAUFMAN	0010	113

ROADWAY	FUNCTIONAL CLASSIFICATION	DESIGN SPEED
Outer Loop	Other Freeway	75 MPH (E.O.)
Mainlanes	Other Freeway	75 MPH (E.O.)
	Other Principal Arterial	75 MPH (E.O.)
Frontage Roads	Other Principal Arterial	45 MPH (E.O.)
	Urban Principal Arterial	45 MPH (E.O.)
	Urban Principal Arterial	45 MPH (E.O.)
Direct Connectors	Other Freeway	45 MPH (E.O.)
	Other Principal Arterial	45 MPH (E.O.)
Cross Streets	Urban Principal Arterial	45 MPH (E.O.)
	Major Collector	45 MPH (E.O.)
	Local Street	45 MPH (E.O.)
	Future Arterial	45 MPH (E.O.)
	Local Street	45 MPH (E.O.)
	Frontage Road	45 MPH (E.O.)
	Local Street	30 MPH (E.O.)

INDEX OF SHEETS

NO.	DESCRIPTION	SHEET NO.
1	INDEX, NOTES & LEGEND	0010
2	ALIGNMENT, ETJ, ROW AND RR TIE DATA SHEET	0020
3	ALIGNMENT, ETJ, ROW AND RR TIE DATA SHEET	0030
4	TYPICAL SECTIONS SHEET	0040
5	TYPICAL SECTIONS SHEET	0050
6	PROFILE SYSTEMS SHEET	0060
7	PROFILE SYSTEMS SHEET	0070
8	PROFILE SYSTEMS SHEET	0080
9	PROFILE SYSTEMS SHEET	0090
10	PROFILE SYSTEMS SHEET	0100
11	PROFILE SYSTEMS SHEET	0110
12	PROFILE SYSTEMS SHEET	0120
13	PROFILE SYSTEMS SHEET	0130

PROJECT LOCATION MAP
KAUFMAN COUNTY

PROJECT LENGTH	8.21 MILES	EXISTING ADT (2045)	N/A
NO. NB LANES	4	PROPOSED NB ADT (2045)	24,000
NO. SB LANES	4	PROPOSED SB ADT (2045)	24,000

NAD 1983 STATE PLANE FIPS TEXAS NORTH 4202 FEET
SURFACE TO GRID FACTOR: 1.000114577

COORDINATES SHOWN ON THIS SHEET ARE IN THE GRID COORDINATE SYSTEM OF THE DISTRICT SURROUNDING OR AS NOTED.

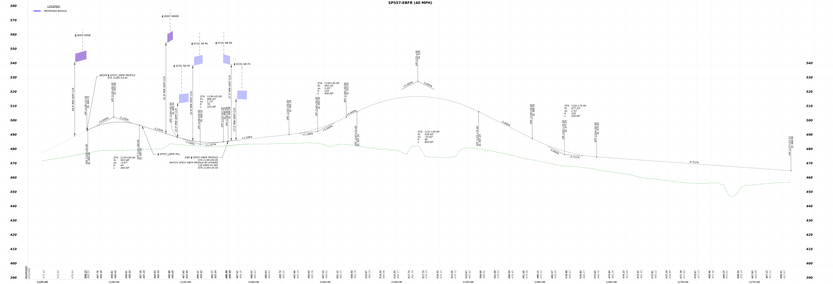
CONSTRUCTION	MONUMENTATION
Proposed Mainlanes	Proposed Mainlanes
Proposed Ramps	Proposed Ramps
Proposed Frontage Roads	Proposed Frontage Roads
Proposed Direct Connectors	Proposed Direct Connectors
Proposed Cross Streets	Proposed Cross Streets
Existing Roadway	Existing Roadway

PRELIMINARY
NOT FOR BIDDING OR CONSTRUCTION
PURPOSE: 90% SCHEMATIC

ROLL 26 OF 30

HDR
FIRM Registration No. F-754
11111 Pleasant Road, Suite 300
Dallas, Texas 75238-1232
(214) 692-2400

SP157-EBFB (45 MPH)



KAUFMAN COUNTY OUTER LOOP

Texas Department of Transportation

KAUFMAN COUNTY OUTER LOOP
90% SCHEMATIC

EXISTING CHANNEL AT
PROPOSED CHANNEL AT
FRONT DRAIN & DISTRICT
EXTENDED SIDEWALK
PROPOSED SIDEWALK

FUNCTIONAL CLASS: PRINCIPAL ARTERIAL OTHER FREEWAYS AND EXPRESSWAYS
TERMINAL LEVEL

DATE	STATE	DISTRICT	COUNTY	CONTROL SECTION JOB	SHEET NO.	SHEET TOTAL
11/15/2025	TX	DAL	KAUFMAN	0918	11	109

	ROADWAY	FUNCTIONAL CLASSIFICATION	DESIGN SPEED
Mainlanes	Outer Loop	Urban Freeway	75 MPH (0.0%)
	Outer Loop	Urban Freeway	70 MPH (0.0%)
	US 80	Urban Principal Arterial	45 MPH (0.0%)
Frontage Roads	US 80	Urban Principal Arterial	45 MPH (0.0%)
	US 80	Urban Minor Collector	40 MPH (0.0%)
	SH 205	Urban Principal Arterial	45 MPH (0.0%)
Cross Street (Connector)	SH 205	Urban Principal Arterial	45 MPH (0.0%)
	SH 205	Urban Principal Arterial	45 MPH (0.0%)
	FM 1390	Urban Principal Arterial	45 MPH (0.0%)
	FM 1390	Urban Minor Collector	40 MPH (0.0%)
	Gaul Hill Pkwy	Local Street	25 MPH (0.0%)
	Future Arterial	Local Street	25 MPH (0.0%)
	Hall Rd	Local Street	25 MPH (0.0%)
	Hall Rd	Local Street	25 MPH (0.0%)
	Future Street	Local Street	25 MPH (0.0%)

REV.	BY	INCURRED	DESCRIPTION	DATE
REV. 1	M.	INCURRED	REVISE TO 11 X 17 PLOTS	10/31/25
REV. 2	M.	INCURRED	ADD TO 90% SUBMITTAL	11/15/25
REV. 3				
REV. 4				
REV. 5				
REV. 6				
REV. 7				
REV. 8				
REV. 9				
REV. 10				

INDEX OF SHEETS

NO.	DESCRIPTION
1	TITLE SHEET
2	PROJECT LAYOUT
3	PROFILE SYSTEMS
4	PROFILE SYSTEMS
5	PROFILE SYSTEMS
6	PROFILE SYSTEMS
7	PROFILE SYSTEMS
8	PROFILE SYSTEMS
9	PROFILE SYSTEMS
10	PROFILE SYSTEMS
11	PROFILE SYSTEMS
12	PROFILE SYSTEMS
13	PROFILE SYSTEMS
14	PROFILE SYSTEMS
15	PROFILE SYSTEMS
16	PROFILE SYSTEMS
17	PROFILE SYSTEMS
18	PROFILE SYSTEMS
19	PROFILE SYSTEMS
20	PROFILE SYSTEMS
21	PROFILE SYSTEMS
22	PROFILE SYSTEMS
23	PROFILE SYSTEMS
24	PROFILE SYSTEMS
25	PROFILE SYSTEMS
26	PROFILE SYSTEMS
27	PROFILE SYSTEMS
28	PROFILE SYSTEMS
29	PROFILE SYSTEMS
30	PROFILE SYSTEMS

PROJECT LOCATION MAP
KAUFMAN COUNTY

PROJECT LENGTH	8.21 MILES	EXISTING ACT (OUW)	N/A
EXC. NO. / SH. NO.	109	PROPOSED ACT (OUW)	14.400
EXC. NO. / SH. NO.	109	PROPOSED ACT (OWE)	14.400

NAD 1983 STATE PLANE FIPS TEXAS NORTH 4202 FEET
SURFACE TO GRID FACTOR: 1.00011.6577

CONTROL POINTS ARE SHOWN ON THE PROJECT LAYOUT SHEETS

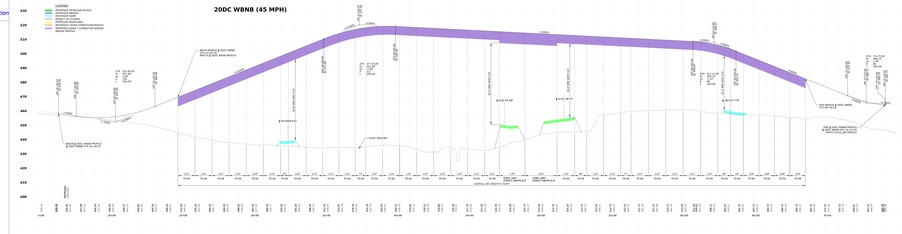
PRELIMINARY
NOT FOR BIDDING OR CONSTRUCTION
RELEASED FOR REVIEW ONLY

DESIGN ENGINEER
Signature
P.E. NUMBER
DATE

QUALITY CONTROL
Signature
DATE

ROLL 27 OF 30

HDR
FIRM Registration No. F-754
17111 Preston Road, Suite 300
Dallas, Texas 75248-1230
(972) 960-7400


20DC WBNB (45 MPH)
LEGEND
PROPOSED FRONTAGE ROADS
PROPOSED RAMPS
PROPOSED MAINLANES
PROPOSED SIDEWALKS
PROPOSED DIRECT CONNECTOR BRIDGE
BRIDGE PROFILE
BEGIN BRIDGE & DOC WBNB PROFILE @ STA 1+00.00
BEGIN BRIDGE & DOC WBNB PROFILE @ STA 1+00.00
END BRIDGE & DOC WBNB PROFILE @ STA 10+00.00
END BRIDGE & DOC WBNB PROFILE @ STA 10+00.00
EXIST GROUND
OVERALL DR UNDER PLAN
OVERALL DR UNDER PLAN
OVERALL DR UNDER PLAN

KAUFFMAN COUNTY OUTER LOOP

Texas Department of Transportation

KAUFMAN COUNTY OUTER LOOP
90% SCHEMATIC

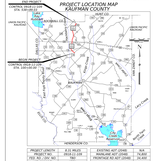
FUTURE CHANNEL AT
FUTURE GRADE SEPARATED
EXISTING GRADE AT US 80
PROJECT LOCATION MAP

FUNCTIONAL CLASS: PRINCIPAL ARTERIAL OTHER FREEWAYS AND EXPRESSWAYS
TERRAIN: LEVEL

DATE	STATE	DISTRICT	COUNTY	SHEET NO.	SHT TOT
11/15/2025	TX	DAL	KAUFMAN	GEOT	113

ROADWAY	FUNCTIONAL CLASSIFICATION	DESIGN SPEED
Outer Loop	Urban Freeway	75 MPH (U)
Mainlanes	Urban Principal Arterial	70 MPH (U)
	Urban Principal Arterial	65 MPH (U)
Frontage Roads	Urban Minor Collector	40 MPH (U)
	Urban Minor Collector	40 MPH (U)
Ramps	Urban Principal Arterial	45 MPH (U)
Direct Connectors	Urban Principal Arterial	45 MPH (U)
Cross Street	Urban Principal Arterial	45 MPH (U)
	Urban Principal Arterial	45 MPH (U)
	Urban Principal Arterial	45 MPH (U)
	Local Street	25 MPH (U)
	Local Street	25 MPH (U)
	Local Street	25 MPH (U)
	Local Street	25 MPH (U)
	Local Street	25 MPH (U)

REV	I.K.	INCARNO	BEGIN STA.	END STA.	DESIGN SPEED
REV 1	X	PROJ. BEGIN STA.	5+00.00	7+00.00	45 MPH
REV 1	X	PROJECT STA. 7+00.00	7+00.00	10+00.00	45 MPH
REV 1	X	PROJECT STA. 10+00.00	10+00.00	12+00.00	45 MPH
REV 1	X	PROJECT STA. 12+00.00	12+00.00	15+00.00	45 MPH
REV 1	X	PROJECT STA. 15+00.00	15+00.00	17+00.00	45 MPH
REV 1	X	PROJECT STA. 17+00.00	17+00.00	PROJ. END STA.	45 MPH
REV 1	X	PROJECT STATION 14+00.00	14+00.00	16+00.00	45 MPH
REV 1	X	PROJECT STATION 16+00.00	16+00.00	18+00.00	45 MPH
REV 1	X	PROJECT STATION 18+00.00	18+00.00	20+00.00	45 MPH
REV 1	X	PROJECT STATION 20+00.00	20+00.00	22+00.00	45 MPH
REV 1	X	PROJECT STATION 22+00.00	22+00.00	24+00.00	45 MPH
REV 1	X	PROJECT STATION 24+00.00	24+00.00	26+00.00	45 MPH
REV 1	X	PROJECT STATION 26+00.00	26+00.00	28+00.00	45 MPH



PROJECT LENGTH	8.21 MILES	EXISTING ADT (2045)	N/A
TOTAL NO. OF LANES	4 MAINLANES	PROPOSED ADT (2045)	84,000
TOTAL NO. OF SHEETS	113	PROPOSED ADT (2050)	91,000

NAD 1983 STATE PLANE FIPS TEXAS NORTH 4202 FEET
SURFACE TO GRID FACTOR: 1.000113 ADJ'T

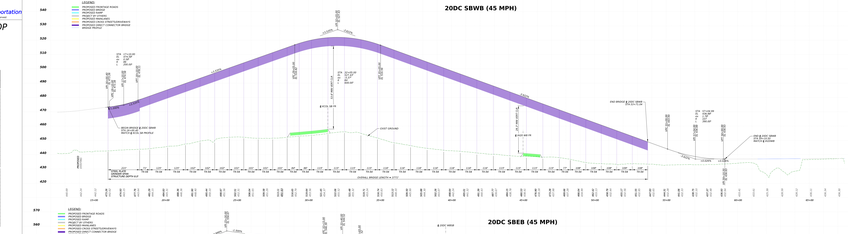
CONTRACTOR'S SIGNATURE	DATE
THE DIRECT SUPERVISION OF:	
DESIGN ENGINEER	DATE
SEAL	

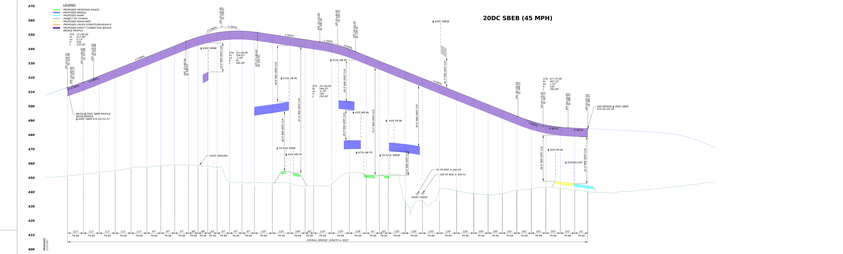
PRELIMINARY
USE NOTICE: 90% PS&E - NOT FOR CONSTRUCTION OR BIDDING

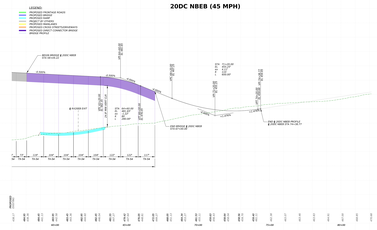
BEGIN PROJECT	END PROJECT
STA. 5+00.00	STA. 28+00.00

ROLL 28 OF 30

HDR
FIRM Registration No. F-754
17111 Preston Road, Suite 300
Dallas, Texas 75248
(972) 960-7400







KAUFFMAN COUNTY OUTER LOOP

Texas Department of Transportation

KAUFMAN COUNTY OUTER LOOP
90% SCHEMATIC

FUTURE CHANNEL AT
FUTURE GRADE SEPARATED
EXISTING GRADE AT US 80
PROJECT LOCATION MAP

FUNCTIONAL CLASS: PRINCIPAL ARTERIAL OTHER FREEWAYS AND EXPRESSWAYS
TERRAIN: LEVEL

DATE	STATE	DISTRICT	COUNTY	SHEET NO.	SHT TOT
11/15/2025	TX	DAL	KAUFMAN	GEOT	113

ROADWAY	FUNCTIONAL CLASSIFICATION	DESIGN SPEED
Outer Loop	Urban Freeway	75 MPH (U)
Mainlanes	Urban Principal Arterial	70 MPH (U)
	Urban Principal Arterial	65 MPH (U)
Frontage Roads	Urban Minor Collector	40 MPH (U)
	Urban Minor Collector	40 MPH (U)
Ramps	Urban Principal Arterial	45 MPH (U)
Direct Connectors	Urban Principal Arterial	45 MPH (U)
Cross Street	Urban Principal Arterial	45 MPH (U)
	Urban Principal Arterial	45 MPH (U)
	Urban Principal Arterial	45 MPH (U)
	Local Street	25 MPH (U)
	Local Street	25 MPH (U)
	Local Street	25 MPH (U)
	Local Street	25 MPH (U)
	Local Street	25 MPH (U)

REV	I.K.	INCARNO	BEGIN STA.	END STA.	DESIGN SPEED
REV 1	X	PROJ. BEGIN STA.	5+00.00	7+00.00	45 MPH
REV 1	X	PROJECT STA. 7+00.00	7+00.00	10+00.00	45 MPH
REV 1	X	PROJECT STA. 10+00.00	10+00.00	12+00.00	45 MPH
REV 1	X	PROJECT STA. 12+00.00	12+00.00	15+00.00	45 MPH
REV 1	X	PROJECT STA. 15+00.00	15+00.00	17+00.00	45 MPH
REV 1	X	PROJECT STA. 17+00.00	17+00.00	PROJ. END STA.	45 MPH
REV 1	X	PROJECT STATION 14+00.00	14+00.00	16+00.00	45 MPH
REV 1	X	PROJECT STATION 16+00.00	16+00.00	18+00.00	45 MPH
REV 1	X	PROJECT STATION 18+00.00	18+00.00	20+00.00	45 MPH
REV 1	X	PROJECT STATION 20+00.00	20+00.00	22+00.00	45 MPH
REV 1	X	PROJECT STATION 22+00.00	22+00.00	24+00.00	45 MPH
REV 1	X	PROJECT STATION 24+00.00	24+00.00	26+00.00	45 MPH
REV 1	X	PROJECT STATION 26+00.00	26+00.00	28+00.00	45 MPH

PROJECT LENGTH	8.21 MILES	EXISTING ADT (2045)	N/A
TOTAL NO. OF LANES	4 MAINLANES	PROPOSED ADT (2045)	84,000
TOTAL NO. OF SHEETS	113	PROPOSED ADT (2050)	91,000

NAD 1983 STATE PLANE FIPS TEXAS NORTH 4202 FEET
SURFACE TO GRID FACTOR: 1.000113 ADJ'T

CONTRACTOR'S SIGNATURE	DATE
THE DIRECT SUPERVISION OF:	
DESIGN ENGINEER	DATE
SEAL	

PRELIMINARY
USE NOTICE: 90% PS&E - NOT FOR CONSTRUCTION OR BIDDING

BEGIN PROJECT	END PROJECT
STA. 5+00.00	STA. 28+00.00

ROLL 28 OF 30

HDR
FIRM Registration No. F-754
17111 Preston Road, Suite 300
Dallas, Texas 75248
(972) 960-7400

KAUFMAN COUNTY OUTER LOOP

Texas Department of Transportation

KAUFMAN COUNTY OUTER LOOP
90% SCHEMATIC

FROM FM 2578
TO FM 1389
FROM US 80 (NORTH)
TO IH 20 (SOUTH)
(INCLUDING SOUTH SPUR)
(PROJECT LENGTH = 8.31 MILES)

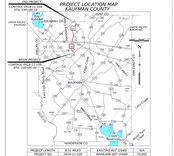
FUNCTIONAL CLASS: PRINCIPAL ARTERIAL OTHER FREEWAYS AND EXPRESSWAYS
TERRAIN: LEVEL

DATE	STATE	DISTRICT	COUNTY	CONTROL SECTION JOB	SHEET NO.	SHEET TOTAL
11/15/2025	TX	DAL	KAUFMAN	0918	11	109

ROADWAY	FUNCTIONAL CLASSIFICATION	DESIGN SPEED
Outer Loop	Urban Freeway	70 MPH
Frontage Road	Urban Principal Arterial	40 MPH
Ramps	Urban Freeway	70 MPH
Frontage Road	Urban Principal Arterial	40 MPH
Ramps	Urban Freeway	70 MPH
Cross Street	Urban Principal Arterial	40 MPH
	Urban Major Collector	40 MPH
	Urban Minor Collector	40 MPH
	Local Street	30 MPH
	Future Arterial	40 MPH
	Local Street	30 MPH
	FM 148	40 MPH
	Local Street	30 MPH

REV.	DESCRIPTION	REVISED DATE
REV. 1	ADD. MOVE CS 1, CS 2, CS 3, CS 4, CS 5	10/31/25
REV. 2	ADD. MOVE CS 6, CS 7, CS 8, CS 9, CS 10	11/14/25
REV. 3	ADD. MOVE CS 11, CS 12, CS 13, CS 14, CS 15	11/15/25
REV. 4	ADD. MOVE CS 16, CS 17, CS 18, CS 19, CS 20	11/15/25
REV. 5	ADD. MOVE CS 21, CS 22, CS 23, CS 24, CS 25	11/15/25
REV. 6	ADD. MOVE CS 26, CS 27, CS 28, CS 29, CS 30	11/15/25
REV. 7	PROFILE STATIONS UNITS	11/15/25
REV. 8	PROFILE STATIONS UNITS	11/15/25
REV. 9	PROFILE STATIONS UNITS	11/15/25
REV. 10	PROFILE STATIONS UNITS	11/15/25
REV. 11	PROFILE STATIONS UNITS	11/15/25
REV. 12	PROFILE STATIONS UNITS	11/15/25

PROJECT LOCATION MAP
KAUFMAN COUNTY



PROJECT LENGTH	8.31 MILES	EXISTING ROW WIDTH	N/A
TOT. NO. LNS. NO.	4	PROPOSED ROW WIDTH	300'
TOT. NO. LNS. NO.	4	PROPOSED NO.OF LANES	4

NAD 1983 STATE PLANE FIPS TEXAS NORTH 4202 FEET
SURFACE TO GRID FACTOR: 1.000131877

COORDINATES SHOWN ON THIS PLAN SHEET ARE BASED ON THE DIRECT SURFACE/GRID SF.

CONTROLLING CRITERIA	DESIGN SPEED
TERRAIN LEVEL	70 MPH

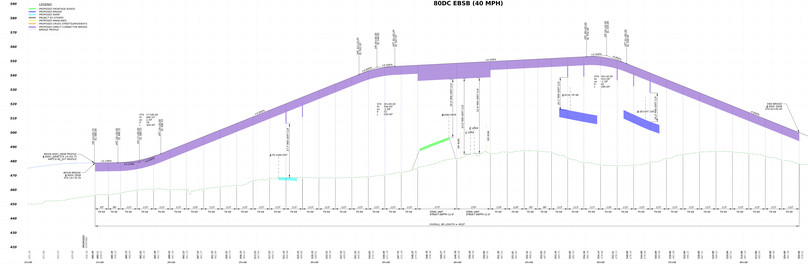
BASIS OF ELEVATION	BASIS OF BEARING
NAVD 88	GRID

PRELIMINARY
NOT FOR BIDDING OR CONSTRUCTION
NOT FOR RECORDING OR CONVEYANCE

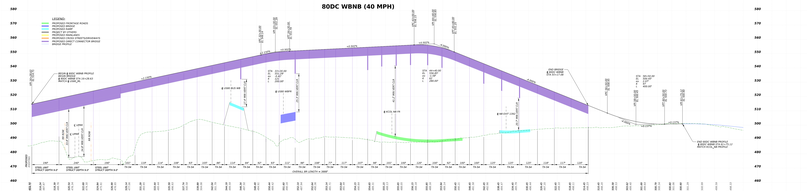
ROLL 29 OF 30

HDR
FIRM Registration No. F-754
11111 Pleasant Ridge, Suite 300
Little Rock, Arkansas 72223
(479) 464-2400

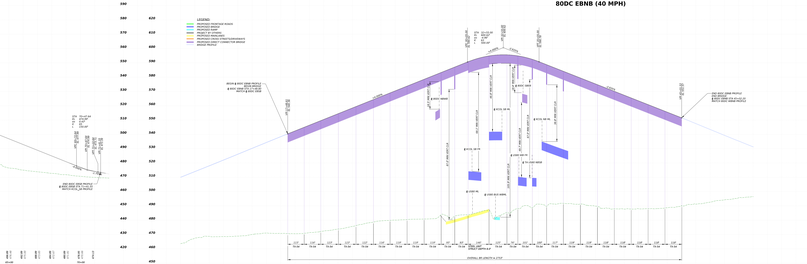
80DC EBSB (40 MPH)



80DC WBNB (40 MPH)



80DC EBNB (40 MPH)



KAUFMAN COUNTY OUTER LOOP

Texas Department of Transportation

KAUFMAN COUNTY OUTER LOOP
90% SCHEMATIC

FROM FM 2578
TO FM 1389
FROM US 80 (NORTH)
TO IH 20 (SOUTH)
(INCLUDING SOUTH SPUR)
(PROJECT LENGTH = 8.31 MILES)

FUNCTIONAL CLASS: PRINCIPAL ARTERIAL OTHER FREEWAYS AND EXPRESSWAYS
TERRAIN: LEVEL

DATE 11/15/2025 | STATE TX | DISTRICT DAL | COUNTY KAUFMAN | CONTROL SECTION JOB 0918 | SHEET NO. 11 | SHEET TOTAL 109

ROADWAY / FUNCTIONAL CLASSIFICATION / DESIGN SPEED
Outer Loop — Urban Freeway — 70 MPH
Frontage Road — Urban Principal Arterial — 40 MPH
Ramps — Urban Freeway — 70 MPH
Frontage Road — Urban Principal Arterial — 40 MPH
Ramps — Urban Freeway — 70 MPH
Cross Street — Urban Principal Arterial — 40 MPH
Urban Major Collector — 40 MPH
Urban Minor Collector — 40 MPH
Local Street — 30 MPH
Future Arterial — 40 MPH
Local Street — 30 MPH
FM 148 — 40 MPH
Local Street — 30 MPH
(+ Ramps) — 40 MPH
LOOP 301 — 40 MPH

REV. 1 ADD. MOVE CS 1, CS 2, CS 3, CS 4, CS 5 — 10/31/25
REV. 2 ADD. MOVE CS 6, CS 7, CS 8, CS 9, CS 10 — 11/14/25
REV. 3 ADD. MOVE CS 11, CS 12, CS 13, CS 14, CS 15 — 11/15/25
REV. 4 ADD. MOVE CS 16, CS 17, CS 18, CS 19, CS 20 — 11/15/25
REV. 5 ADD. MOVE CS 21, CS 22, CS 23, CS 24, CS 25 — 11/15/25
REV. 6 ADD. MOVE CS 26, CS 27, CS 28, CS 29, CS 30 — 11/15/25
REV. 7 PROFILE STATIONS UNITS — 11/15/25
REV. 8 PROFILE STATIONS UNITS — 11/15/25
REV. 9 PROFILE STATIONS UNITS — 11/15/25
REV. 10 PROFILE STATIONS UNITS — 11/15/25
REV. 11 PROFILE STATIONS UNITS — 11/15/25
REV. 12 PROFILE STATIONS UNITS — 11/15/25

PROJECT LOCATION MAP
KAUFMAN COUNTY

PROJECT LENGTH 8.31 MILES | EXISTING ROW WIDTH N/A
TOT. NO. LNS. NO. 4 | PROPOSED ROW WIDTH 300'
TOT. NO. LNS. NO. 4 | PROPOSED NO.OF LANES 4

NAD 1983 STATE PLANE FIPS TEXAS NORTH 4202 FEET
SURFACE TO GRID FACTOR: 1.000131877

CONTROLLING CRITERIA: DESIGN SPEED — 70 MPH
TERRAIN LEVEL

BASIS OF ELEVATION: NAVD 88
BASIS OF BEARING: GRID

PRELIMINARY
NOT FOR BIDDING OR CONSTRUCTION
NOT FOR RECORDING OR CONVEYANCE

ROLL 29 OF 30

HDR
FIRM Registration No. F-754
11111 Pleasant Ridge, Suite 300
Little Rock, Arkansas 72223
(479) 464-2400

KAUFMAN COUNTY OUTER LOOP

Texas Department of Transportation

KAUFMAN COUNTY OUTER LOOP
90% SCHEMATIC

TOSTRUP/CHISHOLM
KAUFMAN COUNTY, TEXAS
FM2257 (SKILLMAN STREET)
FUTURE OUTER LOOP
CONTROL 0918-04-XXX
PROJECT 0918-04-XXX

FUNCTIONAL CLASS: PRINCIPAL ARTERIAL OTHER FREEWAYS AND EXPRESSWAYS
TERRAIN: LEVEL

DATE	STATE	DISTRICT	COUNTY	CONTROL SECTION JOB	SHEET NO.	SHEET NO.
11/15/2025	TX	DAL	KAUFMAN	0918	3.1	109

	ROADWAY	FUNCTIONAL CLASSIFICATION	DESIGN SPEED
Mainlanes	Outer Loop	Other Freeway	75 MPH (E/B)
	Outer Loop	Other Freeway	70 MPH (W/B)
Frontage Roads	SH 205	Urban Principal Arterial	40 MPH (E/B)
	SH 205	Urban Principal Arterial	40 MPH (W/B)
	All Others	Urban Major Collector	30 MPH (E/B)
	All Others	Urban Major Collector	30 MPH (W/B)
Direct Connect (UNDIVIDED) Ramps	SH 205	Urban Principal Arterial	40 MPH (E/B)
Cross Streets	SH205	Urban Principal Arterial	40 MPH (E/B)
	Crandall Rd	Urban Major Collector	40 MPH (E/B)
	FM 1392	Urban Major Collector	40 MPH (E/B)
	Dike Rd	Urban Major Collector	40 MPH (E/B)
	Dike Rd Relo	Local Street	40 MPH (E/B)
	Future Arterial	Local Street	40 MPH (E/B)
	FM 148	Local Street	40 MPH (E/B)
	FM 148	Local Street	40 MPH (E/B)
* = Future		Local Street	40 MPH (E/B)

INDEX OF SHEETS

NO.	DESCRIPTION
1	TITLE SHEET
2	INDEX OF SHEETS
3	PROJECT LAYOUT
4	PROFILE SHEET
5	PROFILE SHEET
6	PROFILE SHEET
7	PROFILE SHEET
8	PROFILE SHEET
9	PROFILE SHEET
10	PROFILE SHEET
11	PROFILE SHEET
12	PROFILE SHEET
13	PROFILE SHEET
14	PROFILE SHEET
15	PROFILE SHEET
16	PROFILE SHEET
17	PROFILE SHEET
18	PROFILE SHEET
19	PROFILE SHEET
20	PROFILE SHEET
21	PROFILE SHEET
22	PROFILE SHEET
23	PROFILE SHEET
24	PROFILE SHEET
25	PROFILE SHEET
26	PROFILE SHEET
27	PROFILE SHEET
28	PROFILE SHEET
29	PROFILE SHEET
30	PROFILE SHEET

PROJECT LOCATION MAP
KAUFMAN COUNTY

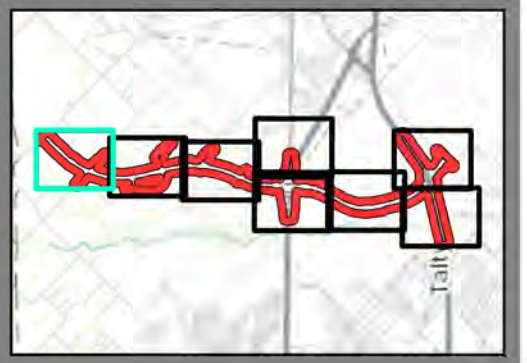
BEGIN PROJECT
CONTROL 0918-04-XXX
STA 1000+00.00
SH 205
FM 1392
Crandall Rd
Dike Rd
Dike Rd Relo
Future Arterial
FM 148
FM 2932
FM 2757
FM 2578
FM 2578
FM 2578

APPENDIX E-1 – WATER FEATURES MAP and SECTION 404-10 IMPACTS TABLE

FIELD DELINEATION MAP

Kaufman County Outer Loop

CSJ: 0918-11-109



- Project Area
- Culvert
- Potential Stream
- Intermittent Stream
- Perennial Stream
- Emergent Wetland
- Forested Wetland
- On-Channel Pond
- Potential Wetland

Data Sources: Field Data - HDR 2024

Basemap: NAIP 2024

Texas Department of Transportation

0 250 500

Feet

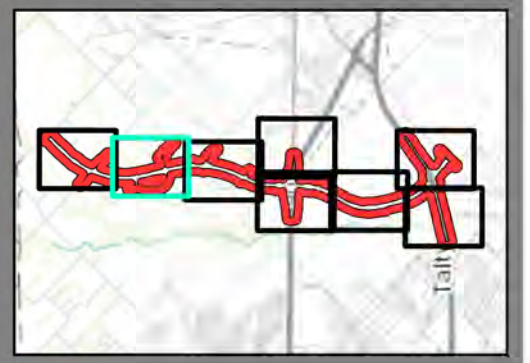
April 2025	Figure E1-01

O:\110341310_10168 Kaufman County Outer Loop\Map Docs\Figures\MXD_Wetland Features.aprx

FIELD DELINEATION MAP

Kaufman County Outer Loop

CSJ: 0918-11-109



- Project Area
- Culvert
- Potential Stream
- Intermittent Stream
- Perennial Stream
- Emergent Wetland
- Forested Wetland
- On-Channel Pond
- Potential Wetland

Data Sources: Field Data - HDR 2024

Basemap: NAIP 2024

Texas Department of Transportation

0 250 500

Feet

April 2025 | Figure E1-02

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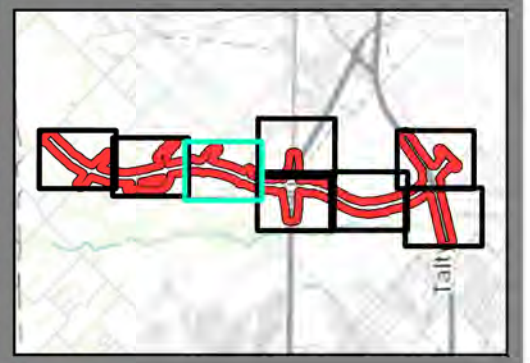
FIELD DELINEATION MAP

Kaufman County Outer Loop

CSJ: 0918-11-109



- Project Area
- Culvert
- Potential Stream
- Intermittent Stream
- Perennial Stream
- Emergent Wetland
- Forested Wetland
- On-Channel Pond
- Potential Wetland

110*

Data Sources: Field Data - HDR 2024

Basemap: NAIP 2024

Texas Department of Transportation

0 250 500

Feet

April 2025 | Figure E1-03

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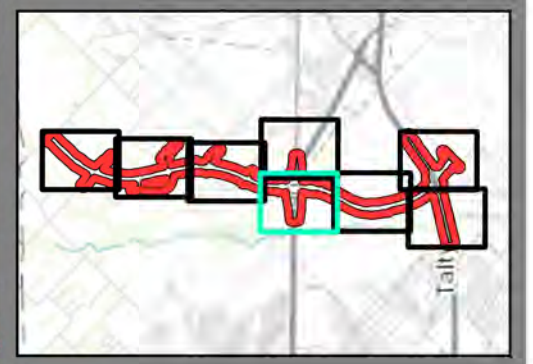
FIELD DELINEATION MAP

Kaufman County Outer Loop

CSJ: 0918-11-109



- Project Area
- Culvert
- Potential Stream
- Intermittent Stream
- Perennial Stream
- Emergent Wetland
- Forested Wetland
- On-Channel Pond
- Potential Wetland

Data Sources: Field Data - HDR 2024

Basemap: NAIP 2024

Texas Department of Transportation

0 250 500

Feet

April 2025 | Figure E1-04

116*

116*

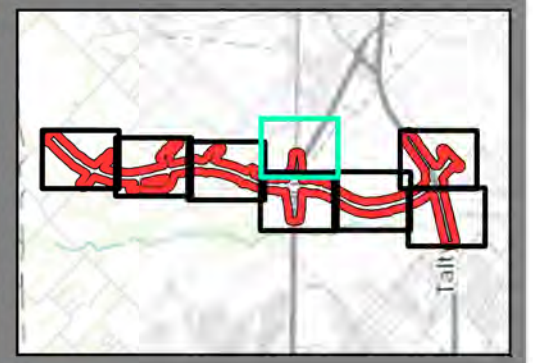
114*

O:\1004\3510_0918_Kaufman_County_Outer_Loop\Map_Docs\ArcPanel\KDX_WatersFeatures.aprx

FIELD DELINEATION MAP

Kaufman County Outer Loop

CSJ: 0918-11-109



- Project Area
- Culvert
- Potential Stream
- Intermittent Stream
- Perennial Stream
- Emergent Wetland
- Forested Wetland
- On-Channel Pond
- Potential Wetland

Data Sources: Field Data - HDR 2024

Basemap: NAIP 2024

Texas Department of Transportation

0 250 500

Feet

April 2025 | Figure E1-05

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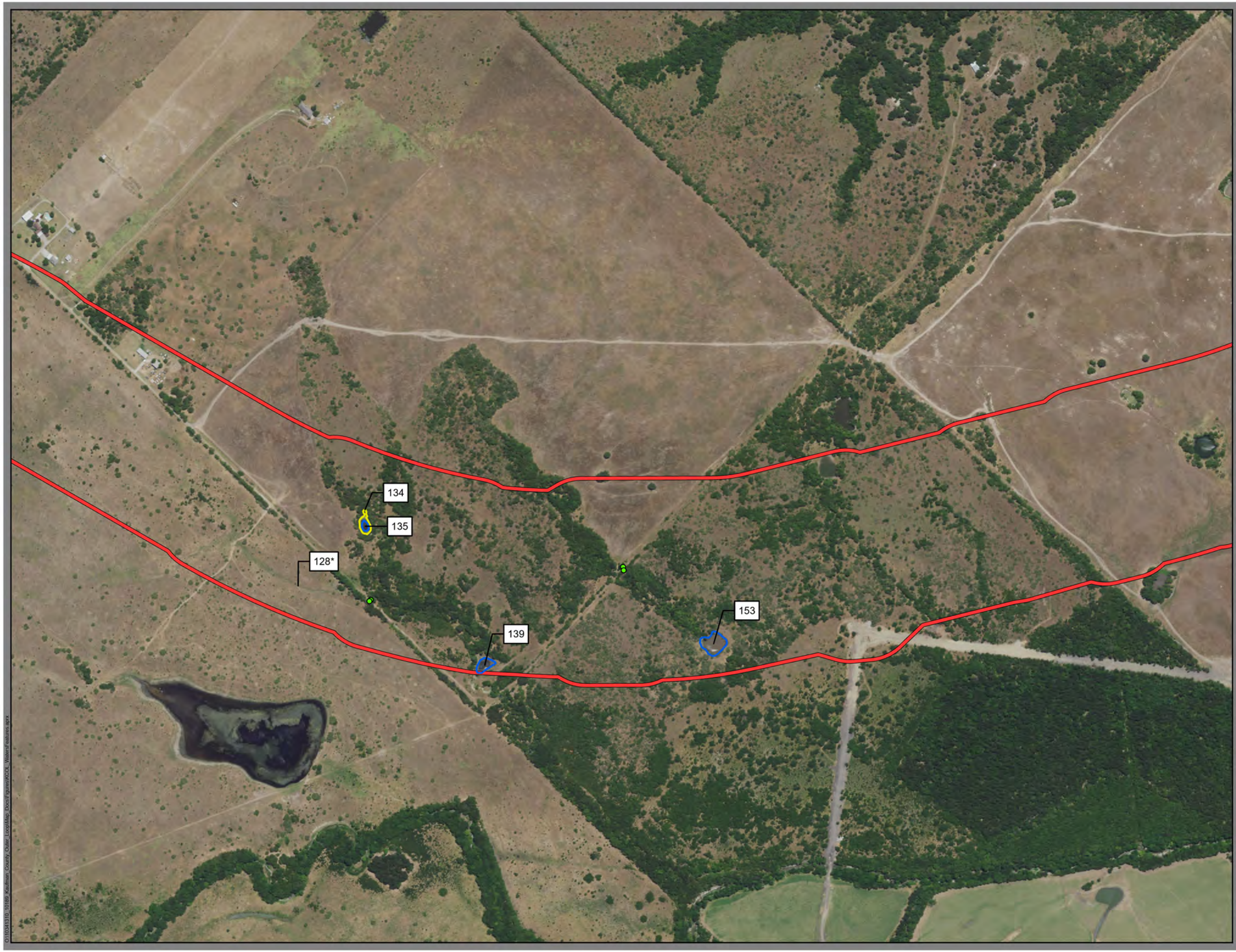
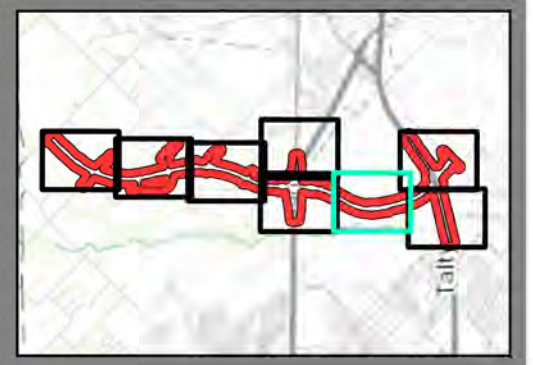


FIELD DELINEATION MAP

Kaufman County Outer Loop

CSJ: 0918-11-109



- Project Area
- Culvert
- Potential Stream
- Intermittent Stream
- Perennial Stream
- Emergent Wetland
- Forested Wetland
- On-Channel Pond
- Potential Wetland

Data Sources: Field Data - HDR 2024

Basemap: NAIP 2024

Texas Department of Transportation

0 250 500

Feet

April 2025 | Figure E1-06

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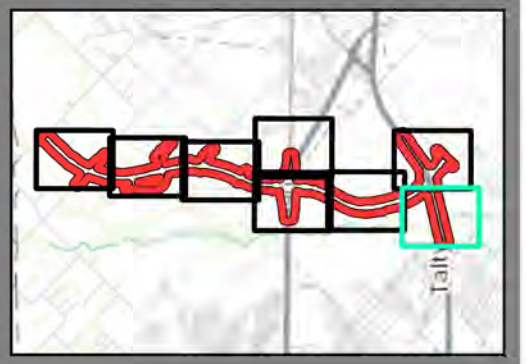
FIELD DELINEATION MAP

Kaufman County Outer Loop

CSJ: 0918-11-109



- Project Area
- Culvert
- Potential Stream
- Intermittent Stream
- Perennial Stream
- Emergent Wetland
- Forested Wetland
- On-Channel Pond
- Potential Wetland

Data Sources: Field Data - HDR 2024

Basemap: NAIP 2024

Texas Department of Transportation

0 250 500

Feet

April 2025 | Figure E1-07

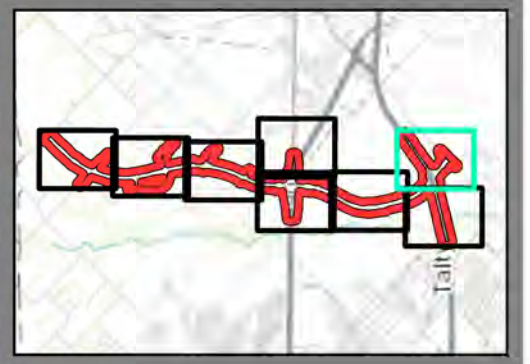
192*
188*
178
175*
186*
174*
185*
184*
182*
183*
172
180*
179*
181*
171*

0310343310_10169_Kaufman_County_Outer_Loop\Maps_Docs\Figures\ROCK_WatersFeatures.aprx

FIELD DELINEATION MAP

Kaufman County Outer Loop

CSJ: 0918-11-109



- Project Area
- Culvert
- Potential Stream
- Intermittent Stream
- Perennial Stream
- Emergent Wetland
- Forested Wetland
- On-Channel Pond
- Potential Wetland

Data Sources: Field Data - HDR 2024

Basemap: NAIP 2024

Texas Department of Transportation

0 250 500

Feet

N E S W

April 2025	Figure E1-08

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Section 404/10 Impacts Table

Version 4, November 2021

Kaufman County Outer Loop

CSJ 0918-11-109

USACE Project Number

10/29/2024

Water Feature Characteristics							Potentially Jurisdictional?		Total Section 404 impacts for WATER FEATURE						Total section 404 impacts for CROSSING						Authorization			
									Temporary			Permanent			Temporary			Permanent						
Crossing number	Water feature number	Name	Type	Latitude, Longitude	Acres within project area (all water features, including streams)	Linear feet within project area (streams only)	Section 404 (waters of the U.S.)	Section 10 (navigable waters)	Acres of temporary impact (all water features, including streams)	Linear feet of temporary impact (streams only)	Cubic yards (CY) of fill material to be temporarily discharged (all water features, including streams)	Acres of permanent impact (all water features, including streams)	Linear feet of permanent impact (streams only)	Cubic yards (CY) of fill material to be permanently discharged (all water features, including streams)	Acres of temporary impact (all water features, including streams)	Linear feet of temporary impact (streams only)	Cubic yards (CY) of fill material to be temporarily discharged (all water features, including streams)	Acres of permanent impact (all water features, including streams)	Linear feet of permanent impact (streams only)	Cubic yards (CY) of fill material to be permanently discharged (all water features, including streams)	Authorization Type	Number (NWP and RGP only)	Reason (PCN only)	Mitigation Required?
1	4*	Unnamed wetland	Potential Emergent Wetland	32.8051746°, -96.3432234°	0.01	N/A	Yes	No	0	N/A	Not available at this time	0.007	N/A	Not available at this time	0	N/A	Not available at this time	0.007	N/A	Not available at this time	NWP - PCN	14	Discharge into a special aquatic site	No
	5	Unnamed pond	Upland Pond	32.7998843°, -96.3482353°	0.24	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	6	Unnamed swale	Swale	32.8001271°, -96.3499353°	N/A	653	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	7	Unnamed swale	Swale	32.7995928°, -96.3494925°	N/A	92	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	8	Unnamed pond	Upland Pond	32.7986970°, -96.3525108°	0.28	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	9	Unnamed wetland	Emergent Wetland	32.7986190°, -96.3526747°	0.02	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	10	Unnamed swale	Swale	32.7984948°, -96.3519382°	N/A	135	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	11	Unnamed wetland	Emergent Wetland	32.7982807°, -96.3516324°	0.08	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	12	Unnamed swale	Swale	32.7980496°, -96.3517007°	N/A	84	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	13	Unnamed wetland	Emergent Wetland	32.7980100°, -96.3515158°	0.01	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	14	Unnamed swale	Swale	32.7980143°, -96.3514127°	N/A	23	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	15	Unnamed wetland	Emergent Wetland	32.7978925°, -96.3513138°	0.04	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	16	Unnamed swale	Swale	32.7974110°, -96.3509851°	N/A	331	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
2	17*	Unnamed wetland	Potential Emergent Wetland	32.7973819°, -96.3510715°	0.01	N/A	Yes	No	0	N/A	Not available at this time	0	N/A	Not available at this time	0	N/A	Not available at this time	0	N/A	Not available at this time	NWP - Non-reporting	14	N/A	No
	18*	Unnamed swale	Swale	32.7972392°, -96.3509302°	N/A	77	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	19*	Unnamed pond	Upland Pond	32.7971619°, -96.3506075°	0.01	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	21*	Unnamed swale	Swale	32.7976258°, -96.3595829°	N/A	154	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	22*	Unnamed pond	Upland Pond	32.7976974°, -96.3587981°	0.53	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	24*	Unnamed swale	Swale	32.7974642°, -96.3600684°	N/A	124	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	25*	Unnamed pond	Upland Pond	32.7972796°, -96.3602779°	0.24	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
3	26*	Unnamed wetland	Potential Forested Wetland	32.7968236°, -96.3601523°	0.40	N/A	Yes	No	0	N/A	Not available at this time	0	N/A	Not available at this time	0	N/A	Not available at this time	0	N/A	Not available at this time	NWP - Non-reporting	14	N/A	No
	27	Unnamed swale	Swale	32.7964757°, -96.3596637°	N/A	188	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	28	Unnamed pond	Upland Pond	32.7962201°, -96.3594267°	0.49	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	33*	Unnamed pond	Upland Pond	32.7962421°, -96.3564760°	0.11	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	34*	Unnamed pond	Upland Pond	32.7958797°, -96.3559554°	0.34	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	35	Unnamed swale	Swale	32.7948885°, -96.3557366°	N/A	411	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	36	Unnamed stream	Ephemeral Stream	32.7943396°, -96.3556551°	0.002	24	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	37	Unnamed stream	Ephemeral Stream	32.7940735°, -96.3557244°	0.03	115	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	38	Unnamed wetland	Scrub Shrub Wetland	32.7938605°, -96.3564786°	0.08	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	39	Unnamed pond	Upland Pond	32.7938541°, -96.3564666°	0.22	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
4	40*	Unnamed pond	On-Channel Pond	32.7932732°, -96.3555266°	0.75	N/A	Yes	No	0.75	N/A	Not available at this time	0	N/A	Not available at this time	0.75	N/A	Not available at this time	0	N/A	Not available at this time	NWP - Non-reporting	14	N/A	No
	41*	Unnamed stream	Ephemeral Stream	32.7925442°, -96.3553339°	0.02	269	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	42	Unnamed stream	Ephemeral Stream	32.7917308°, -96.3547464°	0.01	466	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	43	Unnamed swale	Swale	32.7922293°, -96.3551749°	N/A	60	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
5	45*	Unnamed wetland	Potential Emergent Wetland	32.7923895°, -96.3577035°	0.05	N/A	Yes	No	0	N/A	Not available at this time	0	N/A	Not available at this time	0	N/A	Not available at this time	0	N/A	Not available at this time	NWP - Non-reporting	14	N/A	No
	46*	Unnamed pond	Upland Pond	32.7924306°, -96.3577342°	0.17	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	47	Unnamed stream	Ephemeral Stream	32.7881699°, -96.3572146°	0.02	252	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	48	Unnamed swale	Swale	32.7877846°, -96.3567601°	N/A	248	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	49	Unnamed stream	Ephemeral Stream	32.7872545°, -96.3564585°	0.07	750	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	50	Unnamed swale	Swale	32.7876913°, -96.3569039°	N/A	103	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	51	Unnamed pond	Upland Pond	32.7831819°, -96.3607453°	0.01	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	52	Unnamed swale	Swale	32.7828773°, -96.3608912°	N/A	225	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	53	Unnamed pond	Upland Pond	32.7823289°, -96.3610640°	0.24	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	54	Unnamed pond	Upland Pond	32.7819754°, -96.3586870°	0.31	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	55	Unnamed swale	Swale	32.7816470°, -96.3583360°	N/A	172	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	56	Unnamed stream	Ephemeral Stream	32.7818367°, -96.3567661°	0.01	169	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	57	Unnamed stream	Ephemeral Stream	32.7816658°, -96.3567713°	0.002	89	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										

Section 404/10 Impacts Table

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									Temporary			Permanent			Temporary			Permanent						
Crossing number	Water feature number	Name	Type	Latitude, Longitude	Acres within project area (all water features, including streams)	Linear feet within project area (streams only)	Section 404 (waters of the U.S.)	Section 10 (navigable waters)	Acres of temporary impact (all water features, including streams)	Linear feet of temporary impact (streams only)	Cubic yards (CY) of fill material to be temporarily discharged (all water features, including streams)	Acres of permanent impact (all water features, including streams)	Linear feet of permanent impact (streams only)	Cubic yards (CY) of fill material to be permanently discharged (all water features, including streams)	Acres of temporary impact (all water features, including streams)	Linear feet of temporary impact (streams only)	Cubic yards (CY) of fill material to be temporarily discharged (all water features, including streams)	Acres of permanent impact (all water features, including streams)	Linear feet of permanent impact (streams only)	Cubic yards (CY) of fill material to be permanently discharged (all water features, including streams)	Authorization Type	Number (NWP and RGP only)	Reason (PCN only)	Mitigation Required?
	58	Unnamed stream	Ephemeral Stream	32.7816575°, -96.3569764°	0.01	177	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	59	Unnamed stream	Ephemeral Stream	32.7815195°, -96.3571008°	0.01	152	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	60	Unnamed stream	Ephemeral Stream	32.7815632°, -96.3572978°	0.01	120	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	61	Unnamed drainage ditch	Drainage Ditch	32.7811935°, -96.3573170°	N/A	34	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
6A	62	Little High Point Creek	Intermittent Stream	32.7799126°, -96.3589047°	1.12	2733	Yes	No	0.33	862	Not available at this time	0	0	Not available at this time	0.56	862	Not available at this time	0	0	Not available at this time	NWP - PCN	14	Discharge into a special aquatic site	No
	63	Unnamed drainage ditch	Drainage Ditch	32.7809910°, -96.3573392°	N/A	50	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	64	Unnamed stream	Ephemeral Stream	32.7808944°, -96.3577153°	0.001	52	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
6B	65	Unnamed wetland	Emergent Wetland	32.7811229°, -96.3579714°	0.21	N/A	Yes	No	0.21	N/A	Not available at this time	0	N/A	Not available at this time										
	66	Unnamed wetland	Emergent Wetland	32.7815040°, -96.3557309°	0.21	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	67	Unnamed wetland	Emergent Wetland	32.7811957°, -96.3560818°	0.07	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	68	Unnamed wetland	Emergent Wetland	32.7806232°, -96.3575187°	0.02	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	69	Unnamed swale	Swale	32.7805754°, -96.3571710°	N/A	194	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	70	Unnamed wetland	Emergent Wetland	32.7804829°, -96.3568563°	0.004	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	71	Unnamed swale	Swale	32.7804640°, -96.3567583°	N/A	37	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	72	Unnamed stream	Ephemeral Stream	32.7803100°, -96.3565323°	0.01	161	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	73	Unnamed stream	Ephemeral Stream	32.7803501°, -96.3563884°	0.005	72	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	74	Unnamed stream	Ephemeral Stream	32.7804430°, -96.3563846°	0.003	49	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	75	Unnamed swale	Swale	32.7803055°, -96.3563023°	N/A	18	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	76	Unnamed swale	Swale	32.7801088°, -96.3564113°	N/A	39	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	77	Unnamed stream	Ephemeral Stream	32.7801865°, -96.3565693°	0.002	89	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	78	Unnamed swale	Swale	32.7799685°, -96.3562790°	N/A	152	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	79	Unnamed stream	Ephemeral Stream	32.7792290°, -96.3558190°	0.04	522	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
6C	82	Unnamed wetland	Emergent Wetland	32.7807538°, -96.3585379°	0.61	N/A	Yes	No	0.02	N/A	Not available at this time	0	N/A	Not available at this time										
6D	83*	Unnamed wetland	Potential Emergent Wetland	32.7809793°, -96.3593142°	0.15	N/A	Yes	No	0	N/A	Not available at this time	0	N/A	Not available at this time										
	84	Unnamed pond	Upland Pond	32.7808052°, -96.3607000°	0.43	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	85	Unnamed wetland	Emergent Wetland	32.7788386°, -96.3610350°	0.01	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	86	Unnamed swale	Swale	32.7787367°, -96.3614637°	N/A	100	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
6E	87	Unnamed wetland	Emergent Wetland	32.7785548°, -96.3616810°	0.03	N/A	Yes	No	0	N/A	Not available at this time	0	N/A	Not available at this time										
6F	88	Unnamed pond	On-Channel Pond	32.7785046°, -96.3618053°	0.03	N/A	Yes	No	0	N/A	Not available at this time	0	N/A	Not available at this time										
6G	89*	Unnamed wetland	Potential Forested Wetland	32.7809793°, -96.3593142°	0.14	N/A	Yes	No	0	N/A	Not available at this time	0	N/A	Not available at this time										
	90*	Unnamed swale	Swale	32.7766869°, -96.3618496°	N/A	219	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	91*	Unnamed swale	Swale	32.7749627°, -96.3575624°	N/A	394	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	92*	Unnamed swale	Swale	32.7756601°, -96.3514082°	N/A	127	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	93*	Unnamed pond	Upland Pond	32.7722490°, -96.3467589°	0.14	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	94	Unnamed pond	Upland Pond	32.7713420°, -96.3559639°	0.27	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	95	Unnamed wetland	Emergent Wetland	32.7709466°, -96.3562137°	0.07	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	96	Unnamed pond	Upland Pond	32.7707254°, -96.3562189°	0.89	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	97	Unnamed swale	Swale	32.7696186°, -96.3549243°	N/A	768	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	98*	Unnamed pond	Upland Pond	32.7669847°, -96.3559418°	0.25	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	100	Unnamed swale	Swale	32.7621124°, -96.3548908°	N/A	834	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	101	Unnamed pond	Upland Pond	32.7611893°, -96.3537510°	0.47	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	102	Unnamed swale	Swale	32.7611451°, -96.3532186°	N/A	527	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	103	Unnamed swale	Swale	32.7630431°, -96.3535869°	N/A	220	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	105	Unnamed pond	Upland Pond	32.7571385°, -96.3573141°	0.50	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	106	Unnamed swale	Swale	32.7565129°, -96.3567785°	N/A	390	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	107	Unnamed wetland	Emergent Wetland	32.7559654°, -96.3562562°	0.07	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	108	Unnamed swale	Swale	32.7555123°, -96.3558239°	N/A	400	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										

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	109	Unnamed pond	Upland Pond	32.7551287°, -96.3550917°	0.25	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
7	110*	Unnamed wetland	Potential Scrub Shrub Wetland	32.7518302°, -96.3603420°	0.09	N/A	Yes	No	0	N/A	Not available at this time	0	N/A	Not available at this time	0	N/A	Not available at this time	0	N/A	Not available at this time	NWP - Non-reporting	14	N/A	No
	111*	Unnamed pond	Upland Pond	32.7518851°, -96.3603796°	0.19	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	112	Unnamed pond	Upland Pond	32.7516327°, -96.3599134°	0.50	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	113	Unnamed pond	Upland Pond	32.7494906°, -96.3582122°	0.25	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
8	114*	Unnamed wetland	Potential Forested Wetland	32.7402506°, -96.3726755°	0.01	N/A	Yes	No	0	N/A	Not available at this time	0	N/A	Not available at this time	0	N/A	Not available at this time	0	N/A	Not available at this time	NWP - Non-reporting	14	N/A	No
	115*	Unnamed pond	Upland Pond	32.7402491°, -96.3726987°	0.02	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
9	116*	Tributary to Big Brushy Creek	Potential Intermittent Stream	32.7381476°, -96.3678848°	N/A	2394	Yes	No	0.02	130	Not available at this time	0	0	Not available at this time	0.02	130	Not available at this time	0	0	Not available at this time	NWP -Non-reporting	14	N/A	No
	117	Unnamed wetland	Emergent Wetland	32.7404676°, -96.3566392°	0.03	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
10	121*	Terry Creek	Perennial Stream	32.7383154°, -96.3513074°	0.42	828	Yes	No	0.16	279	Not available at this time	0	0	Not available at this time	0.16	279	Not available at this time	0	0	Not available at this time	NWP - Non-reporting	14	N/A	No
	122*	Unnamed pond	Upland Pond	32.7375256°, -96.3530555°	0.07	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	123*	Unnamed pond	Upland Pond	32.7296732°, -96.3617076°	0.62	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	124	Unnamed wetland	Emergent Wetland	32.7253592°, -96.3671042°	0.06	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	125	Unnamed swale	Swale	32.7252169°, -96.3668868°	N/A	198	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	127*	Unnamed swale	Swale	32.7243710°, -96.3683269°	N/A	343	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
11A	128*	Tributary to Big Brushy Creek	Potential Ephemeral Stream	32.7232004°, -96.3689652°	N/A	611	Yes	No	0	N/A	Not available at this time	0	N/A	Not available at this time	0	N/A	Not available at this time	0.15	N/A	Not available at this time	NWP - PCN	14	Multiple	Yes
	129	Unnamed stream	Ephemeral Stream	32.7224717°, -96.3690206°	0.002	79	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	130	Unnamed stream	Ephemeral Stream	32.7210195°, -96.3695534°	0.13	1367	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	131	Unnamed stream	Ephemeral Stream	32.7221824°, -96.3684844°	0.07	473	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	132	Unnamed stream	Ephemeral Stream	32.7222046°, -96.3678281°	0.005	81	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	133	Unnamed stream	Ephemeral Stream	32.7223516°, -96.3675246°	0.003	129	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
11B	134	Unnamed wetland	Emergent Wetland	32.7225195°, -96.3675856°	0.10	N/A	Yes	No	0	N/A	Not available at this time	0.10	N/A	Not available at this time										
11C	135	Unnamed pond	On-Channel Pond	32.7225130°, -96.3676409°	0.05	N/A	Yes	No	0	N/A	Not available at this time	0.05	N/A	Not available at this time										
	136	Unnamed stream	Ephemeral Stream	32.7226186°, -96.3672956°	0.001	60	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	137	Unnamed swale	Swale	32.7227633°, -96.3672756°	N/A	69	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	138	Unnamed stream	Ephemeral Stream	32.7229220°, -96.3670386°	0.003	131	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
11D	139	Unnamed pond	On-Channel Pond	32.7204990°, -96.3705197°	0.15	N/A	Yes	No	0	N/A	Not available at this time	0	N/A	Not available at this time										
	140	Unnamed stream	Ephemeral Stream	32.7189632°, -96.3677074°	0.09	1386	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	141	Unnamed swale	Swale	32.7190672°, -96.3671261°	N/A	98	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	142	Unnamed swale	Swale	32.7190939°, -96.3669873°	N/A	96	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	143	Unnamed swale	Swale	32.7190828°, -96.3668519°	N/A	20	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	144	Unnamed swale	Swale	32.7182438°, -96.3686678°	N/A	84	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	145	Unnamed stream	Ephemeral Stream	32.7181296°, -96.3685704°	0.002	33	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	146	Unnamed stream	Ephemeral Stream	32.7180919°, -96.3687287°	0.002	52	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	147	Unnamed stream	Ephemeral Stream	32.7178653°, -96.3693639°	0.01	279	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	148	Unnamed stream	Ephemeral Stream	32.7174817°, -96.3690063°	0.02	521	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	149	Unnamed swale	Swale	32.7176836°, -96.3688309°	N/A	62	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	150	Unnamed swale	Swale	32.7172434°, -96.3697419°	N/A	258	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	151	Unnamed stream	Ephemeral Stream	32.7169186°, -96.3700609°	0.01	115	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	152	Unnamed stream	Ephemeral Stream	32.7168957°, -96.3698044°	0.02	192	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
12	153	Unnamed pond	On-Channel Pond	32.7165518°, -96.3701794°	0.37	N/A	Yes	No	0	N/A	Not available at this time	0	N/A	Not available at this time	0	N/A	Not available at this time	0	N/A	Not available at this time	NWP -Non-reporting	14	N/A	No
	154	Unnamed stream	Ephemeral Stream	32.7143844°, -96.3672187°	0.02	227	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	155	Unnamed wetland	Emergent Wetland	32.7145385°, -96.3665994°	0.25	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	156	Unnamed pond	Upland Pond	32.7145293°, -96.3666700°	0.18	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	157	Unnamed swale	Swale	32.7123088°, -96.3658329°	N/A	23	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	158	Unnamed stream	Ephemeral Stream	32.7117258°, -96.3661950°	0.02	476	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	159	Unnamed swale	Swale	32.7117977°, -96.3664398°	N/A	102	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										

Section 404/10 Impacts Table

Version 4, November 2021

Kaufman County Outer Loop

CSJ 0918-11-109

USACE Project Number

10/29/2024

Water Feature Characteristics							Potentially Jurisdictional?		Total Section 404 impacts for WATER FEATURE						Total section 404 impacts for CROSSING						Authorization			
									Temporary			Permanent			Temporary			Permanent						
Crossing number	Water feature number	Name	Type	Latitude, Longitude	Acres within project area (all water features, including streams)	Linear feet within project area (streams only)	Section 404 (waters of the U.S.)	Section 10 (navigable waters)	Acres of temporary impact (all water features, including streams)	Linear feet of temporary impact (streams only)	Cubic yards (CY) of fill material to be temporarily discharged (all water features, including streams)	Acres of permanent impact (all water features, including streams)	Linear feet of permanent impact (streams only)	Cubic yards (CY) of fill material to be permanently discharged (all water features, including streams)	Acres of temporary impact (all water features, including streams)	Linear feet of temporary impact (streams only)	Cubic yards (CY) of fill material to be temporarily discharged (all water features, including streams)	Acres of permanent impact (all water features, including streams)	Linear feet of permanent impact (streams only)	Cubic yards (CY) of fill material to be permanently discharged (all water features, including streams)	Authorization Type	Number (NWP and RGP only)	Reason (PCN only)	Mitigation Required?
	160	Unnamed stream	Ephemeral Stream	32.7117698°, -96.3659882°	0.003	122	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	161	Unnamed swale	Swale	32.7113411°, -96.3661233°	N/A	429	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	162	Unnamed swale	Swale	32.7108818°, -96.3676598°	N/A	597	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	163	Unnamed swale	Swale	32.7111447°, -96.3671794°	N/A	95	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	164	Unnamed pond	Upland Pond	32.7092788°, -96.3653419°	0.14	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	165	Unnamed swale	Swale	32.7087618°, -96.3649500°	N/A	165	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	166	Unnamed pond	Upland Pond	32.7080350°, -96.3663744°	0.49	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	167	Unnamed swale	Swale	32.7078874°, -96.3659823°	N/A	102	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	168	Unnamed swale	Swale	32.7076818°, -96.3660309°	N/A	282	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	169	Unnamed swale	Swale	32.7056506°, -96.3650645°	N/A	79	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	170	Unnamed pond	Upland Pond	32.7043401°, -96.3665577°	0.01	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
13A	171*	Tributary to Big Brushy Creek	Potential Intermittent Stream	32.6982191°, -96.3798262°	N/A	569	Yes	No	0.003	20	Not available at this time	0	N/A	Not available at this time	0.337	1,142	Not available at this time	0.20	0	Not available at this time	NWP - PCN	14	Multiple	Yes
13B	172	Unnamed wetland	Emergent Wetland	32.6976965°, -96.3789856°	0.36	N/A	Yes	No	0.15	N/A	Not available at this time	0.20	N/A	Not available at this time										
13C	174*	Tributary to Big Brushy Creek	Intermittent Stream	32.6974742°, -96.3769224°	0.08	385	Yes	No	0.08	385	Not available at this time	0	0	Not available at this time										
13D	175*	Unnamed wetland	Potential Emergent Wetland	32.6987166°, -96.3766754°	0.07	N/A	Yes	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	176*	Unnamed pond	Upland Pond	32.6987193°, -96.3766735°	0.63	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	177*	Unnamed pond	Upland Pond	32.6990791°, -96.3745381°	0.44	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
13E	182*	Tributary to Big Brushy Creek	Potential Intermittent Stream	32.6955148°, -96.3799208°	N/A	834	Yes	No	0.10	730	Not available at this time	0	N/A	Not available at this time										
13F	183*	Unnamed wetland	Potential Forested Wetland	32.6962895°, -96.3787776°	0.52	N/A	Yes	No	0.003	N/A	Not available at this time	0	N/A	Not available at this time										
13G	186*	Tributary to Big Brushy Creek	Potential Intermittent Stream	32.6965734°, -96.3767915°	N/A	394	Yes	No	0.001	7	Not available at this time	0	N/A	Not available at this time										
13H	179*	Unnamed pond	On-Channel Pond	32.6958062°, -96.3801776°	2.37	N/A	Yes	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
13I	180*	Unnamed stream	Potential Intermittent Stream	32.6960181°, -96.3792657°	N/A	161	Yes	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
13J	181*	Unnamed wetland	Potential Forested Wetland	32.6963554°, -96.3793881°	0.15	N/A	Yes	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
13K	184*	Unnamed wetland	Potential Emergent Wetland	32.6961954°, -96.3780745°	0.23	N/A	Yes	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
13L	185*	Unnamed wetland	Potential Emergent Wetland	32.6965472°, -96.3769173°	0.03	N/A	Yes	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
14A	178	Big Brushy Creek	Perennial Stream	32.6984755°, -96.3730336°	0.71	1097	Yes	No	0.32	483	Not available at this time	0	0	Not available at this time	0.52	483	Not available at this time	0	0	Not available at this time	NWP - PCN	14	Discharge into a special aquatic site	No
14B	188*	Unnamed wetland	Potential Emergent Wetland	32.6994768°, -96.3716104°	0.75	N/A	Yes	No	0.20	N/A	Not available at this time	0	N/A	Not available at this time										
	189	Unnamed swale	Swale	32.6979419°, -96.3713423°	N/A	577	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	190	Unnamed stream	Ephemeral Stream	32.6993953°, -96.3711052°	0.07	439	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	191*	Unnamed stream	Ephemeral Stream	32.6985687°, -96.3709585°	0.07	364	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
14C	192*	Tributary to Big Brushy Creek	Potential Intermittent Stream	32.6976599°, -96.3708258°	N/A	316	Yes	No	0	0	Not available at this time	0.00	0	Not available at this time										
	194	Unnamed stream	Ephemeral Stream	32.6990043°, -96.3662672°	0.03	178	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	195	Unnamed swale	Swale	32.6990862°, -96.3659668°	N/A	81	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	196	Unnamed wetland	Emergent Wetland	32.6993197°, -96.3658800°	0.08	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	198	Unnamed swale	Swale	32.7004747°, -96.3644766°	N/A	309	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	199	Unnamed wetland	Emergent Wetland	32.7028008°, -96.3607481°	0.06	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	200	Unnamed pond	Upland Pond	32.7028585°, -96.3607232°	0.27	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	201	Unnamed stream	Ephemeral Stream	32.7022665°, -96.3600576°	0.001	28	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	202	Unnamed stream	Ephemeral Stream	32.7022554°, -96.3600133°	0.004	159	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
15A	203	Terry Creek	Intermittent Stream	32.7004886°, -96.3583361°	1.08	2853	Yes	No	0.65	1,667	Not available at this time	0.10	236	Not available at this time	1.13	2,161	Not available at this time	0.42	236	Not available at this time	NWP - PCN	14	Multiple	Yes
	204	Unnamed swale	Swale	32.7020801°, -96.3590057°	N/A	101	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	205	Unnamed stream	Ephemeral Stream	32.7032149°, -96.3583410°	0.01	210	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	206	Unnamed stream	Ephemeral Stream	32.7032941°, -96.3578769°	0.01	216	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	207	Unnamed swale	Swale	32.7031436°, -96.3577572°	N/A	230	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
15B	208	Unnamed wetland	Emergent Wetland	32.7030911°, -96.3572605°	0.01	N/A	Yes	No	0	N/A	Not available at this time	0	N/A	Not available at this time										
	209	Unnamed stream	Ephemeral Stream	32.7031356°, -96.3568077°	0.01	237	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										
	210	Unnamed swale	Swale	32.7034238°, -96.3562238°	N/A	205	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time										

Section 404/10 Impacts Table

Version 4, November 2021

Kaufman County Outer Loop

CSJ 0918-11-109

USACE Project Number

10/29/2024

Water Feature Characteristics							Potentially Jurisdictional?		Total Section 404 impacts for WATER FEATURE					Total section 404 impacts for CROSSING						Authorization			
									Temporary			Permanent		Temporary			Permanent						
Crossing number	Water feature number	Name	Type	Latitude, Longitude	Acres within project area (all water features, including streams)	Linear feet within project area (streams only)	Section 404 (waters of the U.S.)	Section 10 (navigable waters)	Acres of temporary impact (all water features, including streams)	Linear feet of temporary impact (streams only)	Cubic yards (CY) of fill material to be temporarily discharged (all water features, including streams)	Acres of permanent impact (all water features, including streams)	Linear feet of permanent impact (streams only)	Acres of temporary impact (all water features, including streams)	Linear feet of temporary impact (streams only)	Cubic yards (CY) of fill material to be temporarily discharged (all water features, including streams)	Acres of permanent impact (all water features, including streams)	Linear feet of permanent impact (streams only)	Cubic yards (CY) of fill material to be permanently discharged (all water features, including streams)	Authorization Type	Number (NWP and RGP only)	Reason (PCN only)	Mitigation Required?
	211	Unnamed wetland	Emergent Wetland	32.7028075°, -96.3572609°	0.09	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time									
15C	212	Tributary to Terry Creek	Intermittent Stream	32.7022643°, -96.3582801°	0.22	688	Yes	No	0.17	494	Not available at this time	0	0	Not available at this time									
	213	Unnamed stream	Ephemeral Stream	32.7023899°, -96.3584430°	0.01	83	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time									
	217	Unnamed pond	Upland Pond	32.7018974°, -96.3540899°	0.30	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time									
	218	Unnamed wetland	Emergent Wetland	32.7009489°, -96.3568298°	0.09	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time									
	219	Unnamed wetland	Emergent Wetland	32.7006156°, -96.3569957°	0.13	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time									
	220	Unnamed pond	Upland Pond	32.6999306°, -96.3576134°	0.01	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time									
15D	221	Unnamed wetland	Forested Wetland	32.6993153°, -96.3594273°	0.09	N/A	Yes	No	0	N/A	Not available at this time	0	N/A	Not available at this time									
	222	Unnamed pond	Upland Pond	32.6993019°, -96.3594376°	0.14	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time									
	223*	Unnamed swale	Swale	32.6989186°, -96.3588626°	N/A	493	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time									
15E	224	Unnamed wetland	Emergent Wetland	32.6998203°, -96.3565850°	0.14	N/A	Yes	No	0.03	N/A	Not available at this time	0.03	N/A	Not available at this time									
15F	225	Unnamed pond	On-Channel Pond	32.6998038°, -96.3566755°	1.10	N/A	Yes	No	0.27	N/A	Not available at this time	0.29	N/A	Not available at this time									
15G	226*	Tributary to Terry Creek	Potential Intermittent Stream	32.6994493°, -96.3556330°	N/A	371	Yes	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time									
15H	227*	Unnamed wetland	Potential Emergent Wetland	32.6992395°, -96.3557711°	1.00	N/A	Yes	No	0.01	N/A	Not available at this time	0	N/A	Not available at this time									
	228	Unnamed wetland	Emergent Wetland	32.6988662°, -96.3572360°	0.14	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time									
	229	Unnamed wetland	Emergent Wetland	32.6986158°, -96.3567780°	0.14	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time									
	230	Unnamed pond	Upland Pond	32.6986113°, -96.3567992°	0.22	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time									
	231	Unnamed swale	Swale	32.6986521°, -96.3563518°	N/A	108	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time									
	232	Unnamed wetland	Emergent Wetland	32.6981115°, -96.3576528°	0.22	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time									
	233*	Unnamed swale	Swale	32.6976332°, -96.3575467°	N/A	192	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time									
15I	234*	Unnamed wetland	Potential Scrub Shrub Wetland	32.6971033°, -96.3575337°	0.15	N/A	Yes	No	0	N/A	Not available at this time	0	N/A	Not available at this time									
	235	Unnamed wetland	Emergent Wetland	32.6972431°, -96.3567893°	0.26	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time									
	236	Unnamed pond	Upland Pond	32.6972266°, -96.3568118°	0.34	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time									
	237	Unnamed swale	Swale	32.6973012°, -96.3557487°	N/A	486	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time									
	238	Unnamed swale	Swale	32.6964536°, -96.3549641°	N/A	20	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time									
	239	Unnamed stream	Ephemeral Stream	32.6963672°, -96.3550131°	0.00	50	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time									
	240	Unnamed wetland	Emergent Wetland	32.6962411°, -96.3549967°	0.33	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time									
	241	Unnamed pond	Upland Pond	32.6960709°, -96.3549555°	0.56	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time									
	242	Unnamed wetland	Forested Wetland	32.6960548°, -96.3549995°	0.04	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time									
	243*	Unnamed pond	Upland Pond	32.6958408°, -96.3553584°	0.73	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time									
	244*	Unnamed wetland	Emergent Wetland	32.6958136°, -96.3554550°	0.15	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time									
	245	Unnamed swale	Swale	32.6958794°, -96.3542767°	N/A	51	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time									
16A	248*	Unnamed stream	Potential Intermittent Stream	32.6943672°, -96.3563148°	N/A	360	Yes	No	0.002	16	Not available at this time	0.004	28	Not available at this time	0.003	29	Not available at this time	0.004	28	Not available at this time	NWP - Non-reporting	14	N/A	No
16B	250*	Unnamed stream	Potential Intermittent Stream	32.6943426°, -96.3555594°	N/A	75	Yes	No	0.001	13	Not available at this time	0	N/A	Not available at this time									
	251*	Unnamed swale	Swale	32.6943012°, -96.3553468°	N/A	240	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time									
	252*	Unnamed swale	Swale	32.6938441°, -96.3558411°	N/A	187	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time									
17	253*	Unnamed wetland	Potential Scrub Shrub Wetland	32.6948622°, -96.3545831°	0.05	N/A	Yes	No	0	N/A	Not available at this time	0	N/A	Not available at this time	0	N/A	Not available at this time	0	N/A	Not available at this time	NWP - Non-reporting	14	N/A	No
	254*	Unnamed pond	Upland Pond	32.6948521°, -96.3543908°	0.36	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time									
	255*	Unnamed pond	Upland Pond	32.6950980°, -96.3541312°	0.20	N/A	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time									
	1-3, 20, 23, 29, 30-32, 44, 80, 81, 99, 104, 118-120, 126, 173, 187, 193*, 197, 214, 215, 216, 246, 247, 249	Unnamed Roadside Drainage Ditches	Roadside Drainage Ditches	Multiple locations	N/A	12805	No	No	N/A	N/A	Not available at this time	N/A	N/A	Not available at this time									

*Indicates desktop delineated feature.

The impacts on this table are calculated based on schematic design files as of 7/22/2024.

APPENDIX E-2 EMST MAPPED
and FIELD-VERIFIED EMST VEGETATION MAP

EMST MAPPED VEGETATION

FIELD VERIFIED EMST VEGETATION

MAPPED VEGETATIVE COMMUNITIES
FIELD VERIFIED VEGETATIVE COMMUNITIES

Kaufman County Outer Loop

CSJ: 0918-11-109

- Project Area
- ROE Not Obtained

Common Name

- Blackland Prairie: Disturbance or Tame Grassland
- Central Texas: Floodplain Hardwood Forest
- Central Texas: Floodplain Herbaceous Vegetation
- Native Invasive: Deciduous Woodland
- Native Invasive: Mesquite Shrubland
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- Post Oak Savanna: Post Oak Motte and Woodland
- Row Crops
- Swamp
- Urban High Intensity
- Urban Low Intensity

Data Sources: TPWD EMST, 2014

Basemap: World Imagery 2024

Texas Department of Transportation

0 500 1,000
Feet

N E S W

April 2025 | Figure E2-01

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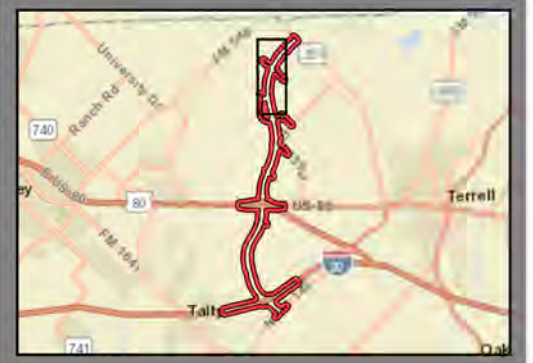
EMST MAPPED VEGETATION

FIELD VERIFIED EMST VEGETATION

MAPPED VEGETATIVE COMMUNITIES
FIELD VERIFIED VEGETATIVE COMMUNITIES

Kaufman County Outer Loop

CSJ: 0918-11-109



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Data Sources: TPWD EMST, 2014

Basemap: World Imagery 2024

Texas Department of Transportation

0 500 1,000
Feet

N E S W

April 2025 | Figure E2-02

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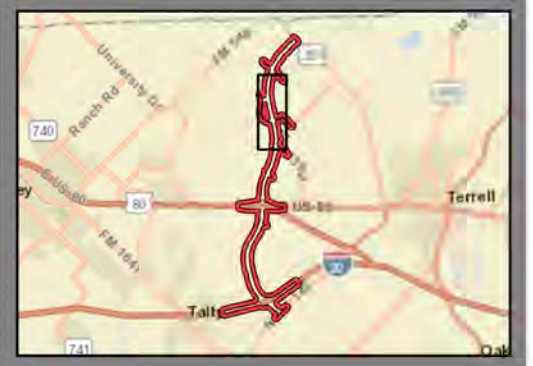
EMST MAPPED VEGETATION

FIELD VERIFIED EMST VEGETATION

MAPPED VEGETATIVE COMMUNITIES
FIELD VERIFIED VEGETATIVE COMMUNITIES

Kaufman County Outer Loop

CSJ: 0918-11-109



- Project Area
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- Row Crops
- Swamp
- Urban High Intensity
- Urban Low Intensity

Data Sources: TPWD EMST, 2014

Basemap: World Imagery 2024

Texas Department of Transportation

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Feet

April 2025 | Figure E2-03

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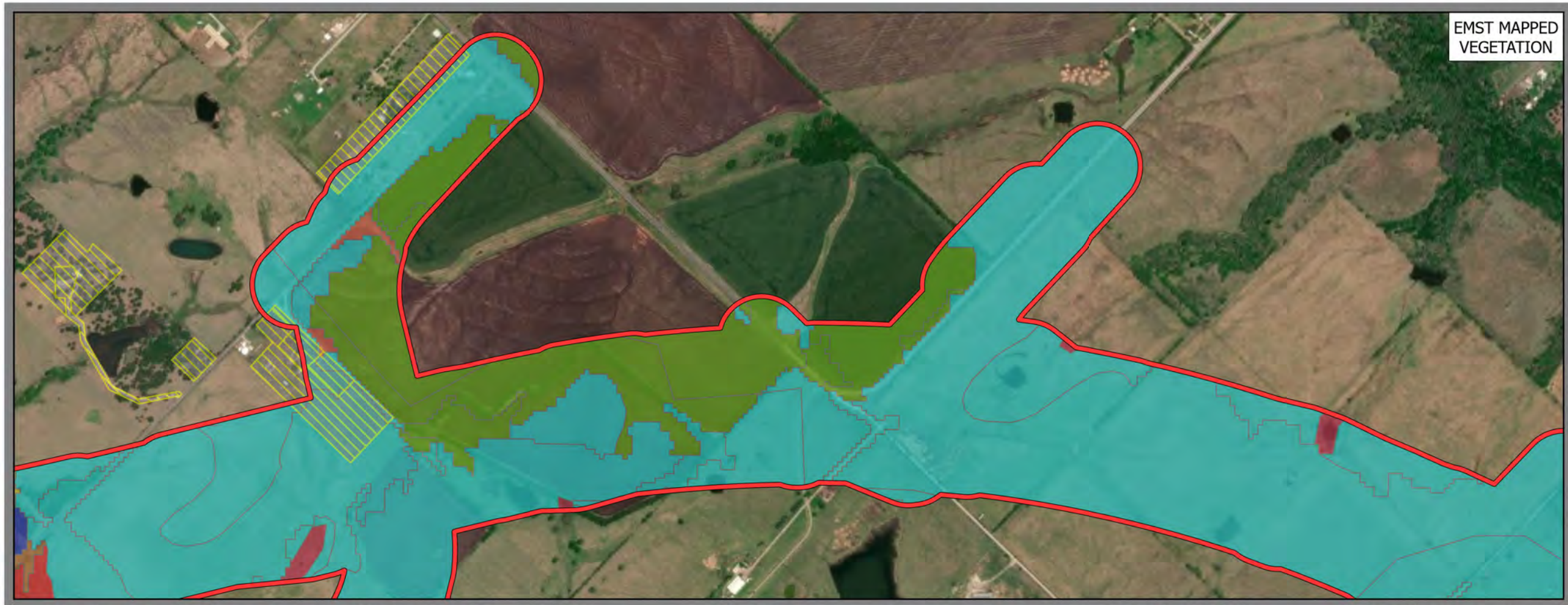
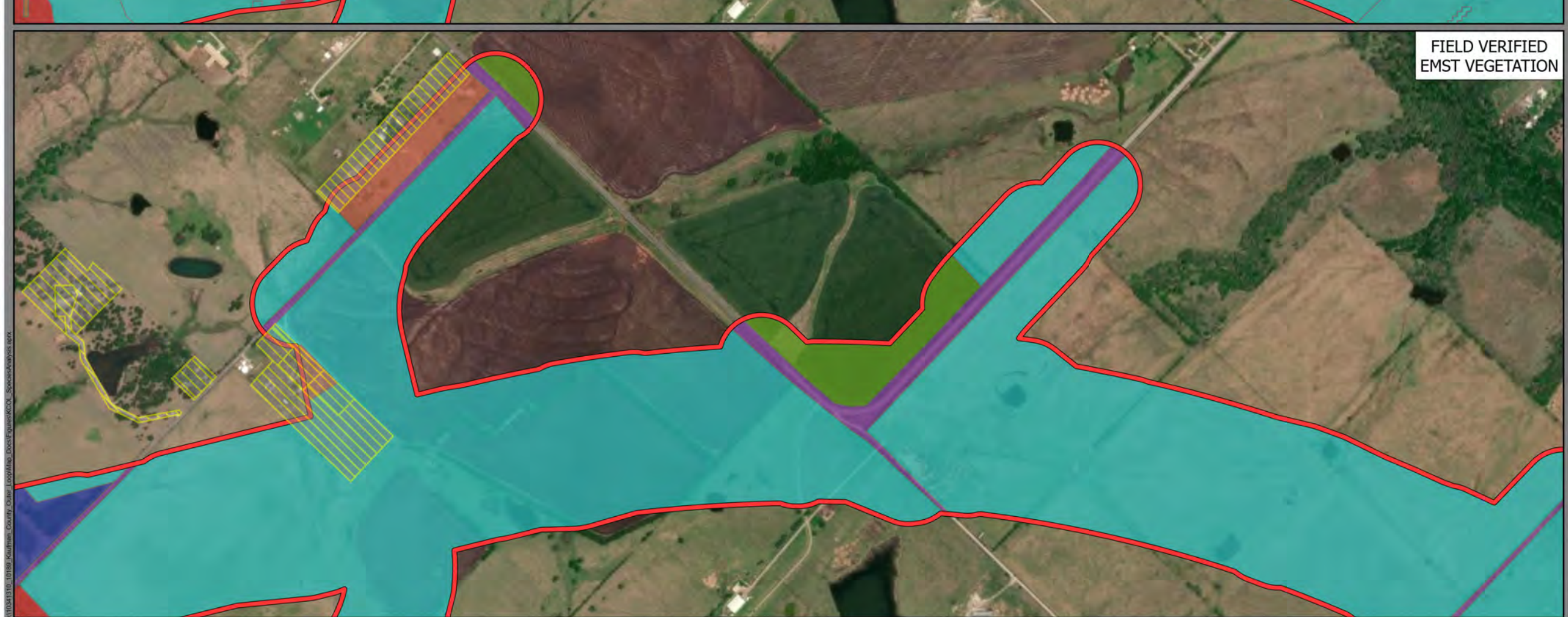
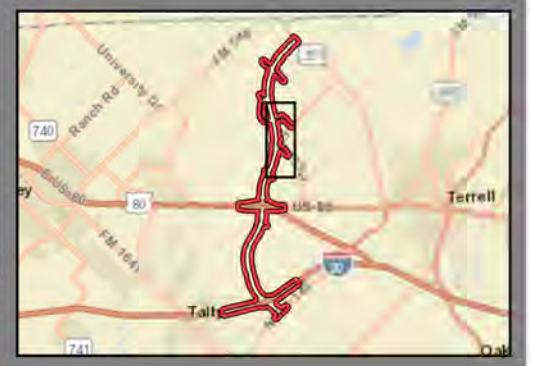




MAPPED VEGETATIVE COMMUNITIES
FIELD VERIFIED VEGETATIVE COMMUNITIES

Kaufman County Outer Loop

CSJ: 0918-11-109



- Project Area
- ROE Not Obtained

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- Swamp
- Urban High Intensity
- Urban Low Intensity

Data Sources: TPWD EMST, 2014

Basemap: World Imagery 2024

Texas Department of Transportation

0 500 1,000
Feet

N E S W

April 2025 | Figure E2-04

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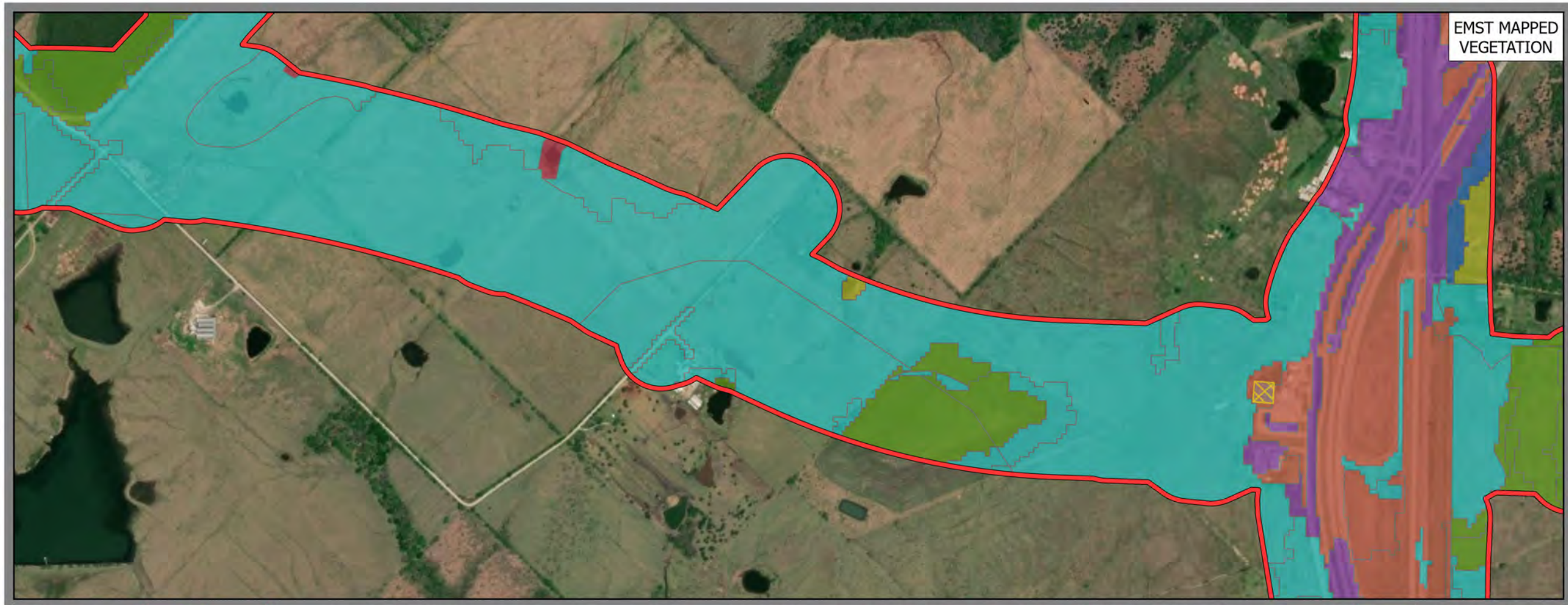

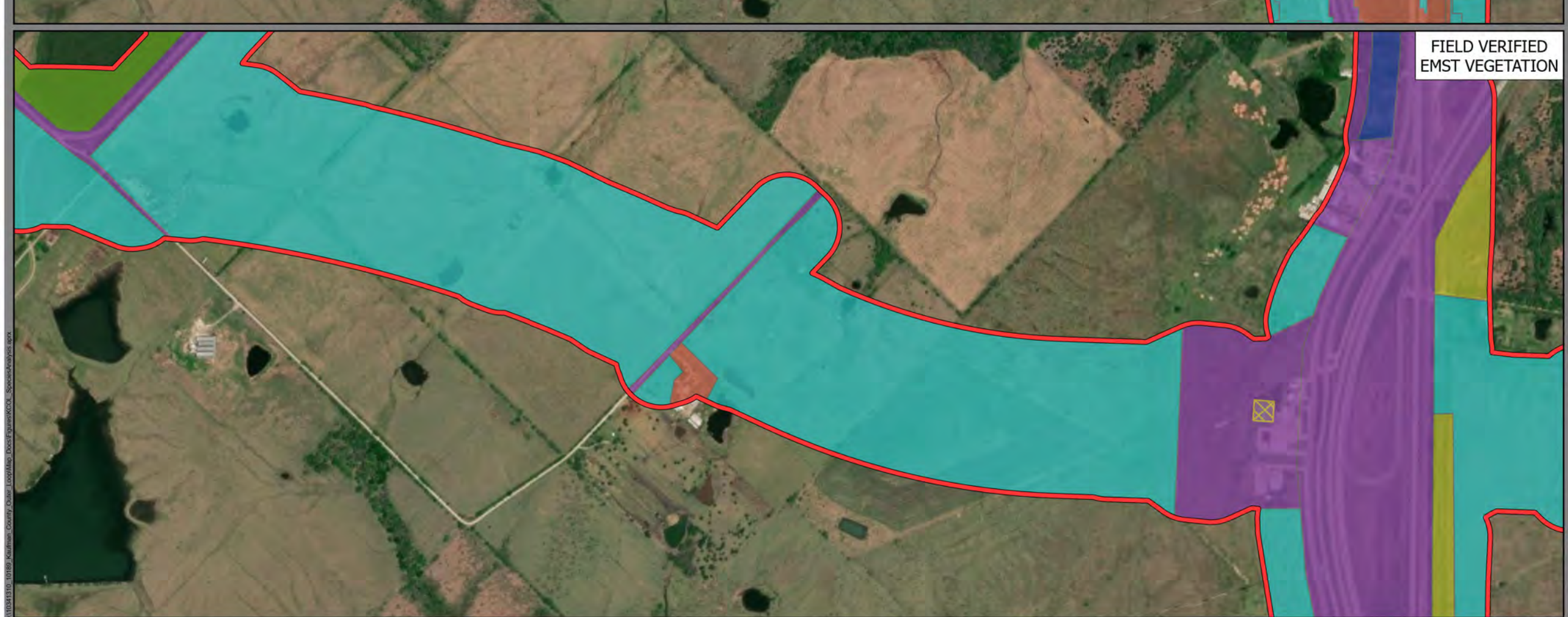

MAPPED VEGETATIVE COMMUNITIES
FIELD VERIFIED VEGETATIVE COMMUNITIES

Kaufman County Outer Loop

CSJ: 0918-11-109

- Project Area
- ROE Not Obtained

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- Row Crops
- Swamp
- Urban High Intensity
- Urban Low Intensity

Data Sources: TPWD EMST, 2014

Basemap: World Imagery 2024

Texas Department of Transportation

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Feet

April 2025 | Figure E2-05

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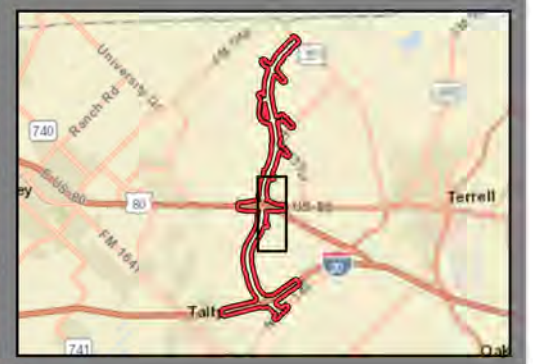
EMST MAPPED VEGETATION

FIELD VERIFIED EMST VEGETATION

MAPPED VEGETATIVE COMMUNITIES
FIELD VERIFIED VEGETATIVE COMMUNITIES

Kaufman County Outer Loop

CSJ: 0918-11-109



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- Urban Low Intensity

Data Sources: TPWD EMST, 2014

Basemap: World Imagery 2024

Texas Department of Transportation

0 500 1,000

Feet

April 2025 | Figure E2-06

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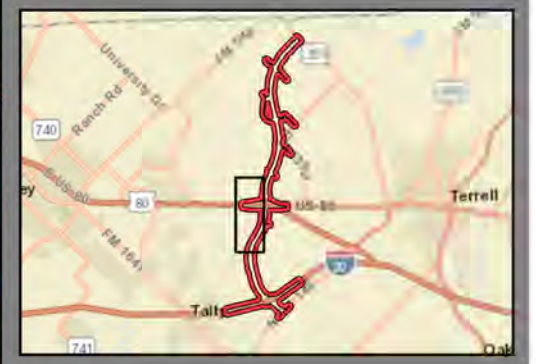
EMST MAPPED VEGETATION

FIELD VERIFIED EMST VEGETATION

MAPPED VEGETATIVE COMMUNITIES
FIELD VERIFIED VEGETATIVE COMMUNITIES

Kaufman County Outer Loop

CSJ: 0918-11-109



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Common Name

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Data Sources: TPWD EMST, 2014

Basemap: World Imagery 2024

Texas Department of Transportation

0 500 1,000

Feet

April 2025 | Figure E2-07

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EMST MAPPED VEGETATION

FIELD VERIFIED EMST VEGETATION

MAPPED VEGETATIVE COMMUNITIES
FIELD VERIFIED VEGETATIVE COMMUNITIES

Kaufman County Outer Loop

CSJ: 0918-11-109

Project Area

ROE Not Obtained

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- Urban Low Intensity

Data Sources: TPWD EMST, 2014

Basemap: World Imagery 2024

Texas Department of Transportation

0 500 1,000

Feet

April 2025 | Figure E2-08

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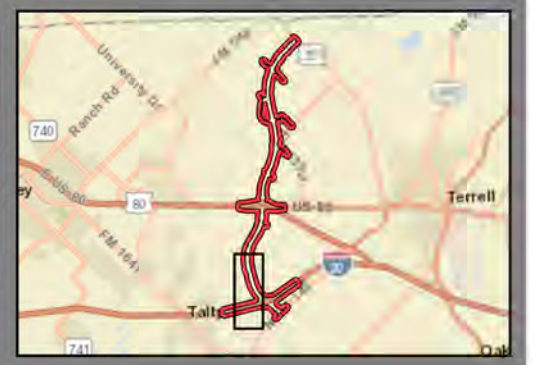
EMST MAPPED VEGETATION

FIELD VERIFIED EMST VEGETATION

MAPPED VEGETATIVE COMMUNITIES
FIELD VERIFIED VEGETATIVE COMMUNITIES

Kaufman County Outer Loop

CSJ: 0918-11-109



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Data Sources: TPWD EMST, 2014

Basemap: World Imagery 2024

Texas Department of Transportation

0 500 1,000

Feet

April 2025 | Figure E2-09

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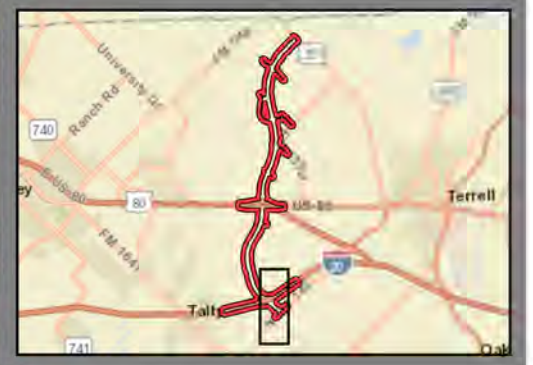
EMST MAPPED VEGETATION

FIELD VERIFIED EMST VEGETATION

MAPPED VEGETATIVE COMMUNITIES
FIELD VERIFIED VEGETATIVE COMMUNITIES

Kaufman County Outer Loop

CSJ: 0918-11-109



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Data Sources: TPWD EMST, 2014

Basemap: World Imagery 2024

Texas Department of Transportation

0 500 1,000

Feet

April 2025 | Figure E2-10

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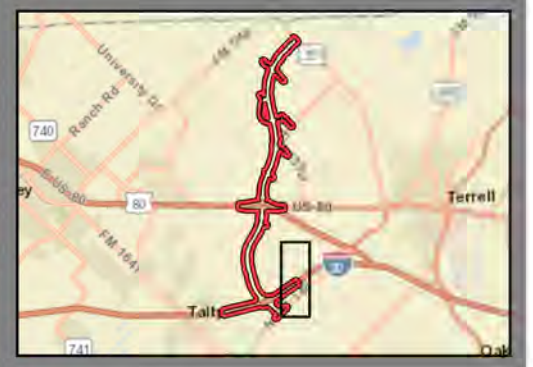
EMST MAPPED VEGETATION

FIELD VERIFIED EMST VEGETATION

MAPPED VEGETATIVE COMMUNITIES
FIELD VERIFIED VEGETATIVE COMMUNITIES

Kaufman County Outer Loop

CSJ: 0918-11-109



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Data Sources: TPWD EMST, 2014

Basemap: World Imagery 2024

Texas Department of Transportation

0 500 1,000
Feet

April 2025 | Figure E2-11

O:\0134\5310_10183_Kaufman_County_Outer_Loop\Map_Docs_Figures\KOL_SpeciesAnalysis.aprx

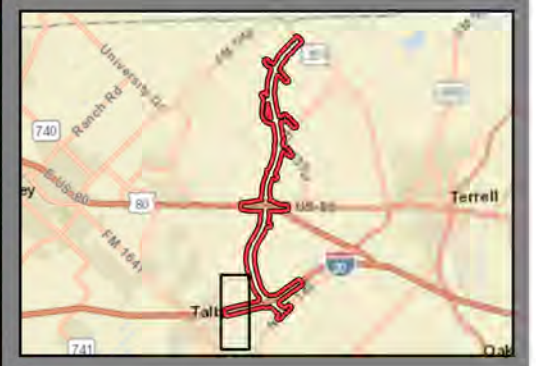
EMST MAPPED VEGETATION

FIELD VERIFIED EMST VEGETATION

MAPPED VEGETATIVE COMMUNITIES
FIELD VERIFIED VEGETATIVE COMMUNITIES

Kaufman County Outer Loop

CSJ: 0918-11-109



- Project Area
- ROE Not Obtained

Common Name

- Blackland Prairie: Disturbance or Tame Grassland
- Central Texas: Floodplain Hardwood Forest
- Central Texas: Floodplain Herbaceous Vegetation
- Native Invasive: Deciduous Woodland
- Native Invasive: Mesquite Shrubland
- Open Water
- Pineywoods: Bottomland Deciduous Successional Shrubland
- Pineywoods: Bottomland Herbaceous Wetland
- Pineywoods: Bottomland Temporarily Flooded Hardwood Forest
- Pineywoods: Small Stream and Riparian Deciduous Successional Shrubland
- Pineywoods: Small Stream and Riparian Herbaceous Wetland
- Pineywoods: Small Stream and Riparian Temporarily Flooded Hardwood Forest
- Post Oak Savanna: Post Oak Motte and Woodland
- Row Crops
- Swamp
- Urban High Intensity
- Urban Low Intensity

Data Sources: TPWD EMST, 2014

Basemap: World Imagery 2024

Texas Department of Transportation

0 500 1,000
Feet

April 2025 | Figure E2-12

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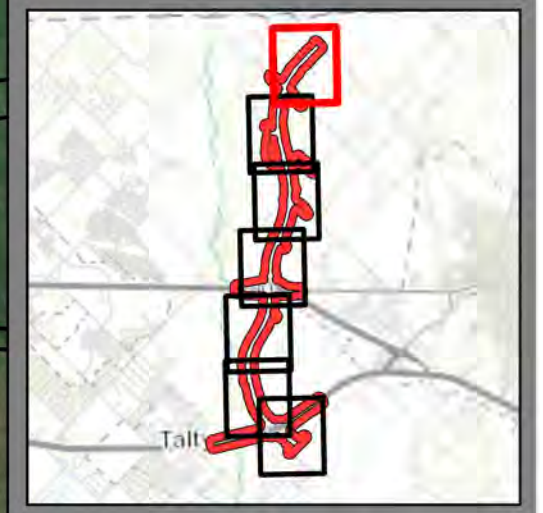
APPENDIX E-3 ENVIRONMENTAL RESOURCES MAP

Environmental Constraints Map

Kaufman County Outer Loop

CSJ: 0918-11-109



- Proposed Right-Of-Way
- City Limits
- Parcels
- Community Resources
- Proposed Cross Streets/Driveways
- Proposed Direct Connnectors
- Proposed Bridges
- Proposed Frontage Roads
- Proposed Mainlanes
- Proposed Ramps
- Proposed Shared Use Path (SUP)

National Hydrography Datset (NHD)

- Ponds/Lakes
- Creeks/Rivers

FEMA Flood Zones

- AE Floodway
- AE (100-Year Flood Zone)
- A (100-Year Flood Zone)

Proposed Displacement

- Commercial
- Primary
- Secondary

Wetland Type

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond

Sensitive Noise Receivers

- Impacted
- Non-Impacted
- Validation Sites

Data Sources: Field Data - HDR 2024
Basemap: NAIP 2024

Texas Department of Transportation

0 380 760
Feet

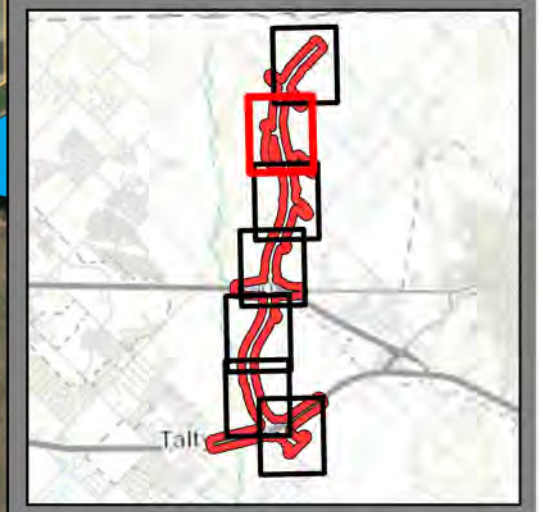
N W E S

July 2025	Figure E3-01

Environmental Constraints Map

Kaufman County Outer Loop

CSJ: 0918-11-109



- Proposed Right-Of-Way
- City Limits
- Parcels
- Community Resources
- Proposed Cross Streets/Driveways
- Proposed Direct Connnectors
- Proposed Bridges
- Proposed Frontage Roads
- Proposed Mainlanes
- Proposed Ramps
- Proposed Shared Use Path (SUP)

National Hydrography Datset (NHD)

- Ponds/Lakes
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- AE Floodway
- AE (100-Year Flood Zone)
- A (100-Year Flood Zone)

Proposed Displacement

- Commercial
- Primary
- Secondary

Wetland Type

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond

Sensitive Noise Receivers

- Impacted
- Non-Impacted
- Validation Sites

Data Sources: Field Data - HDR 2024
Basemap: NAIP 2024

Texas Department of Transportation

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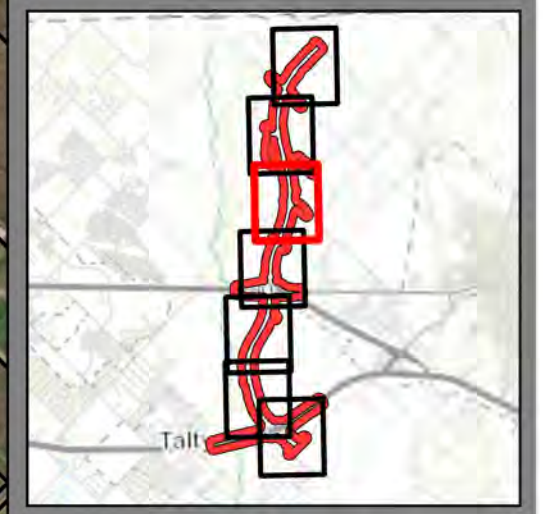
N W E S

July 2025	Figure E3-02

Environmental Constraints Map

Kaufman County Outer Loop

CSJ: 0918-11-109



- Proposed Right-Of-Way
- City Limits
- Parcels
- Community Resources
- Proposed Cross Streets/Driveways
- Proposed Direct Connnectors
- Proposed Bridges
- Proposed Frontage Roads
- Proposed Mainlanes
- Proposed Ramps
- Proposed Shared Use Path (SUP)

National Hydrography Datset (NHD)

- Ponds/Lakes
- Creeks/Rivers

FEMA Flood Zones

- AE Floodway
- AE (100-Year Flood Zone)
- A (100-Year Flood Zone)

Proposed Displacement

- Commercial
- Primary
- Secondary

Wetland Type

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond

Sensitive Noise Receivers

- Impacted
- Non-Impacted
- Validation Sites

Data Sources: Field Data - HDR 2024
Basemap: NAIP 2024

Texas Department of Transportation

0 380 760
Feet

N W E S

July 2025

Figure E3-03

Environmental Constraints Map

Kaufman County Outer Loop

CSJ: 0918-11-109

- Proposed Right-Of-Way
- City Limits
- Parcels
- Community Resources
- Proposed Cross Streets/Driveways
- Proposed Direct Connnectors
- Proposed Bridges
- Proposed Frontage Roads
- Proposed Mainlanes
- Proposed Ramps
- Proposed Shared Use Path (SUP)

National Hydrography Datset (NHD)

- Ponds/Lakes
- Creeks/Rivers

FEMA Flood Zones

- AE Floodway
- AE (100-Year Flood Zone)
- A (100-Year Flood Zone)

Proposed Displacement

- Commercial
- Primary
- Secondary

Wetland Type

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond

Sensitive Noise Receivers

- Impacted
- Non-Impacted
- Validation Sites

Data Sources: Field Data - HDR 2024
Basemap: NAIP 2024

Texas Department of Transportation

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Feet

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July 2025

Figure E3-04

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Environmental Constraints Map

Kaufman County Outer Loop

CSJ: 0918-11-109

- Proposed Right-Of-Way
- City Limits
- Parcels
- Community Resources
- Proposed Cross Streets/Driveways
- Proposed Direct Connnectors
- Proposed Bridges
- Proposed Frontage Roads
- Proposed Mainlanes
- Proposed Ramps
- Proposed Shared Use Path (SUP)

National Hydrography Datset (NHD)

- Ponds/Lakes
- Creeks/Rivers

FEMA Flood Zones

- AE Floodway
- AE (100-Year Flood Zone)
- A (100-Year Flood Zone)

Proposed Displacement

- Commercial
- Primary
- Secondary

Wetland Type

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond

Sensitive Noise Receivers

- Impacted
- Non-Impacted
- Validation Sites

Data Sources: Field Data - HDR 2024
Basemap: NAIP 2024

Texas Department of Transportation

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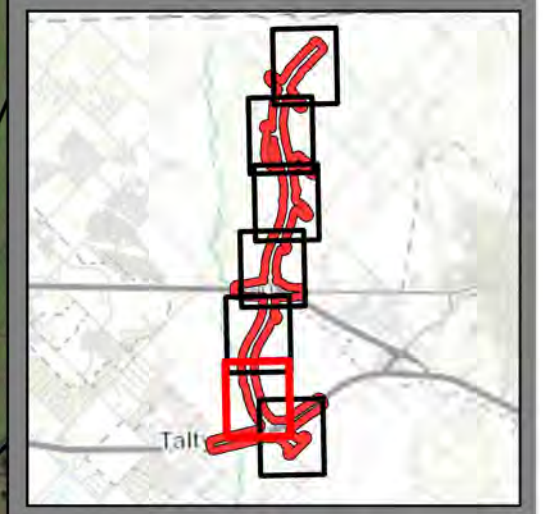
July 2025

Figure E3-05

Environmental Constraints Map

Kaufman County Outer Loop

CSJ: 0918-11-109



Big Brushy Creek

County Road 238

Terry Creek

W Interstate 20

- Proposed Right-Of-Way
- City Limits
- Parcels
- Community Resources
- Proposed Cross Streets/Driveways
- Proposed Direct Connnectors
- Proposed Bridges
- Proposed Frontage Roads
- Proposed Mainlanes
- Proposed Ramps
- Proposed Shared Use Path (SUP)

National Hydrography Datset (NHD)

- Ponds/Lakes
- Creeks/Rivers

FEMA Flood Zones

- AE Floodway
- AE (100-Year Flood Zone)
- A (100-Year Flood Zone)

Proposed Displacement

- Commercial
- Primary
- Secondary

Wetland Type

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond

Sensitive Noise Receivers

- Impacted
- Non-Impacted
- Validation Sites

Data Sources: Field Data - HDR 2024
Basemap: NAIP 2024

Texas Department of Transportation

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July 2025

Figure E3-06

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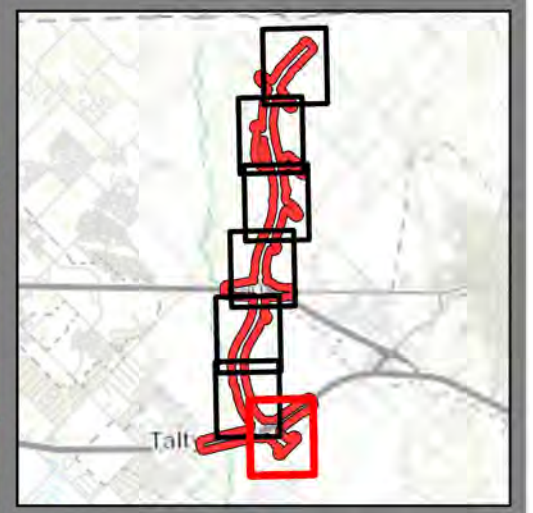
Environmental Constraints Map

Kaufman County Outer Loop

CSJ: 0918-11-109



- Proposed Right-Of-Way
- City Limits
- Parcels
- Community Resources
- Proposed Cross Streets/Driveways
- Proposed Direct Connnectors
- Proposed Bridges
- Proposed Frontage Roads
- Proposed Mainlanes
- Proposed Ramps
- Proposed Shared Use Path (SUP)

National Hydrography Datset (NHD)

- Ponds/Lakes
- Creeks/Rivers

FEMA Flood Zones

- AE Floodway
- AE (100-Year Flood Zone)
- A (100-Year Flood Zone)

Proposed Displacement

- Commercial
- Primary
- Secondary

Wetland Type

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond

Sensitive Noise Receivers

- Impacted
- Non-Impacted
- Validation Sites

Data Sources: Field Data - HDR 2024
Basemap: NAIP 2024

Texas Department of Transportation

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July 2025	Figure E3-07

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APPENDIX F RESOURCE AGENCY COORDINATION

From: noreply@thc.state.tx.us
To: Scott Pletka; reviews@thc.state.tx.us
Subject: 091811109 Kaufman Co Outer Loop
Date: Monday, April 21, 2025 10:15:03 AM

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 #202508696
Date: 04/21/2025
091811109 Kaufman Co Outer Loop (Permit 31919)
US 80 at Spur 557
Terrell,TX 75160

Description: TxDOT proposes to construct an outer loop in Kaufman County. The submitted report is the draft archeological survey report for the accessible portion of the APE.

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 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.
- 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: THC has reviewed the draft report and concurs with TxDOT's recommendations that the survey of the 557.04 acres is adequate and no additional consultation with our office is necessary for this portion of the APE, and that once ROE is given for the remaining 20.63 acre, survey should be conducted. THC also concurs that newly recorded historic site 41KF242 does not demonstrate eligibility for the NRHP or as an SAL. Please revise the incorrect field date in the abstract before submitting a final draft.

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: 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 Joseph Bell, State Historic Preservation Officer
Executive Director, Texas Historical Commission

Please do not respond to this email.

Historic Resource Coordination

Docusign Envelope ID: 96DA468D-977D-44EF-91AB-AB7D9B6238A7

MEMO

May 15, 2025

District: Dallas
County: Kaufman
CSJ#: 0918-11-109
Highway: Kaufman County Outer Loop (KCOL)
Project Limits: From SH 205 to I-20
Let Date: 2027
Summary: Construct new four lane highway with frontage roads. New ROW required. No historic properties present.

To: Administrative Record

From: Renee Benn
Environmental Protection Specialist

Subject: Internal review under the Section 106 Programmatic Agreement (Section 106 PA) among the Texas Department of Transportation, Texas State Historic Preservation Officer, Advisory Council on Historic Preservation, and Federal Highway Administration; and the Memorandum of Understanding (MOU) between the Texas Historical Commission and the Texas Department of Transportation. 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.

Project Description
See pages 33-36 of the Historical Resources Survey Report (HRSR) reconnaissance survey for 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.

Determination of Eligibility
TxDOT historians reviewed the National Register of Historic Places (NRHP), the list of State Antiquities Landmarks (SAL), the list of Recorded Texas Historic Landmarks (RTHL), and TxDOT files and found no historically significant resources previously documented within the area of potential effects (APE). The custom APE for this project is the existing right-of-way (ROW) where no new ROW is proposed, 150' from the existing and proposed ROW where the project follows a current road alignment and 300' from the proposed ROW where the project is on new alignment.

Docusign Envelope ID: 96DA468D-977D-44EF-91AB-AB7D9B6238A7

A reconnaissance-level survey identified 24 historic-age (built prior to 1982) properties in the APE. Property types include domestic, commercial, industrial, and agricultural. TxDOT historians determined that 23 of the properties are common designs that lack architectural merit, are not works of a master, and have no known historic associations with important events or persons, and are therefore not eligible for NRHP listing under *Criterion A*, *B*, *or C.*

Due to potential for effect caused by the new alignment roadway, TxDOT conducted an intensive survey on one of the 24 historic-age properties in the APE, an agricultural complex owned by the Samuels family (Resource #8). The project would displace an abandoned c. 1950 corral (8I) and ruinous shed (no number) on the property and would bisect part of the property. The intensive survey APE included nine parcels associated with the Samuels family farmstead along Samuels Road. The parcels contain domestic and agricultural buildings that have been in the Samuels family since the early 1900s. TxDOT historians surveyed a total of ten resources on the parcels, including seven historic-age resources and three non-historic-age resources. Resources 8A, 8C, and 8D are first-generation domestic resources; Resources 8F, 8G, and 8J are second-generation domestic resources, and Resources 8B, 8E, 8H, and 8I are agricultural resources and adjacent pastures and cultivated fields. Historical aerial photographs indicate at least six first-generation agricultural resources have been relocated or are no longer extant.

TxDOT evaluated Property 8 for eligibility under *Criterion A* for agriculture. Although agriculture was historically an important aspect of Kaufman County's economy, research did not indicate the Samuels farmstead is historically significant within this context. Nothing was identified in the intensive-level research to indicate that Property 8 played an identifiable or documented role in the development of the region's agricultural industry. TxDOT determined Property 8 is not eligible for listing under *Criterion A*.

Deed research identified four generations of the Samuels family that have operated the Samuels farmstead. Except for William Dewey Samuels, Jr., who was active in demonstration farming during the 1950s and served on the three-person Kaufman County Agricultural Stabilization and Conservation Service Committee during the late 1980s, no mentions of the other Samuels agriculturalists were identified in contemporary newspaper research. Resource 8F is associated with Dessie Samuels, who achieved success as a tennis player and United States Tennis Association (USTA) official, but the dwelling is not demonstrative of her achievements. Property 8 is not eligible for listing in the NRHP under *Criterion B*.

The farmstead's built resources appear to have been constructed with typical methods. Property 8 does not embody distinctive characteristics of a particular agricultural property type, and it does not reflect unique or rare examples of a building type or form. Research did not indicate that the complex is an important representative of the variation, evolution, or transition of construction types that shaped later agricultural developments in Kaufman County or beyond. The complex

Docusign Envelope ID: 96DA468D-977D-44EF-91AB-AB7D9B6238A7

is not the work of a master, and the collective buildings do not possess high artistic value. Property 8 is not eligible for listing in the NRHP under *Criterion C*.

Consultation
TxDOT historians emailed the Kaufman County Historical Commission (CHC) in December 2024 during the reconnaissance phase of the survey and have not received a response to date (see page 8 of the reconnaissance report).

Therefore, pursuant to Stipulation X, Appendix 6 "Undertakings with the Potential to Cause Effects per 36 CFR 800.16(i)" of the Section 106 PA and the MOU, TxDOT historians determined that there are no historic, non-archeological properties in the APE. In compliance with the Antiquities Code of Texas and the MOU, TxDOT historians determined project activities have no potential for adverse effects. Individual project coordination with SHPO is not required.

HIST Program Lead DocuSigned by: Jennifer Carpenter 2C1488B09CFC41C... for TxDOT 5/13/2025

Jennifer Carpenter Date

TPWD Collaborative

From: Mohammed Shaikh
To: Lloyd, Kristine
Subject: FW: 0918-11-109 Kaufman County Outer Loop - Request for initial Collaborative review for an EA Project
Date: Friday, March 21, 2025 5:12:03 PM
Attachments: image001.png

CAUTION: [EXTERNAL] 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.

From: WHAB_TxDOT <WHAB_TxDOT@tpwd.texas.gov>
Sent: Friday, March 21, 2025 4:28 PM
To: Adelina Munoz <Adelina.Munoz@txdot.gov>; WHAB_TxDOT <WHAB_TxDOT@tpwd.texas.gov>; Suzanne Walsh <Suzanne.Walsh@tpwd.texas.gov>
Cc: Dan Perge <Dan.Perge@txdot.gov>; Christine Bergren <Christine.Bergren@txdot.gov>; Mohammed Shaikh <Mohammed.Shaikh@txdot.gov>; Jan Heady <Jan.Heady@txdot.gov>; Lauren Young <Lauren.Young@txdot.gov>; Naomi McManus <Naomi.McManus@txdot.gov>
Subject: RE: 0918-11-109 Kaufman County Outer Loop - Request for initial Collaborative review for an EA Project

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.

The TPWD Wildlife Ecological & Environmental Planning Program has received your request and has assigned it project ID # **53971**. The Ecological & Environmental Planning Program Biologist who will complete your project review is copied on this email.

Thank you,

John Ney
Staff Services Officer
Texas Parks & Wildlife Department
Wildlife Division – Ecological & Environmental Planning Program
4200 Smith School Road
Austin, TX 78744
Office: (512) 389-4571

From: Adelina Munoz <Adelina.Munoz@txdot.gov>

Sent: Friday, March 21, 2025 3:17 PM
To: WHAB_TxDOT <WHAB_TxDOT@tpwd.texas.gov>
Cc: Dan Perge <Dan.Perge@txdot.gov>; Christine Bergren <Christine.Bergren@txdot.gov>; Mohammed Shaikh <Mohammed.Shaikh@txdot.gov>; Jan Heady <Jan.Heady@txdot.gov>; Lauren Young <Lauren.Young@txdot.gov>; Naomi McManus <Naomi.McManus@txdot.gov>
Subject: 0918-11-109 Kaufman County Outer Loop - Request for initial Collaborative review for an EA Project

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

Hello,

TxDOT is requests the initial collaborative review for Kaufman County Outer Loop Environmental Assessment (EA) in Kaufman County, Texas. Please see ECOS WPD I screen in ECOS for the project description. The project location would include new location from State Highway 5 (SH-205) to the north and Interstate 20 (I-20) to the south in Kaufman County. The following file names for relevant documents are available in ECOS:

1. 2024-11-23 07:42:59_Fig1_GenLoc_11x17.jpg
2. 2024-11-23 07:43:16_Fig2_Aerial_11x17.jpg
3. 2024-11-23 07:43:29_Fig3_MappedVegCommunities_11x17.jpg
4. 2024-11-23 07:43:45_Fig4_FieldVerifiedVegCommunities_11x17.jpg
5. 2024-11-23 07:44:08_Fig5_TXNDD_1_5mi_11x17.jpg
6. 2024-11-23 07:44:24_Fig6_TXNDD_10mi_11x17.jpg
7. 2025-03-21 08:12:05_APPROVED_0918-11-109_KCOL_300-04-frm_BMP_01312025.pdf
8. 2025-03-21 08:13:16_APPROVED_0918-11-109_KCOL_SpeciesAnalysisSpreadsheet_03212025.pdf
9. 2025-03-21 08:11:38_APPROVED_0918-11-109_KCOL SA Form_11142024.pdf
10. 2025-03-21 08:58:18_0918-11-109 _KCOL_TPWD_RTEST 03212025.pdf 03/21/2025 Delete Document
11. 2025-03-21 08:59:09_APPROVED_KCOL_SA_Photos_11142024.pdf 03/21/2025 Delete Document
12. 2025-03-21 08:58:44_0918-11-109- KCOL IPAC_USFWS SPECIES List 03212025.pdf 03/21/2025 Delete Document
13. APPROVED 0918-11-109 - KCOL SWAF 09.2024.docx
14. Approved 0918-11-109 - KCOL WFDR 12.2024.pdf
15. Approved 0918-11-109 - KCOL 404-10 Impact Table 11.2024.xlsx
16. CSJ 0918-11-109 - KCOL 60% Schematic 09.2024.pdf

These documents, along with other project-related information, are available in ECOS under the CSJ 0918-11-109. Just as general timeline information, the DEA is expected to be published in mid-August. Please feel free to contact me with any questions or if additional information is needed.

Thank you,

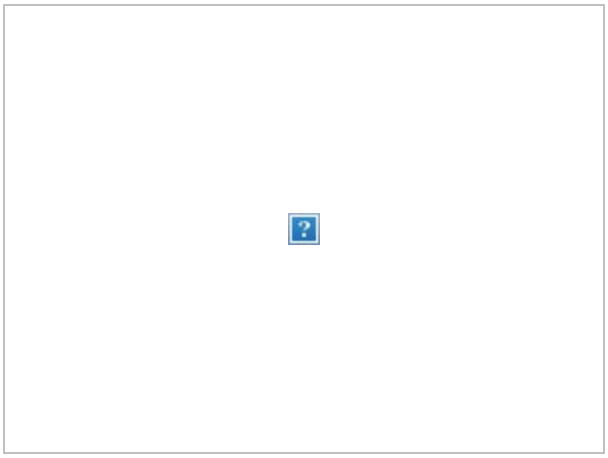
ADELINA MUÑOZ
Environmental Project Planner
Dallas Environmental
Texas Department of Transportation

4777 E. Highway 80
Mesquite, TX 75150-6643
Office: 214-320-6140 | Adelina.Munoz@txdot.gov

TxDOT.gov | Texas Highways Magazine | Get Involved

Out of Office: March 24th- 28th

Agency Holiday: March 31st



Official USFWS IPaC List

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Arlington Ecological Services Field Office
17629 El Camino Real, Suite 211
Houston, TX 77058-3051
Phone: (817) 277-1100 Fax: (817) 277-1129
Email Address: arles@fws.gov

In Reply Refer To: 06/25/2025 20:57:19 UTC
Project Code: 2025-0114208
Project Name: TxDOT_0918-11-109 - KCOL

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, which may occur within the boundary of your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under section 7(a)(1) of the Act, Federal agencies are directed to utilize their authorities to carry out programs for the conservation of threatened and endangered species. Under and 7(a)(2) and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to determine whether their actions may affect threatened and endangered species and/or designated critical habitat. A Federal action is an activity or program authorized, funded, or carried out, in whole or in part, by a Federal agency (50 CFR 402.02).

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For Federal actions other than major construction activities, the Service suggests that a biological evaluation (similar to a Biological Assessment) be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

After evaluating the potential effects of a proposed action on federally listed species, one of the following determinations should be made by the Federal agency:

1. *No effect* - the appropriate determination when a project, as proposed, is anticipated to have no effects to listed species or critical habitat. A "no effect" determination does not require section 7 consultation and no coordination or contact with the Service is necessary. However, the action agency should maintain a complete record of their evaluation, including the steps leading to the determination of affect, the qualified personnel conducting the evaluation, habitat conditions, site photographs, and any other related information.
2. *May affect, but is not likely to adversely affect* - the appropriate determination when a proposed action’s anticipated effects to listed species or critical habitat are insignificant, discountable, or completely beneficial. Insignificant effects relate to the size of the impact and should never reach the scale where "take" of a listed species occurs. Discountable effects are those extremely unlikely to occur. Based on best judgment, a person would not be able to meaningfully measure, detect, or evaluate insignificant effects, or expect discountable effects to occur. This determination requires written concurrence from the Service. A biological evaluation or other supporting information justifying this determination should be submitted with a request for written concurrence.
3. *May affect, is likely to adversely affect* - the appropriate determination if any adverse effect to listed species or critical habitat may occur as a consequence of the proposed action, and

the effect is not discountable or insignificant. This determination requires formal section 7 consultation.

The Service has performed up-front analysis for certain project types and species in your project area. These analyses have been compiled into *determination keys*, which allows an action agency, or its designated non-federal representative, to initiate a streamlined process for determining a proposed project's potential effects on federally listed species. The determination keys can be accessed through IPaC.

The Service recommends that candidate species, proposed species, and proposed critical habitat be addressed should consultation be necessary. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found at: https://www.fws.gov/service/section-7-consultations

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (https://www.fws.gov/library/collections/bald-and-golden-eagle-management). Additionally, wind energy projects should follow the wind energy guidelines (https://www.fws.gov/media/land-based-wind-energy-guidelines) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: https://www.fws.gov/media/recommended-best-practices-communication-tower-design-siting-construction-operation. The Federal Aviation Administration (FAA) released specifications for and made mandatory flashing L-810 lights on new towers 150-350 feet AGL, and the elimination of L-810 steady-burning side lights on towers above 350 feet AGL. While the FAA made these changes to reduce the number of migratory bird collisions (by as much as 70%), extinguishing steady-burning side lights also reduces maintenance costs to tower owners. For additional information concerning migratory birds and eagle conservation plans, please contact the Service's Migratory Bird Office at 505-248-7882.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in

the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Arlington Ecological Services Field Office
17629 El Camino Real, Suite 211
Houston, TX 77058-3051
(817) 277-1100

PROJECT SUMMARY

Project Code: 2025-0114208
Project Name: TxDOT_0918-11-109 - KCOL
Project Type: Road/Hwy - New Construction
Project Description: The Project limits are primarily on a new location from State Highway 5 (SH-205)to the north and Interstate 20 (I-20)to the south in Kaufman County. The proposed right of way (ROW) width is 500 feet. Northbound and southbound bridge connectors would provide entrance and exit ramps for I-20 and US 80. Bridge crossings over existing corridors will occur at the intersections of I-20, US 80, County Road (CR) 239, CR 1392, CR 240/ Samuels Road and CR 233/Colquitt Road. The project would include a 4-lane divided highway with 12-foot travel lanes, 10-foot outside shoulders and 8-foot inside shoulders, and a grassy median. The project would also include northbound and southbound frontage road. The frontage would consist of two 12-foot travel lanes with 10-foot outside shoulders and 8-foot inside shoulders, along with a 10-foot shared use path on the outside of the frontage. The proposed ROW width is 500 feet. Northbound and southbound bridge connectors would provide entrance and exit ramps for I-20 and US-80. Bridge crossings over existing corridors will occur at the intersections of I-20, US-80, CO Rd 239, CO Rd 1392, CO Rd 240/ Samuels RD, and CO Rd 233/Colquitt Rd.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@32.697981600000006,-96.3559926967715,14z

Counties: Kaufman County, Texas

ENDANGERED SPECIES ACT SPECIES

There is a total of 6 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 2 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Tricolored Bat *Perimyotis subflavus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

BIRDS

NAME	STATUS
Piping Plover *Charadrius melodus* Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is **final** critical habitat for this species. Your location does not overlap the critical habitat. This species only needs to be considered under the following conditions: ▪ Wind Energy Projects Species profile: https://ecos.fws.gov/ecp/species/6039	Threatened
Rufa Red Knot *Calidris canutus rufa* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. This species only needs to be considered under the following conditions: ▪ Wind Energy Projects Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened
Whooping Crane *Grus americana* Population: Wherever found, except where listed as an experimental population There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/758	Endangered

REPTILES

NAME	STATUS
Alligator Snapping Turtle *Macrochelys temminckii* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4658	Proposed Threatened

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

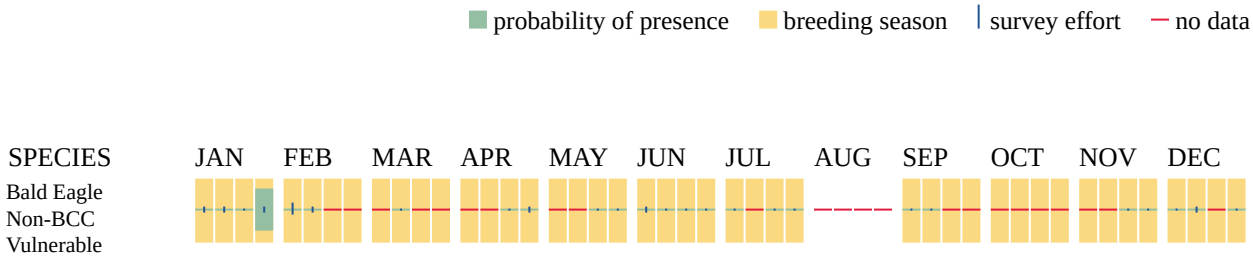
Agency: Texas Department of Transportation
Name: Jeffrey Smith
Address: 17111 Preston Rd STE 300,
City: Dallas
State: TX
Zip: 75248
Email jeffrey.smith@hdrinc.com
Phone: 2143567766

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Texas Department of Transportation

Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.



Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

MIGRATORY BIRDS

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service). The incidental take of migratory birds is the injury or death of birds that results from, but is not the purpose, of an activity. The Service interprets the MBTA to prohibit incidental take.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31
Chimney Swift *Chaetura pelagica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9406	Breeds Mar 15 to Aug 25
Prairie Loggerhead Shrike *Lanius ludovicianus excubitorides* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8833	Breeds Feb 1 to Jul 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

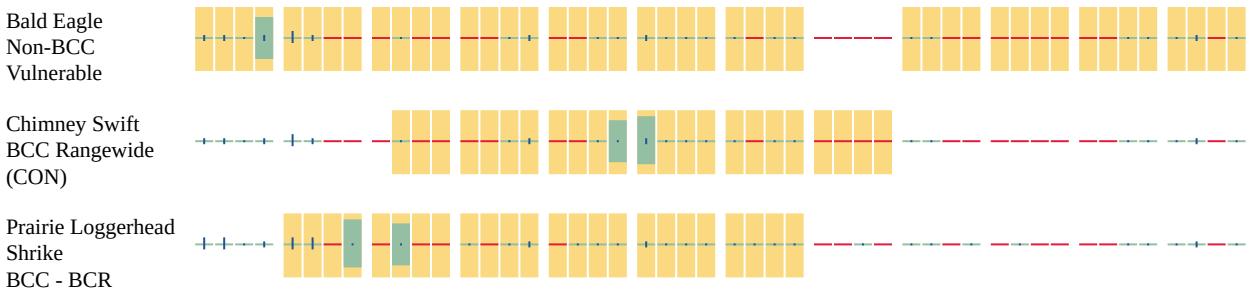
Breeding Season (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

■ probability of presence ■ breeding season | survey effort – no data

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC



Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

FRESHWATER EMERGENT WETLAND

- PEM1C
- PEM1A
- PEM1Cx

FRESHWATER FORESTED/SHRUB WETLAND

- PFO1C
- PFO1A

FRESHWATER POND

- PAB3/UBHh
- PUBHx
- PUBF

- PUBHh
- PUBH

RIVERINE

- R5UBH
- R4SBC

IPAC USER CONTACT INFORMATION

Agency: County of Kaufman
Name: Adelina Munoz
Address: 4777 E. Highway 80
City: Mesquite,
State: TX
Zip: 75150-6643
Email adelina.munoz@txdot.gov
Phone: 2143206140

You have indicated that your project falls under or receives funding through the following special project authorities:

- BIPARTISAN INFRASTRUCTURE LAW (BIL) (OTHER)

TxDOT Species Analysis Form

Form
Species Analysis

Project Name: **0918-11-109 – KCOL (Kaufman County Outer Loop)**

CSJ(s): **0918-11-109**

County(ies): **Kaufman County**

Date Analysis Completed: **November 14, 2024**

Prepared by: **Kathryn Burton, HDR Engineering, inc.**

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.

I. Endangered Species Act

Select the appropriate statement below based on the determinations recorded in the completed project-specific species analysis spreadsheet:

☐ This project does not require consultation with or authorization from the USFWS or NMFS under the Endangered Species Act.

☐ This project requires consultation with or authorization from the USFWS or NMFS under the Endangered Species Act.

☒ This project does not require consultation with or authorization from the USFWS or NMFS under the Endangered Species Act at this time; however, it may affect species that are candidates or are proposed for federal listing or proposed critical habitat. Commitments to review the project and its impacts including the need to consult if the species are listed are documented in the ECOS project file in a “Perform Endangered Species Act Consultation Commitments” Activity.

☐ This project does not require consultation with or authorization from the USFWS or NMFS under the Endangered Species Act at this time; however, a voluntary conference opinion is being sought to address proposed species or proposed critical habitat prior to listing. The conference will be documented in the “Obtain Endangered Species Act Consultation” Activity. in the ECOS project file.

For a project that requires federal authorization or approval, if the completed project-specific species analysis spreadsheet indicates, “May affect,” for any listed species, then consultation with the USFWS is required under section 7 of the Endangered Species Act and the second checkbox above must be checked.

For more information regarding the Endangered Species Act, see **ENV’s Endangered Species Act Handbook**.

II. TPWD Coordination

Select the appropriate statement below:

☒ This project requires a new environmental assessment (EA) or environmental impact statement (EIS), and therefore must be coordinated with TPWD under the 2021 TxDOT/TPWD MOU.

☐ This project involves a re-evaluation of an EA or EIS that was previously coordinated with TPWD and triggers for re-coordination were met, therefore the re-evaluation must be coordinated with TPWD under the 2021 TxDOT/TPWD MOU.

☐ This project involves a re-evaluation of an EA or EIS that was previously coordinated with TPWD and triggers for re-coordination were not met, therefore the re-evaluation will not be coordinated with TPWD under the TxDOT/TPWD MOU.

☐ This project is a categorical exclusion (CE)-level project; therefore, coordination with TPWD under the 2021 TxDOT/TPWD MOU is not required; however, it will be coordinated with TPWD under the 2021 TxDOT/TPWD MOU at the TxDOT district's discretion.

☐ This project is a categorical exclusion (CE)-level project; therefore coordination with TPWD under the 2021 TxDOT/TPWD MOU is not required and it will not be coordinated with TPWD under 2021 TxDOT/TPWD MOU at the TxDOT district's discretion.

For any project that will be coordinated with TPWD, complete the **Documentation of Texas Parks and Wildlife Department Best Management Practices Form**.

For more information regarding TPWD Coordination, see **ENV's Guidance: TPWD Coordination Under the 2021 Memorandum of Understanding**.

III. Bald and Golden Eagle Protection Act (BGEPA)

Select the appropriate statement below:

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

☐ This project is within 660 feet of an active or inactive Bald or Golden Eagle nest; however, construction activities within 660 feet will not occur during the nesting season, and the project will adhere to the National Bald Eagle Management Guidelines of 2007. Therefore, no coordination with USFWS is required.

☐ This project is within 660 feet of an active or inactive Bald or Golden Eagle nest, and construction within 660 feet will occur during the nesting season or the project will not adhere to the National Bald Eagle Management Guidelines of 2007. Therefore, coordination with USFWS to obtain a Non-Purposeful Take Permit is required.

For more information regarding BGEPA, see Section 7.0 of **ENV's Ecological Resources Handbook**.

IV. Migratory Bird Protections

This project will 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.

For more information regarding migratory bird protections, see **ENV's Guidance: Avoiding Migratory Birds and Handling Potential Violations** and Section 3.0 of **ENV's Ecological Resources Handbook**.

TxDOT Species Analysis Spreadsheet

SPECIES ANALYSIS SPREADSHEET: Project Information Sheet	
Project Name:	0918-11-109 KCOL
CSJ(s):	0918-11-109
TxDOT District: (Click dropdown arrow to select a District from List)	Dallas
County(ies): (Click dropdown arrow to select each county)	Kaufman
Prepared by: (Full Name)	Kathryn Burton, HDR Engineering, inc.
Date Completed: (m/d/yyyy)	1/31/2025
TxDOT ENV Spreadsheet Template date: July 3, 2024.	

SPECIES ANALYSIS SUMMARY
Project Name:
CSJ(s):

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Federal Status	Effect/Take Determination for Federally Listed Species	State Status	Impact Determination for State-Listed Species	Explanation for Effect/Take and/or Impact Determination	Presence/ Absence survey conducted?
Kaufman	Birds	Black Rail	*Laterallus jamaicensis*	Black rails are year-round residents of the central and upper coast and migrants in the eastern part of the state. The species nests in salt, brackish, and freshwater marshes, pond borders, wet meadows, and wetlands with hydrophytic grass species. Water depth is an important and key habitat component, as the species typically is found where water is less than two to four centimeters deep. Other significant habitat factors may include vegetation density, distance to open water, and water regime stability. Nesting typically occurs in the highest sections of the marsh, which have mesic to hydric soils and are flooded by only the highest tides. Nests are built in areas with saturated or shallowly flooded soils and dense vegetation on damp ground, on mat of previous year's dead grasses, or over shallow water. In salt or brackish marshes, typical habitat includes dense stands of cordgrasses (*Spartina* sp.), spikegrasses (*Distichlis* sp.), and needlerush (*Juncus* sp.), or, in more upland saltbush communities along marsh edges. Typical freshwater habitat includes species such as cattail (*Typha*) and bulrush (*Scirpus* sp.). Non-breeding habitat is thought to be similar to breeding habitat.	N/A	In Texas, the Black Rail breeds and winters in high quality coastal marsh and prairie. The project area is outside the breeding and wintering ranges of this species. Suitable habitat for migratory Black Rails may be present; however, any use of that habitat would be incidental and ephemeral.	T	No effect or take	T	No impact	The project area does not contain suitable breeding or wintering habitat for the Black Rail. Any use of potential migratory stopover habitat within the project area would be incidental and ephemeral.	N
Kaufman	Birds	Piping Plover - Migratory	*Charadrius melodus*	This migratory species overwinters in Texas, where it occurs on beaches, ephemeral sand flats, barrier islands, sand, mud, algal flats, washover passes, salt marshes, lagoons, and dunes along the Gulf Coast and adjacent offshore islands, including spoil islands in the Intracoastal Waterway. Algal flats appear to be the highest quality habitat because of their relative inaccessibility and their continuous availability throughout all tidal conditions. Sand flats often appear to be preferred over algal flats when both are available, but large portions of sand flats along the Texas coast are available only during low or very low tides and are often completely unavailable during extreme high tides or strong north winds. Beaches appear to serve as a secondary habitat to the flats associated with the primary bays, lagoons, and inter-island passes. Beaches are rarely used on the southern Texas coast, where bayside habitat is always available, and are abandoned as bayside habitats become available on the central and northern coast.	N/A	The list of federally threatened and endangered species indicates that based on the project location within the migratory route, effects to Piping Plover only need be considered for wind energy projects. The project area is outside the breeding and wintering range of this species. Although suitable stopover habitat may be present, Piping Plover is not expected to regularly occur and any use of this habitat would be incidental.	T	No effect or Take	T	No impact	The project is not a wind energy project within the migratory route and does not contain suitable breeding and wintering habitat for the Piping Plover.	N

Kaufman	Birds	Red Knot - Migratory	*Calidris canutus rufa*	The species is a winter resident and migrant in Texas. It is primarily found in marine habitats such as sandy beaches, salt marshes, lagoons, mudflats of estuaries and bays, and mangrove swamps during winter months. It primarily occurs along the Gulf coast on tidal flats and beaches and less frequently in marshes and flooded fields. It has occasionally been observed along shorelines of large lakes and freshwater marshes.	N/A	The list of federally threatened and endangered species indicates that based on the project location within the migratory route, effects to Red Knot only need be considered for wind energy projects. The project area is outside the breeding and wintering range of this species. Although suitable stopover habitat may be present, Red Knot is not expected to regularly occur and any use of this habitat would be incidental.	T	No effect or Take	T	No impact	The project is not a wind energy project within the migratory route and does not contain suitable breeding and wintering habitat for the Red Knot.	N
Kaufman	Birds	White-faced Ibis	*Plegadis chihi*	The species is found in the Western Gulf Coastal Plains ecoregion of Texas. Preferred habitat includes freshwater wetlands, marshes, ponds, rivers, irrigated land, and sloughs, but it occasionally forages in brackish or saltwater marshes. It nests in marshes in low trees, on the ground in bulrushes (Scirpus sp.) or reeds, or on floating mats.	Y	Suitable habitat is present wihtin the project area, including wetlands, ponds, and streams, but does not occur in the Western Gulf Coastal Plains ecoregion. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	—	N/A	T	No impact	Suitable habitat is present; however, the project area does not occur within the ecoregion where this species is found.	N
Kaufman	Birds	Whooping Crane	*Grus americana*	The species breeds in Canada and winters on the Texas coast at Aransas National Wildlife Refuge. During migration it typically stops to rest and feed in open bottomlands of large rivers and marshes but, like other waterbirds, it may also utilize flooded croplands, playas, large wetlands associated with lakes, small ponds, and various other aquatic features. Typical migration habitat includes sites with good horizontal visibility, water depth of 30 centimeters or less, and minimum wetland size of 0.04 hectare for roosting.	N	Flooded croplands and small ponds within the project area could provide migratory stopover habitat. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	E	No effect or take	E	No impact	Suitable breeding and wintering habitat is not present for this species. Species presence within stopover habitat would be temporary and incidental.	N

Kaufman	Birds	Wood Stork	*Mycteria americana*	The species breeds in Mexico, and nesting sites have not been recorded in Texas since 1960. However, post-breeding migrants disperse into Texas in the summer. Foraging habitat includes freshwater prairie ponds, flooded pastures or fields, ditches, and other shallow standing water with an open canopy, occasionally including brackish wetlands. The species typically roosts communally in tall snags, sometimes in association with other wading birds (i.e. active heronries).	N	Flooded pastures, fields, ditches and other shallow standing water with an open canopy were observed within the project area; however, presence of this species within the project area would likely be incidental and ephemeral. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	—	N/A	T	No impact	Suitable breeding habitat is not present for this species. Species presence would be temporary and incidental.	N
Kaufman	Insects	Monarch Butterfly	*Danaus plexippus*	Found statewide. Adults are found in a variety of habitats including native prairies, pastures, open woodlands and savannas, desert scrub, roadsides, and other habitats with abundant nectar plants, including urbanized areas. Although adults may be present year round, they are primarily encountered between March and November, and are most commonly observed in the summer and fall during breeding and migration. Caterpillars are found on various species of the family Asclepiadaceae (occasionally treated as a subfamily of Apocynaceae). Common host plants in Texas include milkweeds (*Asclepias* spp.) milkweed vines (*Matelea* spp.), climbing milkweed (Funastrum spp.), swallowworts (*Cynanchum* spp.) and Anglepod (*Gonolobus suberosus*). Caterpillars are most frequently observed between April and September.	Y	Suitable habitat including pastures, roadsides, and urban areas were observed within the project area. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	C	May affect	—	N/A	The project may affect the proposed threatened monarch butterfly since the action area contains suitable habitat for this species. A conference, or consultation with the USFWS would be completed before construction begins.	N
Kaufman	Mammals	Black Bear	*Ursus americanus*	Once widespread throughout the state, both subspecies of American black bear (*Ursus americanus eremicus* and *U. a. amblyceps*) have been restricted to west Texas, primarily in or near the larger mountain ranges such as the Chisos and Guadalupe Mountains, but occasionally in the Edwards Plateau region. Preferred habitat consists of desert scrub, chaparral, and juniper-oak or pinyon-oak woodlands. Optimal brushy and forest habitats consist of moderate to high density and canopy cover, high species diversity, rugged topography, and low human population.	N	The project area does not occur within the range of the black bear occuring in west Texas; however, the ssp. luteolus can be found in east Texas and Louisiana. Suitable habitat for ssp. luteolus was not observed within the project area as the majority of the project area occurs in existing ROW, cattle pastures, and agricultural fields. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	—	N/A	T	No impact	No suitable habitat is present within the project area for this species.	N

Kaufman	Mammals	Tricolored Bat	*Perimyotis subflavus*	In Texas, Tricolored Bats may be found year-round, in mature hardwoods (>5-inch average dbh), nesting in the leaves or bark of live and dead trees, or epiphytic vegetation such as Spanish moss (*Tillandsia usneoides*). They may also roost among ferns and crevices on limestone and sandstone bluffs and cliffs, and in caves, where present. From late winter to early spring, they also may roost in bridges, culverts, and abandoned buildings. During the winter they may go into periods of torpor during colder temperatures; however, they will emerge to feed on warm evenings. Foraging habitat consists of open woodlands, riparian corridors, and forest edge, especially near waterbodies (natural and manmade). [If any portion of the project area is inside of the IPaC species range, an effect determination is required. If the entirety of the project area is outside of the IPaC species range, use the following: "In this project area, effects to tricolored bat only need to be considered for wind energy projects. Tricolored bat is not expected to regularly occur, and any use of this habitat would be incidental."]	Y	Culverts, abandoned buildings, and live and dead deciduous hardwood trees were observed within the project area providing suitable habitat. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	PE	May affect	–	N/A	Suitable habitat is present within the project area for this species. The action area contains suitable habitat for this species. A conference, or consultation with the Unites States Fish and Wildlife Services would be completed before construction begins.	N
Kaufman	Mollusks	Louisiana Pigtoe	*Pleurobema riddellii*	Freshwater mussel currently found in the Sabine, Neches, and Trinity River basins in Texas. The species occurs in streams to medium-sized rivers with moderate flow. In Texas, the species has only been documented occurring in relatively shallow lotic waters with preferable substrate being sand and sand with gravel and silt. It is not generally known to tolerate impoundments.	N	Perennial streams, Big Brushy Creek and Terry Creek, within the project area are categorized as Group 5 or ungrouped, the USFWS-TPWD protocol (April 2024) assumes the streams to not be occupied by state or federally listed species. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	PT	No effect or take	T	No impact	No suitable habitat is present within the project area for this species. Freshwater Mussel BMPs, including survey/relocation of native mussels, apply in compliance with USFWS-TPWD Protocol.	N

Kaufman	Mollusks	Sandbank Pocketbook	*Lampsilis satura*	A freshwater mussel that is currently limited to the Upper Trinity, Neches, Sabine, and San Jacinto River basins in Texas. The species occurs in flowing small to large rivers with gravel, gravel-sand, and sand substrates. It has been observed in littoral areas with snags, gravel, or sand substrate with slow to moderate currents, as well as lotic waters in substrates of sand, silty sand, and sand and clay mixture.	N	Perennial streams, Big Brushy Creek and Terry Creek, within the project area are categorized as Group 5 or ungrouped, the USFWS-TPWD protocol (April 2024) assumes the streams to not be occupied by state or federally listed species. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	–	N/A	T	No impact	No suitable habitat is present within the project area for this species. Freshwater Mussel BMPs, including survey/relocation of native mussels, apply in compliance with USFWS-TPWD Protocol.	N
Kaufman	Mollusks	Texas Fawnsfoot	*Truncilla macrodon*	A freshwater mussel that is currently limited to the Brazos, Colorado, and Trinity River basins in Texas. The species occupies large streams to medium rivers and is intolerant of impoundment. Little is known about the species due to lack of representative specimens, however it is thought that the species prefers protected areas near shore in water with a moderate current over mud, sandy mud, and gravel substrates. It is also found in perennial irrigation canals for rice.	N	Perennial streams, Big Brushy Creek and Terry Creek, within the project area are categorized as Group 5 or ungrouped, the USFWS-TPWD protocol (April 2024) assumes the streams to not be occupied by state or federally listed species. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	T	No effect or take	T	No impact	No suitable habitat is present within the project area for this species. Freshwater Mussel BMPs, including survey/relocation of native mussels, apply in compliance with USFWS-TPWD Protocol.	N

Kaufman	Mollusks	Texas Heelsplitter	*Potamilus amphichaenus*	A freshwater mussel currently known from the Trinity, Neches, and Sabine River basins. The species occurs in small streams to medium rivers with sand or mud substrate. It is found in flowing water but not in riffles or shoals. It prefers quiet waters and can be found in reservoirs.	N	Perennial streams, Big Brushy Creek and Terry Creek, within the project area are categorized as Group 5 or ungrouped, the USFWS-TPWD protocol (April 2024) assumes the streams to not be occupied by state or federally listed species. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	PE	No effect or take	T	No impact	No suitable habitat is present within the project area for this species. Freshwater Mussel BMPs, including survey/relocation of native mussels, apply in compliance with USFWS-TPWD Protocol.	N
Kaufman	Mollusks	Trinity Pigtoe	*Fusconaia chunii*	This species of mussel was recently split from Texas Pigtoe and occurs in similar habitats. It is found in a variety of habitats but most common in riffles. It inhabits various substrates though most often sand, gravel, and cobble.	N	Perennial streams, Big Brushy Creek and Terry Creek, within the project area are categorized as Group 5 or ungrouped, the USFWS-TPWD protocol (April 2024) assumes the streams to not be occupied by state or federally listed species. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	—	N/A	T	No impact	No suitable habitat is present within the project area for this species. Freshwater Mussel BMPs, including survey/relocation of native mussels, apply in compliance with USFWS-TPWD Protocol.	N

Kaufman	Reptiles	Alligator Snapping Turtle	*Macrochelys temminckii*	Occurs in drainages east of the Brazos River where it inhabits perennial water bodies such as the deep water of sluggish rivers, canals, lakes, and oxbows, along with swamps, bayous. This highly aquatic species spends the majority of its time on the bottom of water bodies with abundant woody debris that serves as refugia. The presence of woody riparian vegetation is an important component of the waterbodies where the species may be found.	Y	The project area is east of the Brazos River and crosses perennial streams Terry Creek and Big Brushy Creek with sandy to sandy gravel substrate which have wooded riparian zones, submerged woody debris, and movement corridors. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	PT	May affect	T	May impact	Suitable habitat is present within the project area for this species adjacent to the existing ROW along Terry Creek and Big Brushy Creek; however, no project impacts would occur outside of exisitng ROW or within the OHWM of these streams. Temporary impacts may occur to Big Brushy Creek within existing ROW; however, a SWPPP will be implemented. Consultation with the USFWS would be completed for Big Brushy Creek before construction begins for impact.	N
Kaufman	Reptiles	Texas Horned Lizard	*Phrynosoma cornutum*	The species is found in semi-arid open areas with scattered vegetation comprised of bunchgrass, cacti, yucca, mesquite, acacia, juniper, or other woody shrubs and small trees commonly found in loose sandy or loamy soils.	N	The majority of the project area is comprised of heavily disturbed or maintained cattle pastures and clay soils. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	—	N/A	T	No impact	No suitable habitat was observed within the project area for this species.	N

SPECIES ANALYSIS SUMMARY (SGCN)
Project Name:
CSJ(s):

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Impact Determination for SGCNs	Explanation for Impact Determination	Presence/ Absence survey conducted?
Kaufman	AMPHIBIANS	eastern tiger salamander	Ambystoma tigrinum	Terrestrial adults generally occur under cover objects or in burrows surrounding a variety of lentic freshwater habitats, such as ponds, lakes, bottomland wetlands, or upland ephemeral pools. The specific terrestrial habitats are also varied and the occurrence of this species seems to be more closely associated with sandy, loamy or other soils which have easy burrowing properties, rather than any particular ecological system type. Requires fishless breeding pools for successful reproduction.	Y	Ponds are present within the project area and lakes are located outside of the project area. Ponds within the project area consisted of clay soils. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	May impact	Suitable habitat is present within the project area for this species. The following BMPs would be implemented: 1) Aquatic Amphibian and Reptile BMP 2) Terrestrial Amphibian and Reptile BMP 3) Water Quality BMP 4) Vegetation BMP	N
Kaufman	AMPHIBIANS	southern crawfish frog	Lithobates areolatus areolatus	Terrestrial and aquatic: The terrestial habitat is primarily grassland and can vary from pasture to intact prairie; it can also include small prairies in the middle of large forested areas. Aquatic habitat is any body of water but preferred habitat is ephemeral wetlands.	Y	Pastures and a variety of ponds and wetlands are present within the project area. TXNDD EO data indicates sightings of the southern crawfish frog within 10 miles of the project area. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	May impact	Suitable habitat is present within the project area for this species. The following BMPs would be implemented: 1) Aquatic Amphibian and Reptile BMP 2) Terrestrial Amphibian and Reptile BMP 3) Water Quality BMP 4) Vegetation BMP	N
Kaufman	AMPHIBIANS	Strecker's chorus frog	Pseudacris streckeri	Terrestrial and aquatic: Wooded floodplains and flats, prairies, cultivated fields and marshes. Likes sandy substrates.	Y	Cultivated fields are present within the project area; however, the majority of the project area is comprised of clay soils. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	May impact	Suitable habitat is present within the project area for this species. The following BMPs would be implemented: 1) Aquatic Amphibian and Reptile BMP 2) Terrestrial Amphibian and Reptile BMP 3) Water Quality BMP 4) Vegetation BMP	N
Kaufman	AMPHIBIANS	Woodhouse's toad	Anaxyrus woodhousii	Terrestrial and aquatic: A wide variety of terrestrial habitats are used by this species, including forests, grasslands, and barrier island sand dunes. Aquatic habitats are equally varied.	Y	This species has a variety of habitats including grasslands, creeks, ponds, and wetlands, which may be found within the project area. iNaturalist indicated sightings in the Terrell area. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	May impact	Suitable habitat is present within the project area for this species. The following BMPs would be implemented: 1) Aquatic Amphibian and Reptile BMP 2) Terrestrial Amphibian and Reptile BMP 3) Water Quality BMP 4) Vegetation BMP.	N

SPECIES ANALYSIS SUMMARY (SGCN)
Project Name:
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County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Impact Determination for SGCNs	Explanation for Impact Determination	Presence/ Absence survey conducted?
Kaufman	BIRDS	Bank Swallow	Riparia riparia	Bank Swallows live in low areas along rivers, streams, ocean coasts, and reservoirs. Their territories usually include vertical cliffs or banks where they nest in colonies of 10 to 2,000 nests. Though in the past Bank Swallows were most commonly found around natural bluffs or eroding streamside banks, they now often nest in human-made sites, such as sand and gravel quarries or road cuts. They forage in open areas and avoid places with tree cover.	Y	Riparian zones of streams, human-made sites, and open areas are present within the project area providing suitable stopover habitat. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	May impact	Suitable stopover habitat is present within the project area for this species. Bird BMP would be implemented.	N
Kaufman	BIRDS	Brewer's Blackbird	Euphagus cyanocephalus	Shrubby and bushy areas (especially near water), riparian woodland, aspen parklands, cultivated lands, marshes, and around human habitation; in migration and winter also in pastures and fields (AOU 1983).	Y	Shrubby areas, riparian woodland, cultivated lands, human habitation, and pastures and fields are present within the project area. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	May impact	Suitable habitat is present within the project area for this species. Bird BMP would be implemented.	N
Kaufman	BIRDS	Chestnut-Collared Longspur	Calcarius ornatus	Occurs in open shortgrass settings especially in patches with some bare ground. Also occurs in grain sorghum fields and Conservation Reserve Program lands.	Y	The project area contains shortgrass areas. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	May impact	Suitable habitat is present within the project area for this species. Bird BMP would be implemented.	N
Kaufman	BIRDS	Common Grackle	Quiscalus quiscula	Common Grackles do well in human landscapes, using scattered trees for nesting and open ground for foraging. Typical natural habitats include open woodland, forest edge, grassland, meadows, swamps, marshes, and palmetto hammocks. They are also very common near agricultural fields and feedlots, suburbs, city parks, cemeteries, pine plantations, and hedgerows. Unbroken tracts of forest are the only places where you are unlikely to find Common Grackles.	Y	Human landscapes and agricultural fields are common within the project area. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	May impact	Suitable habitat is present within the project area for this species. Bird BMP would be implemented.	N
Kaufman	BIRDS	Common Nighthawk	Chordeiles minor	Common Nighthawks nest in both rural and urban habitats including coastal sand dunes and beaches, logged forest, recently burned forest, woodland clearings, prairies, plains, sagebrush, grasslands, open forests, and rock outcrops. They also nest on flat gravel rooftops, though less often as gravel roofs are being replaced by smooth, rubberized roofs that provide an unsuitable surface.	Y	Rural habitats are common throughout the project area. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	May impact	Suitable habitat is present within the project area for this species. Bird BMP would be implemented.	N
Kaufman	BIRDS	Loggerhead Shrike	Lanius ludovicianus	Loggerhead Shrikes inhabit open country with short vegetation and well-spaced shrubs or low trees, particularly those with spines or thorns. They frequent agricultural fields, pastures, old orchards, riparian areas, desert scrublands, savannas, prairies, golf courses, and cemeteries. Loggerhead Shrikes are often seen along mowed roadsides with access to fence lines and utility poles.	Y	The project area is primarily comprised of short vegetation, agricultural fields, pastures, and riparian areas. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	May impact	Suitable habitat is present within the project area for this species. Bird BMP would be implemented.	N

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Kaufman	BIRDS	Mottled Duck	Anas fulvigula	Estuaries, ponds, lakes, secondary bays.	Y	Ponds are present within the project area and lakes are located outside of the project area. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	May impact	Suitable habitat is present within the project area for this species. Bird BMP would be implemented.	N
Kaufman	BIRDS	Northern Bobwhite	Colinus virginianus	Inhabits a wide variety of vegetation types, particularly early successional stages. Occurs in croplands, grasslands, pastures, fallow fields, grass-brush rangelands, open pinelands, open mixed pine-hardwood forests, and habitat mosaics (Brennan 1999).	Y	Croplands, pastures, and grass-brush rangelands are present within the study area. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	May impact	Suitable habitat is present within the project area for this species. Bird BMP would be implemented.	N
Kaufman	BIRDS	Sprague's Pipit	Anthus spragueii	The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Habitat during migration and in winter consists of pastures and weedy fields (AOU 1983), including grasslands with dense herbaceous vegetation or grassy agricultural fields.	Y	Pastures, weedy fields, and agricultural fields are present within the project area. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	May impact	Suitable habitat is present within the project area for this species. Bird BMP would be implemented.	N
Kaufman	BIRDS	Wilson's Warbler	Cardellina pusilla	Wilson's warblers key in on forests and scrubby areas along streams to fatten up during migration. During the nonbreeding season they use many types of habitats from lowland thickets near streams to high-elevation cloud forests in Mexico and Central America.	Y	Riparian zones along intermittent and perennial streams, including Terry Creek, Big Brushy Creek, and Little High Point Creek, are located within the project area. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	May impact	Suitable habitat is present within the project area for this species. Bird BMP would be implemented.	N
Kaufman	BIRDS	Yellow Rail	Coturnicops noveboracensis	BREEDING: Emergent wetlands, grass or sedge marshes and wet meadows in freshwater situations. Some breeding territories in these wet meadows contain firm footing and only a few remnant pools of water (Berkey 1991). These areas can range from damp to 38 cm (15 inches) of water but the average depth used for nesting is 8 to 15 cm (3 to 6 inches) (Savaloja 1981). NON-BREEDING: Grain fields in winter and when migrating. Winters in both freshwater and brackish marshes, as well as in dense, deep grass. During fall migration, will use many open habitats, from rice paddies to dry hayfields.	Y	Emergent wetlands, grain fields, and hayfields are present within the project area providing suitable stopover habitat. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	May impact	Suitable stopover habitat is present within the project area for this species. Bird BMP would be implemented.	N

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Kaufman	FISH	spotted sucker	Minytrema melanops	Found primarily in east Texas streams from the Red to the Brazos river basins. An isolated, disjunct population occurs in the Llano River near Junction downstream to about Mason; this may be an introduced population. Typically in clear creeks with firm substrates.	Y	The project area is located in east Texas in the Trinity River basin and contains intermittent streams with mainly clay substrate and perennial streams with sand and sandy gravel substrate. Named streams include Terry Creek, Big Brushy Creek, and Little High Point Creek. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	May impact	Suitable habitat is present within the project area for this species. The following BMPs would be implemented: 1) Water Quality BMP 2) Stream Crossings BMP 3) Fish BMP	N
Kaufman	INSECTS	American bumblebee	Bombus pensylvanicus	Preferred habitat includes farmlands and open fields (USFWS).	Y	Farmlands and open fields were observed within the project area. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	May impact	Suitable habitat is present within the project area for this species. The following BMPs would be implemented: 1) Vegetation BMP 2) Insect Pollinator BMP	N
Kaufman	MAMMALS	eastern spotted skunk	Spilogale putorius	Generalist; open fields prairies, croplands, fence rows, farmyards, forest edges & woodlands. Prefer wooded, brushy areas & tallgrass prairies. S.p. ssp. interrupta found in wooded areas and tallgrass prairies, preferring rocky canyons and outcrops when such sites are available.	Y	Croplands, fence rows, farmyards, and brushy areas are present within the study area. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	May impact	Suitable habitat is present within the project area for this species. The following BMPs would be implemented: 1) General Design and Construction BMP 2) Vegetation BMP	N
Kaufman	MAMMALS	hoary bat	Lasiurus cinereus	Hoary bats are highly migratory, high-flying bats that have been noted throughout the state. Females are known to migrate to Mexico in the winter, males tend to remain further north and may stay in Texas year-round. Commonly associated with forests (foliage roosting species) but are found in unforested parts of the state and lowland deserts. Tend to be captured over water and large, open flyways.	Y	The project area has large unforested areas and a variety of water features that could be used as large, open flyways. Forested riparian zones within the project area also provide suitable foliage roosting habitat. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	May impact	Suitable habitat is present within the project area for this species. The following BMP would be implemented: 1) Bat BMP	N
Kaufman	MAMMALS	plains spotted skunk	Spilogale interrupta	Generalist; open fields, prairies, croplands, fence rows, farmyards, forest edges, and woodlands; prefers wooded, brushy areas and tallgrass prairie	Y	Open fields, croplands, fence rows, and forest edges are present within the project area. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	May impact	Suitable habitat is present within the project area for this species. The following BMPs would be implemented: 1) General Design and Construction BMP 2) Vegetation BMP	N

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Kaufman	MAMMALS	southeastern myotis bat	Myotis austroriparius	Caves are rare in Texas portion of range; buildings, hollow trees are probably important. Historically, lowland pine and hardwood forests with large hollow trees; associated with ecological communities near water. Roosts in cavity trees of bottomland hardwoods, concrete culverts, and abandoned man-made structures.	Y	Small areas of bottomland hardwoods, concrete culverts, and abandoned man-made structures are present within the project area. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	May impact	Suitable habitat is present within the project area for this species. The following BMP would be implemented: 1) Bat BMP.	N
Kaufman	MOLLUSKS	Gulf mapleleaf	Tritogonia nobilis	Reported from streams to rivers, lakes, and reservoirs. In riverine habitats it is often found in nearshore, backwaters, or riffles in still to moderate currents in mud, sand, gravel, or cobble substrates (Howells et al. 1996; Williams et al. 2008).	Y	Perennial streams with sand to sandy gravel substrate and intermittent streams with loam to clay substrate are present within the project area. Perennial streams had flowing water at the time of site visits while intermittent streams had pools and/or minimal flow. Named streams include Terry Creek, Big Brushy Creek, and Little High Point Creek. Unidentified mussel shells were observed within the project area during site visits. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	May impact	Suitable habitat is present within the project area for this species. The following BMPs would be implemented: 1) Water Quality BMP 2) Stream Crossings BMP 3) Freshwater Mussels BMP	N
Kaufman	MOLLUSKS	lilliput	Toxolasma parvum	Reported from small streams, where it may penetrate into the headwaters, to large rivers, oxbows, sloughs, lakes, ponds, canals, borrow pits, and reservoirs. Primarily occurs in still to slow currents in mud and sand substrates (Coker et al. 1921; Read 1954; Neck and Metcalf 1988; Williams et al. 2008; Watters et al. 2009).	Y	Ponds and perennial streams with sand to sandy gravel substrate and intermittent streams with loam to clay substrate are present within the project area. Perennial streams had flowing water at the time of site visits while intermittent streams had pools and/or minimal flow. Named streams include Terry Creek, Big Brushy Creek, and Little High Point Creek. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	May impact	Suitable habitat is present within the project area for this species. The following BMPs would be implemented: 1) Water Quality BMP 2) Stream Crossings BMP 3) Freshwater Mussels BMP	N

SPECIES ANALYSIS SUMMARY (SGCN)
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Kaufman	MOLLUSKS	Louisiana fatmucket	Lampsilis hydiana	Reported from streams to rivers, may penetrate into headwaters, oxbows, lakes, canals, and reservoirs. Reported to occur in still to moderate currents in sand, mud, and gravel substrates. In riverine systems it is found primarily in nearshore habitats such as banks, backwaters and oxbows (Howells et al. 1996; Randklev et al. 2013a; Randklev et al. 2014a; Tsakiris and Randklev 2016). It adapts readily to reservoirs and can cope with flow modification stemming from river impoundment (Randklev et al. 2016).	Y	Perennial streams with sand to sandy gravel substrate and intermittent streams with loam to clay substrate are present within the project area. Perennial streams had flowing water at the time of site visits while intermittent streams had pools and/or minimal flow. Named streams include Terry Creek, Big Brushy Creek, and Little High Point Creek. Unidentified mussel shells were observed within the project area during site visits. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	May impact	Suitable habitat is present within the project area for this species. The following BMPs would be implemented: 1) Water Quality BMP 2) Stream Crossings BMP 3) Freshwater Mussels BMP	N
Kaufman	MOLLUSKS	mapleleaf	Quadrula quadrula	Reported from streams to rivers, lakes, and reservoirs. In riverine habitats, it may be found in main-channel habitats such as riffles or runs in sand, gravel, and cobble substrates with moderate to swift currents. May also be found in nearshore habitats such as banks and backwaters to include pools in sand or mud substrates with little to no flow. (Williams et al. 2008; Howells 2016; Haag and Cicerello 2016).	Y	Perennial streams with sand to sandy gravel substrate and intermittent streams with loam to clay substrate are present within the project area. Perennial streams had flowing water at the time of site visits while intermittent streams had pools and/or minimal flow. Named streams include Terry Creek, Big Brushy Creek, and Little High Point Creek. Unidentified mussel shells were observed within the project area during site visits. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	May impact	Suitable habitat is present within the project area for this species. The following BMPs would be implemented: 1) Water Quality BMP 2) Stream Crossings BMP 3) Freshwater Mussels BMP	N

SPECIES ANALYSIS SUMMARY (SGCN)
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CSJ(s):

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Impact Determination for SGCNs	Explanation for Impact Determination	Presence/ Absence survey conducted?
Kaufman	MOLLUSKS	pimpleback	Cyclonaias pustulosa	Occurs in small streams to large rivers in habitats including riffles and runs with flowing water, also found in nearshore habitats such as banks and backwaters or pools. Can occur in reservoirs but varies based by population. Is often found in substrates comprising of sand, gravel, and cobble but also mud and silt (Howells et al. 1996; Williams et al. 2008; Watters et al. 2009).	Y	Perennial streams with sand to sandy gravel substrate and intermittent streams with loam to clay substrate are present within the project area. Perennial streams had flowing water at the time of site visits while intermittent streams had pools and/or minimal flow. Named streams include Terry Creek, Big Brushy Creek, and Little High Point Creek. Unidentified mussel shells were observed within the project area during site visits. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	May impact	Suitable habitat is present within the project area for this species. The following BMPs would be implemented: 1) Water Quality BMP 2) Stream Crossings BMP 3) Freshwater Mussels BMP	N
Kaufman	MOLLUSKS	pistolgrip	Tritogonia verrucosa	Reported from streams to rivers, lakes, and reservoirs, but considered less tolerant of impoundment (Haag and Cicerello 2016). Can occur in a variety of habitat types but most often found in main channel habitats such as riffles and runs with moderate current and sand, gravel, or cobble substrates (Howells et al. 1996; Williams et al. 2008).	Y	Perennial streams with sand to sandy gravel substrate and intermittent streams with loam to clay substrate are present within the project area. Perennial streams had flowing water at the time of site visits while intermittent streams had pools and/or minimal flow. Named streams include Terry Creek, Big Brushy Creek, and Little High Point Creek. Unidentified mussel shells were observed within the project area during site visits. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	May impact	Suitable habitat is present within the project area for this species. The following BMPs would be implemented: 1) Water Quality BMP 2) Stream Crossings BMP 3) Freshwater Mussels BMP	N

SPECIES ANALYSIS SUMMARY (SGCN)
Project Name:
CSJ(s):

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Impact Determination for SGCNs	Explanation for Impact Determination	Presence/ Absence survey conducted?
Kaufman	MOLLUSKS	pondmussel	Sagittunio subrostratus	Reported from streams to rivers, where it can invade headwater systems but is rarely in large river systems. Can also inhabit natural and artificial ponds, lakes, reservoirs, and canals. In riverine habitat typically occurs in backwaters, pools, sloughs, and oxbows in little to no current in substrates of mud or sand (Parmalee and Bogan 1998; Williams et al. 2008; Watters et al. 2009; Haag and Cicerello 2016; Watters 2018).	Y	Perennial streams with sand to sandy gravel substrate and intermittent streams with loam to clay substrate are present within the project area. Perennial streams had flowing water at the time of site visits while intermittent streams had pools and/or minimal flow. Named streams include Terry Creek, Big Brushy Creek, and Little High Point Creek. Unidentified mussel shells were observed within the project area during site visits. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	May impact	Suitable habitat is present within the project area for this species. The following BMPs would be implemented: 1) Water Quality BMP 2) Stream Crossings BMP 3) Freshwater Mussels BMP	N
Kaufman	MOLLUSKS	tapered pondhorn	Uniomerus declivis	It likely occurs in streams, rivers, oxbows, marshes, swamps, lakes, canals, ponds, and reservoirs in still to moderate currents in mud, sand, or gravel substrates. Also probably occurs in woody debris such as logjams and exposed roots of riparian trees (Williams et al. 2008).	Y	Perennial streams with sand to sandy gravel substrate and intermittent streams with loam to clay substrate are present within the project area. Perennial streams had flowing water at the time of site visits while intermittent streams had pools and/or minimal flow. Named streams include Terry Creek, Big Brushy Creek, and Little High Point Creek. Unidentified mussel shells were observed within the project area during site visits. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	May impact	Suitable habitat is present within the project area for this species. The following BMPs would be implemented: 1) Water Quality BMP 2) Stream Crossings BMP 3) Freshwater Mussels BMP	N
Kaufman	REPTILES	eastern box turtle	Terrapene carolina	Terrestrial: Eastern box turtles inhabit forests, fields, forest-brush, and forest-field ecotones. In some areas they move seasonally from fields in spring to forest in summer. They commonly enters pools of shallow water in summer. For shelter, they burrow into loose soil, debris, mud, old stump holes, or under leaf litter. They can successfully hibernate in sites that may experience subfreezing temperatures.	Y	Fields, pools of shallow water, and options for shelter are present within the project area. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	May impact	Suitable habitat is present within the project area for this species. The following BMPs would be implemented: 1) Terrestrial Amphibian and Reptile BMP 2) Vegetation BMP	N

SPECIES ANALYSIS SUMMARY (SGCN)
Project Name:
CSJ(s):

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Impact Determination for SGCNs	Explanation for Impact Determination	Presence/ Absence survey conducted?
Kaufman	REPTILES	prairie skink	Plestiodon septentrionalis	The prairie skink can occur in any native grassland habitat across the Rolling Plains, Blackland Prairie, Post Oak Savanna and Pineywoods ecoregions.	Y	The project area is located in the Blackland Prairies ecoregion providing pastures and fields. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	May impact	Suitable habitat is present within the project area for this species. The following BMPs would be implemented: 1) Terrestrial Amphibian and Reptile BMP 2) Vegetation BMP	N
Kaufman	REPTILES	slender glass lizard	Ophisaurus attenuatus	Terrestrial: Habitats include open grassland, prairie, woodland edge, open woodland, oak savannas, longleaf pine flatwoods, scrubby areas, fallow fields, and areas near streams and ponds, often in habitats with sandy soil.	Y	Scrubby areas, streams, and ponds are present within the project area. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	May impact	Suitable habitat is present within the project area for this species. The following BMPs would be implemented: 1) Terrestrial Amphibian and Reptile BMP 2) Vegetation BMP	N
Kaufman	REPTILES	western box turtle	Terrapene ornata	Terrestrial: Ornate or western box trutles inhabit prairie grassland, pasture, fields, sandhills, and open woodland. They are essentially terrestrial but sometimes enter slow, shallow streams and creek pools. For shelter, they burrow into soil (e.g., under plants such as yucca) (Converse et al. 2002) or enter burrows made by other species.	Y	Pastures, fields, and streams are present within the project area. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	May impact	Suitable habitat is present within the project area for this species. The following BMPs would be implemented: 1) Terrestrial Amphibian and Reptile BMP 2) Vegetation BMP	N
Kaufman	REPTILES	western chicken turtle	Deirochelys reticularia miaria	Aquatic and terrestrial: This species uses aquatic habitats in the late winter, spring and early summer and then terrestrial habitats the remainder of the year. Preferred aquatic habitats seem to be highly vegetated shallow wetlands with gentle slopes. Specific terrestrial habitats are not well known.	Y	Some vegetated shallow wetlands are present within the project area. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	May impact	Suitable habitat is present within the project area for this species. The following BMPs would be implemented: 1) Aquatic Amphibian and Reptile BMP 2) Terrestrial Amphibian and Reptile BMP 3) Water Quality BMP 4) Vegetation BMP	N
Kaufman	REPTILES	western massasauga	Sistrurus tergeminus	Terrestrial: Shortgrass or mixed grass prairie, with gravel or sandy soils. Often found associated with draws, floodplains, and more mesic habitats within the arid landscape. Frequently occurs in shrub encroached grasslands.	Y	The project area has floodplains and shrub encroached grasslands. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	May impact	Suitable habitat is present within the project area for this species. The following BMPs would be implemented: 1) Terrestrial Amphibian and Reptile BMP 2) Vegetation BMP	N
Kaufman	PLANTS	Shinner's sedge	Carex shinnersii	Occurs in ditches and swales in prairie landscapes (Carr 2015).	Y	Ditches and swales are present throughout the project area. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	May impact	Suitable habitat is present within the project area for this species. The following BMPs would be implemented: 1) Rare Plant BMP.	N

SPECIES ANALYSIS SUMMARY (SGCN)
Project Name:
CSJ(s):

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Impact Determination for SGCNs	Explanation for Impact Determination	Presence/ Absence survey conducted?
Kaufman	PLANTS	Topeka purple-coneflower	Echinacea atrorubens	Occurring mostly in tallgrass prairie of the southern Great Plains, in blackland prairies but also in a variety of other sites like limestone hillsides; Perennial; Flowering Apr-June	Y	The project area occurs in the Blackland Prairie ecoregion and has potential to provide suitable habitat. TXNDD EO data indicates sightings of the Topeka purple-coneflower within 1.5 miles of the project area. The site visits were conducted in October and November, 2023, and January, July, and August, 2024.	May impact	Suitable habitat is present within the project area for this species. The following BMPs would be implemented: 1) Rare Plant BMP.	N

Documentation of Texas Parks and Wildlife Department Best Management Practices Form

Form

Documentation of Texas Parks and Wildlife Department Best Management Practices

Project Name: **0918-11-109 – KCOL (Kaufman County Outer Loop)**

CSJ(s): **0918-11-109**

County(ies): **Kaufman**

Date Form Completed: **January 31, 2025**

Prepared by: **Kathryn Burton, HDR Engineering, inc.**

Information on state-listed species, SGCN, water resources, and other natural resources can be found in the ECOS documents tab under the filenames specified in the e-mail sent to WHAB_TXDOT@tpwd.texas.gov.

1. Does the project impact any state parks, wildlife management areas, wildlife refuges, or other designated protected areas?

   ☒ No

   ☐ Yes

   <if yes, describe>

2. Does TxDOT need TPWD assistance in identifying and locating Section 404 mitigation opportunities for this project?

   ☒ No / N/A / Not yet determined

   ☐ Yes

   <if yes, describe>

3. Is there a species or resource challenge that TPWD can assist with additional guidance? If so, describe below:

   The current 2021 Memorandum of Understanding with the Texas Parks and Wildlife Department (TPWD) and the current TPWD Beneficial Management Practices provide sufficient guidance for the Threatened, Endangered, and Species of Greatest Conservation Need species.

4. List all BMP that will be applied to this project per the document *Beneficial Management Practices: 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.**

BMPs to be Implemented:

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 dark-sky 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 night-time lighting needed for safety and security should be used.

1.2 Vegetation BMP

- 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 onsite 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.

1.4 Water Quality BMPs

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

1.5 Stream Crossings BMP

- Use spanning bridges rather than culverts.
- If using a culvert, staggered culverts that concentrate low flows but provide conveyance of higher flows through staggered culverts placed at higher elevations is recommended.
- Bottomless culverts are recommended to allow for fish and other aquatic wildlife passage in the low flow channel. If bottomless culverts are not used, making a low flow channel for fish passage is recommended.
- Avoid placing riprap across stream channels and instead use alternative stabilization such as biotechnical stream bank stabilization methods including live native vegetation or a combination of vegetative and structural materials. When riprap or other bank stabilization devices are necessary, their placement should not impede the movement of aquatic and terrestrial wildlife underneath the bridge. In some instances, rip rap may be buried, back-filled with topsoil and planted with native vegetation.
- Incorporate bat-friendly design into bridges and culverts.
- Design bridges for adequate vertical and horizontal clearances under the roadway to allow for terrestrial wildlife to safely pass under the road.
- A span wide enough to cross the stream and allow for dry ground and a natural surface path under the roadway is encouraged. For culverts, incorporation of an artificial ledge inside the culvert on one or both sides for use by terrestrial wildlife is recommended.
- Riparian buffer zones should remain undisturbed.

1.6 Dewatering BMP

- Follow most recent TPWD Aquatic Resources Relocation Plan Guidelines (PWD LF T3200-1956)
- Impact avoidance measures for aquatic organisms, including all native fish and freshwater mussel species, regardless of state-listing status, should be considered during project planning and construction activities.

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 BMPs

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 foottraffic 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.

2.3 Fish BMP

The following Fish BMP apply to projects for all fish species in waters of the state to minimize impacts to water quality and aquatic passage from transportation projects.

- For projects in waters of the state and work is adjacent to water: Water Quality and Stream Crossing BMP.
- For projects in waters of the state and work is in the water: Water Quality, Stream Crossing, and Dewatering BMP.

2.4.3 Freshwater Mussel BMPs

The following Freshwater Mussel BMP apply to projects within the range and in suitable habitat for mussel SGCN found below and that are also listed on TPWD's RTEST online application.

- In addition to Water Quality and Stream Crossing BMP, follow the most recent, "TPWD–TxDOT Annual Work Plan for Pre-Construction Surveys, Aquatic Resources Relocations, and Other Best Management Practices to Avoid, Minimize, and Mitigate Impacts to Freshwater Resources."
- When work is adjacent to the water: Water Quality BMP implemented as part of the Texas Commission on Environmental Quality (TCEQ) Stormwater Pollution Prevention Plan (SWPPP) for a construction general permit or any conditions of the 401 Water Quality Certification for the project will be implemented. (Note: SWPPP and 401 BMP are not listed in this document).

Mollusks		
Common Name	**Status**	**Scientific Name**
Brazos heelsplitter	T	*Potamilus streckersoni*
False spike	T	*Fusconaia mitchelli*
Guadalupe fatmucket	T	*Lampsilis bergmanni*
Guadalupe orb	T	*Cyclonaias necki*
Louisiana pigtoe	T	*Pleurobema riddellii*
Mexican fawnsfoot	T	*Truncilla cognata*
Salina mucket	T	*Potamilus metnecktayi*
Sandbank pocketbook	T	*Lampsilis satura*
Southern hickorynut	T	*Obovaria arkansasensis*
Texas heelsplitter	T	*Potamilus amphichaenus*
Texas fatmucket	T	*Lampsilis bracteata*
Texas fawnsfoot	T	*Truncilla macrodon*
Texas pigtoe	T	*Fusconaia askewi*
Texas pimpleback	T	*Cyclonaias petrina*
Trinity pigtoe	T	*Fusconaia chunii*

2.4.4 Insect Pollinator BMP

The following Insect Pollinator BMP apply to projects within the range and in suitable habitat for insect SGCN found below and that are also listed on TPWD's RTEST online application.

- Mowing should only be applied to 30% or less of a site in a given year when practical. In general, mowing is inadequate for management of native insect pollinator habitat in the long term, except to remove annual non-native plants during establishment (i.e., high-mowing before they flower) or to facilitate a light disking. When conducted it should be done post bloom or when host plants have gone dormant for the growing season. This can also be done by leaving strips of habitat farthest from road or highway corridors un-mowed when practical.
- If mowing is required during period of active bloom or high pollinator activity it should be implemented during the heat of the day and with a high mower deck to allow for pollinators to escape and to give late season blooming species a chance to recover and bloom.
- Deep soil disturbances, such as, tilling or deep disking in areas that host aggregations of ground-nesting bees should be avoided. Tilling and disking also may promote the invasion or germination of non-native plants. Different species of native ground-nesting bees prefer different soil conditions, although research suggests that many ground nesting bees prefer sandy, loamy sand or sandy loam soils. In areas with these soil types consider leaving open patches of soil.
- Allow dead trees to stand (so long as they do not pose a risk to property or people) and protect shrubs and herbaceous plants with pithy or hollow stems (e.g., cane fruits, sumac, elderberry), as these provide nesting habitat for tunnel-nesting native bees.
- Retain dead or dying branches whenever it is safe and practical at the edges of the ROW. Wood-boring beetle larvae often fill dead trees and branches with narrow tunnels into which tunnel-nesting bees will establish nests. Additionally, bumble bees may choose to nest in wood piles.

- Retain rotting logs at edges of the ROW where some bee species may burrow tunnels in which to nest.
- Protect sloped or well-drained ground sites where plants are sparse and direct access to soil is available. These are the areas where ground-nesting bees may dig nests. Turning the soil destroys all ground nests that are present at that depth and hinders the emergence of bees that are nesting deeper in the ground.
- Protect grassy thickets, or other areas of dense, low cover from mowing or other disturbance. These are the sites where bumble bees might find the nest cavities they need, as well as annual and perennial wildflowers that can provide important food resources.
- Where available and economical, native plants and seed should be procured from local eco-type providers. Seed mixes should be diverse and include as many ecoregion natives as possible ensuring full season floral resources. Species by Texas ecoregion can be found in the Texas Management Recommendations for Native Insect Pollinators in Texas document: https://tpwd.texas.gov/publications/pwdpubs/media/pwd_bk_w7000_1813.pdf.
- Planting at least three different native flowering plants within each of three blooming periods are recommended (spring, summer, early fall) in high rainfall regions of Texas. In drier regions of the state, a target of three native flowering plants within each of two blooming periods can be used.
- In areas along the I-35 corridor of central Texas consider increasing fall blooming nectar resources as this is a critical time period of monarch butterflies (*Danaus plexippus*) and nesting bees and has been identified as a critical need for these species in Texas.
- Habitat enhancements for native pollinators should include at least one native bunchgrass adapted to the site.
- Utilize an Integrated Pest Management Strategy (IPM) strategy for controlling weedy or invasive plants by minimizing broad use of certain herbicides and surfactants in close proximity to intact habitats utilized by native pollinators. Reduce application timing to periods of low pollinator activity and not during peak bloom season.

Insects		
Common Name	**Status**	**Scientific Name**
a moth		*Sphingicampa blanchardi*
American bumblebee		*Bombus pensylvanicus*
Bay skipper		*Euphyes bayensis*
Blanchards' sphinx moth		*Adhemarius blanchardorum*
Chisos metalmark		*Apodemia chisosensis*
Chisos skipperling		*Piruna haferniki*
Dolan Falls perdita		*Perdita dolanensis*
Manfreda giant-skipper		*Stallingsia maculosus*
No accepted common name		*Andrena scotoptera*
No accepted common name		*Bombus variabilis*
No accepted common name		*Coelioxys piercei*
No accepted common name		*Colletes bumeliae*
No accepted common name		*Colletes saritensis*
No accepted common name		*Eucera birkmanniella*
No accepted common name		*Holcopasites jerryrozeni*
No accepted common name		*Macrotera parkeri*
No accepted common name		*Macrotera robertsi*
No accepted common name		*Megachile parksi*
No accepted common name		*Perdita atriventris*
No accepted common name		*Perdita fracticincta*
No accepted common name		*Perdita tricincta*
Poling's hairstreak		*Satyrium polingi*
Sage sphinx moth		*Lintneria eremitoides*
Scarce streaky-skipper		*Celotes limpia*
Tamaulipan agapema		*Agapema galbina*

2.5.3 Bat BMPs

The following Bat BMP apply to projects within the range and in suitable habitat for all bat SGCN and that are also listed on TPWD's RTEST online application. Review the habitat descriptions for species of interest on RTEST and other trusted resources to determine the appropriate beneficial management practice to avoid or minimize impacts to bats. All bat surveys and other activities that include direct contact with bats shall comply with TPWD-recommended white-nose syndrome protocols located on the TPWD Wildlife Habitat Assessment Program website under "Project Design and Construction".

The following survey and exclusion protocols should be followed prior to commencement of construction activities. For the purposes of this document, structures are defined as bridges, culverts (concrete or metal), wells, and buildings.

- Inform TPWD WHAB during initial collaborative review phase for projects that may impact the following bat species:
  - 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 COVID19 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.
  - 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.
  - 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).
  - 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.

2.6.1 Aquatic Amphibian and Reptile BMPs

The following Aquatic Amphibian and Reptile BMP apply to projects within the range and in suitable habitat for herpetofauna SGCN listed below and that are also listed on TPWD's RTEST online application. Please note that some species may require both aquatic and terrestrial BMP. It is difficult to confirm absence for most species of amphibians and reptiles; therefore, assume presence in suitable habitat and implement the following BMP.

- Inform TPWD WHAB during initial collaborative review phase for projects that may affect habitat for the following species:
  - Black-spotted newt (Notophthalmus meridionalis)
  - Cascade Caverns salamander (Eurycea latitans)
  - Texas salamander (Eurycea neotenes)
  - Brazos water snake (Nerodia harteri)
  - Concho water snake (Nerodia paucimaculata)
- 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).
- 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 BMPs

The following Terrestrial Amphibian and Reptile BMP apply to projects within the range and in suitable habitat for herpetofauna SGCN listed below and that are also listed on TPWD's RTEST online application. Please note that some species may require both aquatic and terrestrial BMP. It is difficult to confirm absence for most species of amphibians and reptiles; therefore, assume presence in suitable habitat and implement the following BMP.

- Inform TPWD WHAB during initial collaborative review phase for projects that may affect habitat for the following species:
- Black-spotted newt (*Notophthalmus meridionalis*)
- Brazos water snake (*Nerodia harteri*)
- Concho water snake (*Nerodia paucimaculata*)
- Dunes sagebrush lizard (*Sceloporus arenicolus)*
- Tamaulipan spot-tailed earless lizard (*Holbrookia subcaudalis*)

- 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.

Amphibians			
Common Name	**Status**	**Scientific Name**	**BMP**
Black-spotted newt	T	*Notophthalmus meridionalis*	1) Aquatic Amphibian and Reptile BMP 2) Terrestrial Amphibian and Reptile BMP 3) Water Quality BMP 4) Vegetation BMP
Blanco blind salamander	T	*Eurycea robusta*	1) Aquatic Amphibian and Reptile BMP 2) Water Quality BMP
Cascade Caverns salamander	T	*Eurycea latitans*	1) Aquatic Amphibian and Reptile BMP 2) Water Quality BMP
Eastern tiger salamander		*Ambystoma tigrinum*	1) Aquatic Amphibian and Reptile BMP 2) Terrestrial Amphibian and Reptile BMP 3) Water Quality BMP 4) Vegetation BMP
Gulf Coast waterdog		*Necturus beyeri*	1) Aquatic Amphibian and Reptile BMP 2) Water Quality BMP
Mexican burrowing toad	T	*Rhinophrynus dorsalis*	1) Aquatic Amphibian and Reptile BMP 2) Terrestrial Amphibian and Reptile BMP 3) Water Quality BMP 4) Vegetation BMP
Mexican treefrog	T	*Smilisca baudinii*	1) Aquatic Amphibian and Reptile BMP 2) Terrestrial Amphibian and Reptile BMP 3) Water Quality BMP 4) Vegetation BMP

Amphibians			
Common Name	**Status**	**Scientific Name**	**BMP**
Sheep frog	T	*Hypopachus variolosus*	1) Minimize disturbance to burrows or downed woody debris 2) Aquatic Amphibian and Reptile BMP 3) Terrestrial Amphibian and Reptile BMP 4) Water Quality BMP 5) Vegetation BMP
South Texas siren (large form)	T	*Siren sp 1*	1) Minimize impacts to warm, shallow waters with vegetative cover such as ponds and ditches 2) Aquatic Amphibian and Reptile BMP 3) Water Quality BMP
Southern crawfish frog		*Lithobates areolatus areolatus*	1) Minimize impacts to wetland habitats including isolated ephemeral pools 2) Aquatic Amphibian and Reptile BMP 3) Terrestrial Amphibian and Reptile BMP 4) Water Quality BMP 5) Vegetation BMP
Spotted dusky salamander		*Desmognathus conanti*	1) Aquatic Amphibian and Reptile BMP 2) Terrestrial Amphibian and Reptile BMP 3) Water Quality BMP 4) Vegetation BMP
Strecker's chorus frog		*Pseudacris streckeri*	1) Aquatic Amphibian and Reptile BMP 2) Terrestrial Amphibian and Reptile BMP 3) Water Quality BMP 4) Vegetation BMP
Texas salamander	T	*Eurycea neotenes*	1) Aquatic Amphibian and Reptile BMP 2) Water Quality BMP
White-lipped frog	T	*Leptodactylus fragilis*	1) Aquatic Amphibian and Reptile BMP 2) Terrestrial Amphibian and Reptile BMP 3) Water Quality BMP 4) Vegetation BMP

Amphibians			
Common Name	**Status**	**Scientific Name**	**BMP**
Woodhouse's toad		*Anaxyrus woodhousii*	1) Aquatic Amphibian and Reptile BMP 2) Terrestrial Amphibian and Reptile BMP 3) Water Quality BMP 4) Vegetation BMP

Reptiles			
Common Name	**Status**	**Scientific Name**	**BMP**
Alligator snapping turtle	T	*Macrochelys temminckii*	1) Minimize impacts to wetland and riverine habitats 2) Aquatic Amphibian and Reptile BMP 3) Water Quality BMP
Big Bend slider		*Trachemys gaigeae*	1) Aquatic Amphibian and Reptile BMP 2) Water Quality BMP
Black-striped snake	T	*Coniophanes imperialis*	1) Terrestrial Amphibian and Reptile BMP 2) Vegetation BMP
Brazos water snake	T	*Nerodia harteri*	1) Minimize impacts to suitable riverine habitats, particularly rock substrate within waterway and along the shoreline, along the upper Brazos River drainage 2) Avoid temporarily or permanently impounding water flow within suitable habitat 3) Aquatic Amphibian and Reptile BMP 4) Terrestrial Amphibian and Reptile BMP 5) Water Quality BMP
Cagle's map turtle	T	*Graptemys caglei*	1) Minimize impacts to riverine habitats in the Guadalupe and San Antonio River drainages 2) Minimize impacts to gently sloping sand banks within 30 feet of shoreline 3) Aquatic Amphibian and Reptile BMP 4) Water Quality BMP

Reptiles			
Common Name	**Status**	**Scientific Name**	**BMP**
Chihuahuan Desert lyre snake		*Trimorphodon vilkinsonii*	1) Terrestrial Amphibian and Reptile BMP 2) Vegetation BMP
Chihuahuan mud turtle	T	*Kinosternon hirtipes murrayi*	1) Aquatic Amphibian and Reptile BMP 2) Water Quality BMP
Concho water snake		*Nerodia paucimaculata*	1) Aquatic Amphibian and Reptile BMP 2) Terrestrial Amphibian and Reptile BMP 3) Water Quality BMP
Dunes sagebrush lizard		*Sceloporus arenicolus*	1) Inform TPWD WHAB during initial collaborative review phase for projects that may impact habitat for species 2) Terrestrial Amphibian and Reptile BMP 3) Vegetation BMP
Eastern box turtle		*Terrapene carolina*	1) Terrestrial Amphibian and Reptile BMP 2) Vegetation BMP
Gray-checkered whiptail		*Aspidoscelis dixoni*	1) Terrestrial Amphibian and Reptile BMP 2) Vegetation BMP
Longnose leopard lizard		*Gambelia wislizenii*	1) Terrestrial Amphibian and Reptile BMP 2) Vegetation BMP
Mexican blackhead snake		*Tantilla atriceps*	1) Terrestrial Amphibian and Reptile BMP 2) Vegetation BMP
Mountain short-horned lizard	T	*Phrynosoma hernandesi*	1) Terrestrial Amphibian and Reptile BMP 2) Vegetation BMP
Northern cat-eyed snake	T	*Leptodeira septentrionalis septentrionalis*	1) Terrestrial Amphibian and Reptile BMP 2) Vegetation BMP
Northern scarlet snake		*Cemophora coccinea*	1) Terrestrial Amphibian and Reptile BMP 2) Vegetation BMP

Reptiles			
Common Name	**Status**	**Scientific Name**	**BMP**
Pygmy rattlesnake		*Sistrurus miliarius*	1) Terrestrial Amphibian and Reptile BMP 2) Vegetation BMP
Plateau spot-tailed earless lizard		*Holbrookia lacerata*	1) Terrestrial Amphibian and Reptile BMP 2) Vegetation BMP
Prairie skink		*Plestiodon septentrionalis*	1) Terrestrial Amphibian and Reptile BMP 2) Vegetation BMP
Reticulate collared lizard		*Crotaphytus reticulatus*	1) Terrestrial Amphibian and Reptile BMP 2) Vegetation BMP
Reticulated gecko		*Coleonyx reticulatus*	1) Terrestrial Amphibian and Reptile BMP 2) Vegetation BMP
Rio Grande river cooter		*Pseudemys gorzugi*	1) Aquatic Amphibian and Reptile BMP 2) Water Quality BMP
Roundtail horned lizard		*Phrynosoma modestum*	1) Terrestrial Amphibian and Reptile BMP 2) Vegetation BMP
Salt marsh snake		*Nerodia clarkia*	1) Aquatic Amphibian and Reptile BMP 2) Water Quality BMP
Slender glass lizard		*Ophisaurus attenuates*	1) Terrestrial Amphibian and Reptile BMP 2) Vegetation BMP
Smooth softshell		*Apalone mutica*	1) Aquatic Amphibian and Reptile BMP 2) Water Quality BMP
Speckled racer	T	*Drymobius margaritiferus*	1) Terrestrial Amphibian and Reptile BMP 2) Vegetation BMP
Tamaulipan spot-tailed earless lizard		*Holbrookia subcaudalis*	1) Terrestrial Amphibian and Reptile BMP 2) Vegetation BMP

Reptiles			
Common Name	**Status**	**Scientific Name**	**BMP**
Texas diamondback terrapin		*Malaclemys terrapin littoralis*	1) Avoid disturbing basking and nesting sites 2) Aquatic Amphibian and Reptile BMP 3) Water Quality BMP
Texas garter snake		*Thamnophis sirtalis annectens*	1) Terrestrial Amphibian and Reptile BMP 2) Vegetation BMP
Texas horned lizard	T	*Phrynosoma cornutum*	1) Avoid harvester ant mounds in the selection of Project Specific Locations (PSLs). 2) Terrestrial Amphibian and Reptile BMP 3) Vegetation BMP
Texas indigo snake		*Drymarchon melanurus erebennus*	1) Terrestrial Amphibian and Reptile BMP 2) Vegetation BMP
Texas map turtle		*Graptemys versa*	1) Aquatic Amphibian and Reptile BMP 2) Water Quality BMP
Texas scarlet snake	T	*Cemophora lineri*	1) Terrestrial Amphibian and Reptile BMP 2) Vegetation BMP
Texas tortoise	T	*Gopherus berlandieri*	1) Utility trenches should be covered overnight or visually inspected before filling to avoid burial of the species 2) Terrestrial Amphibian and Reptile BMP 3) Vegetation BMP
Timber (canebrake) rattlesnake		*Crotalus horridus*	1) Terrestrial Amphibian and Reptile BMP 2) Vegetation BMP
Trans-Pecos black-headed snake	T	*Tantilla cucullate*	1) Terrestrial Amphibian and Reptile BMP 2) Vegetation BMP
Western box turtle		*Terrapene ornata*	1) Terrestrial Amphibian and Reptile BMP 2) Vegetation BMP

Reptiles			
Common Name	**Status**	**Scientific Name**	**BMP**
Western chicken turtle		*Deirochelys reticularia miaria*	1) Aquatic Amphibian and Reptile BMP 2) Terrestrial Amphibian and Reptile BMP 3) Water Quality BMP 4) Vegetation BMP
Western hognose snake		*Heterodon nasicus*	1) Terrestrial Amphibian and Reptile BMP 2) Vegetation BMP
Western massasauga		*Sistrurus tergeminus*	1) Terrestrial Amphibian and Reptile BMP 2) Vegetation BMP
Western rattlesnake		*Crotalus viridis*	1) Terrestrial Amphibian and Reptile BMP 2) Vegetation BMP

5. List all TxDOT species protection specifications that will be applied to this project (e.g., Amphibian and Reptile Exclusion Fence, Bat Houses, etc.)

Species protection specifications to be Implemented:

Amphibian and Reptile Exclusion Fences Toad Exclusion Fence Orange Construction Fence Vegetated Filter Strips Vegetated Buffers Conventional Control Dewatering Bag Temporary Sediment Tank Additional species protection specifications should be implemented to meet the requirements of the BMPs listed above.

Tribal Coordination

From: Melanie Johnson
To: mbear@cheyenneandarapaho-nsn.gov; mromannose@cheyenneandarapaho-nsn.gov; Theodore Villicana; Carissa Speck; jflynn@jenachoctaw.org; thpo@kiowatribe.org; ahill@kiowatribe.org; holly@mathpo.org; mallen@tonkawatribe.com; Robin Williams
Subject: TxDOT Section 106 Consultation Request - CSJ: 0918-11-109, Kaufman County Outer Loop, Kaufman County, Dallas District
Date: Monday, March 31, 2025 9:28:00 AM
Attachments: image001.jpg

Sec. 106 Consultation

MARCH 31, 2025

Contacts:

Scott Pletka
512-416-2631

Notice:

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 kindly request your comments on historic properties of cultural or religious significance to your Tribe that may be affected by the proposed project. Please see the following summary for project details and information. To access the associated reports, which include a detailed project description, APE definition and identification efforts, use the attached link. After 30 days, the link will expire. We will provide an updated link upon request. This project will also be included during our monthly Sec. 106 conference call every third Wednesday of the month at 2 p.m.

Summary:

Project ID (CSJ), Roadway, Limits, County and TxDOT District	*CSJ: 0918-11-109, Kaufman County Outer Loop from SH 205 to IH 20, Kaufman County, Dallas District*
Lat/Longs:	*Begin: 32.814280, -96.350724* *End: 32.696258, -96.353741*
Project Sponsor:	*Kaufman County Outer Loop*
Consultation Status:	☒*Initial Consultation* ☐*Continuation of Consultation* *Reason(s):*
Short Description:	*New location freeway*
New Right of Way:	*600 acres.*
Depth of Impacts:	*Typical 2 feet, maximum 50 feet*
Known Archeological Sites or Properties in project area:	*41KF242*
Identification Efforts:	*Survey*
Recommendations:	*No historic properties affected in the surveyed area. Finish survey of 20.63 acres once access is obtained.*
Link to Detailed Report:	*https://txdot.box.com/s/hk6myb6b5qo5dod57f2u03k6kg9giq97*

Please provide any comments that you may have on the TxDOT findings and recommendations. 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.

MELANIE JOHNSON
Archeological Studies Project Planner
TEXAS DEPARTMENT OF TRANSPORTATION
ENV Division
melanie.johnson@txdot.gov | 512-954-4251 | TxDOT.gov

Texas Department of Transportation

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

March 31, 2025

RE: CSJ: 0918-11-109; Kaufman County Outer Loop, New Location Freeway, Section 106 Consultation; Kaufman County, Dallas District

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

Kaufman County is proposing to construct a loop west of the City of Terrell in Kaufman County, Texas. This project will utilize funding and/or require approval from the Federal Highway Administration.

Area of Potential Effects

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

- The project limits extend from SH 205 to IH 20 along the Kaufman County Outer Loop. The total project length is thus 8.2 miles.
- The existing right of way within these limits comprises an area estimated at 0 acres since the project is entirely on new location.
- The proposed project would require 600 acres of new right of way.

- The estimated depth of impacts is typically 2 feet with a maximum depth of impacts of 50 feet.
- See the attached technical report for additional details regarding the Area of Potential Effects.

Identification Efforts

For this project, TxDOT has conducted an archeological survey. This work covers the accessible portions of proposed new ROW and areas not requiring survey. See the attached technical report for details.

Findings and Recommendations

Based on the above, TxDOT proposes the following findings and recommendations: the project will have no effect on archeological historic properties within evaluated areas and additional survey is needed once ROW has been acquired. 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 the area within the above defined buffer. 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. TxDOT will address any comments provided after that time 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 Melanie Johnson (TxDOT Archeologist) at 512-954-4251 (email: melanie.johnson@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,

Melanie Johnson, Archeological Project Planner
Archeological Studies Branch
Environmental Affairs Division

Enclosure

cc w/o enclosure: ECOS

COMANCHE NATION

Texas Transportation Department
Attn: Ms. Melanie Johnson
1601 Southwest Pkwy
Texas 76302

April 7, 2025

Re: TxDOT Request for Section 106 consultation for CSJ-0918-11-109,
Kaufman County Outer Loop, Kaufman County, Dallas District

Dear Ms. Johnson:

In response to your request, the above reference project has been reviewed by staff of this office to identify areas that may potentially contain prehistoric or historic archeological materials. The location of your project has been cross referenced with the Comanche Nation site files, where an indication of ***"No Properties"*** have been identified. (IAW 36 CFR 800.4(d)(1)).

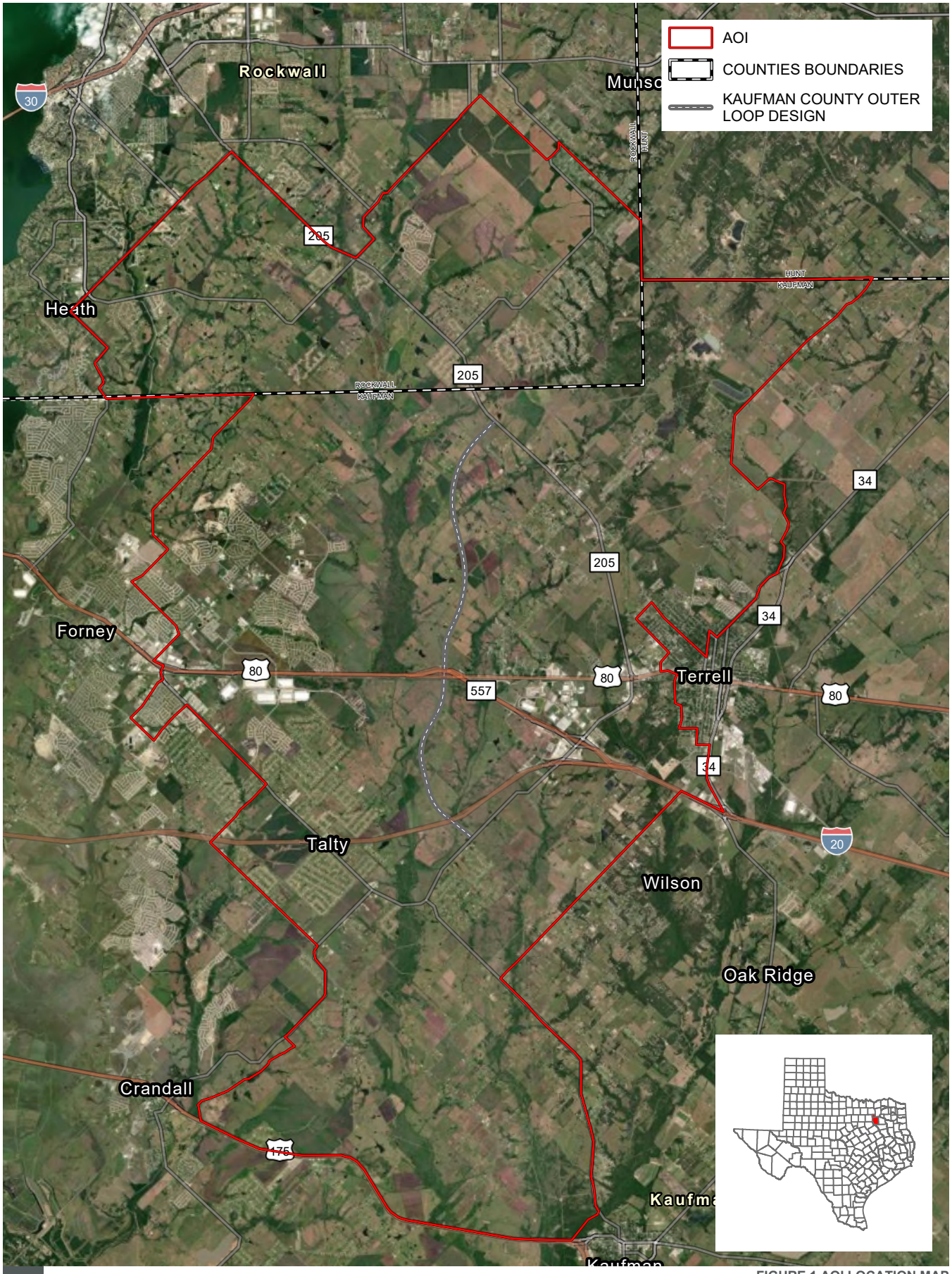
Please contact this office at (580) 492-1153) if you require additional information on this project.

This review is performed in order to identify and preserve the Comanche Nation and State cultural heritage, in conjunction with the State Historic Preservation Office.

Regards

Comanche Nation Historic Preservation Office
Theodore E. Villicana , Technician
#6 SW "D" Avenue, Suite C
Lawton, OK. 73502

APPENDIX G INDUCED GROWTH MAPS



KAUFMAN COUNTY OUTER LOOP

0 8,000 Feet

FIGURE 1 AOI LOCATION MAP

KAUFMAN COUNTY OUTER LOOP
KAUFMAN AND ROCKWALL COUNTIES, TEXAS
CSJ: 0918-11-109

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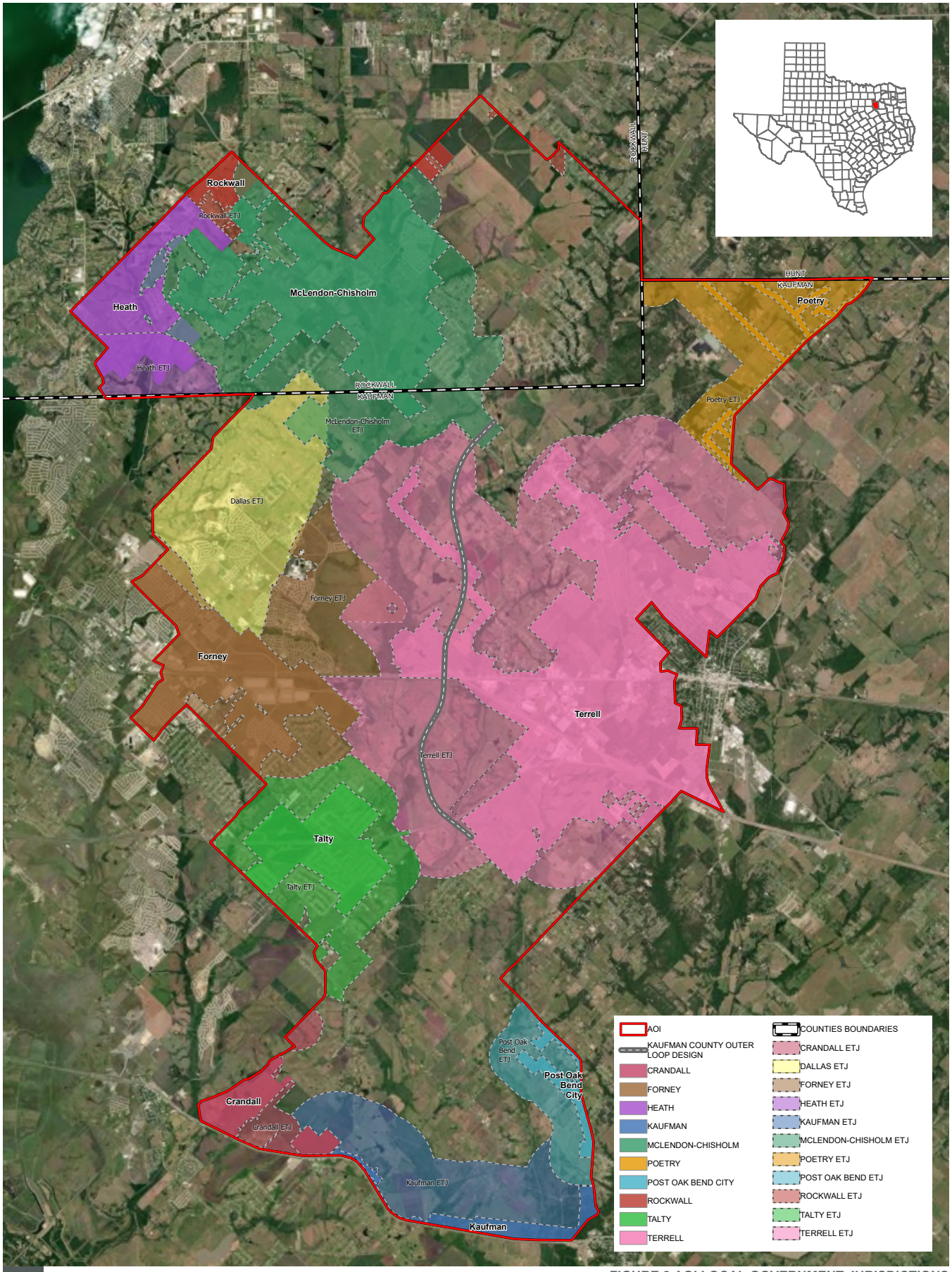

KAUFMAN COUNTY OUTER LOOP

0 8,000 Feet

FIGURE 2 AOI LOCAL GOVERNMENT JURISDICTIONS

KAUFMAN COUNTY OUTER LOOP
KAUFMAN AND ROCKWALL COUNTIES, TEXAS
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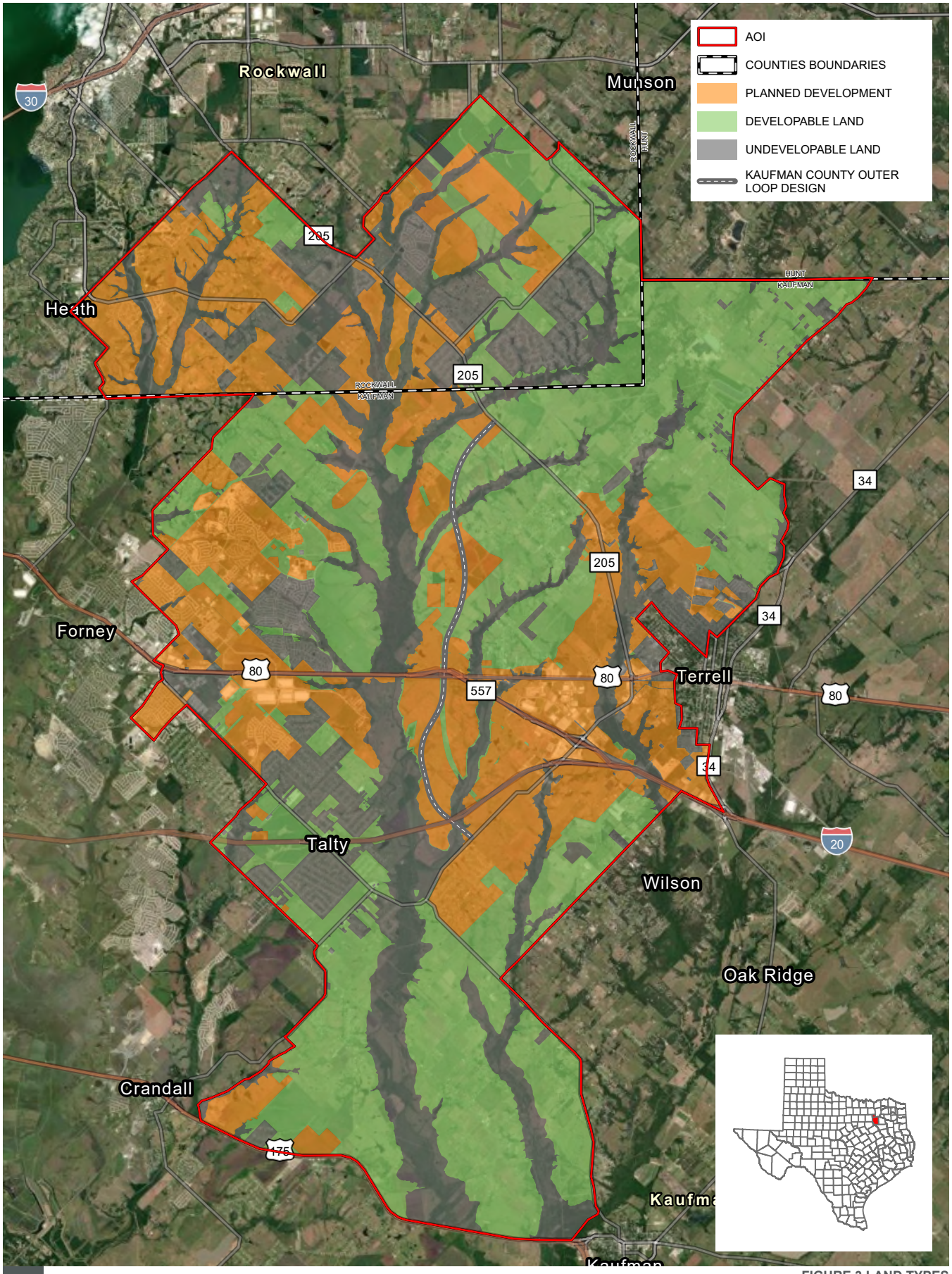

KAUFMAN COUNTY OUTER LOOP

0 8,000 Feet

FIGURE 3 LAND TYPES
KAUFMAN COUNTY OUTER LOOP
KAUFMAN AND ROCKWALL COUNTIES, TEXAS
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