

EXHIBIT “F”
HIDALGO COUNTY
Professional Engineering Services
Agreement # C-26-0435-08-18

WORK AUTHORIZATION NO. 1

THIS WORK AUTHORIZATION is made pursuant to the terms and conditions of the Professional Engineering Services Agreement No. C-26-0435-08-18, incorporated herein by reference, for the **“TxDOT HSIP Projects”** made by and between HIDALGO COUNTY, action herein by and through the Commissioner’s Court, hereinafter called the **“Owner,”** and **Scivle, PLLC**, hereinafter called **“Engineer”**.

PART 1. SCOPE OF WORK

The purpose of this Work Authorization is for the **Engineer** to provide Civil Engineering services for the TxDot HSIP Projects. The **Engineer** is to provide the scope of Services as required by the Agreement with Owner.

The scope of services to be provided by the **Engineer** is identified in **Attachment “A” – “Scope of Services to be provided by Engineer”** attached hereto and incorporated by reference.

PART 2. ESTIMATED COST

The estimated cost for services under this Work Authorization is **\$54,000.00**. This amount is based upon the costs outlined in the **Attachment “B” – “Fee Proposal”** attached hereto and incorporated by reference.

PART 3. PAYMENT

Compensation and payment to the Engineer for the services established under this Work Authorization shall be made in accordance with the **Professional Engineering Services Agreement No. C-26-0435-08-18**. Projects between the **Owner** and the **Engineer**.

PART 4. FUNDING

This Work Authorization No.1 shall be funded through funding source:

Account No. 1315-31-123-000-0000-508410-
1315-31-123-000-0000-507210

PART 5. PERIOD OF SERVICE

This Work Authorization shall become effective on the date of final acceptance of the parties hereto, and terminate **upon completion of the scopes of the Work Authorization, within the limits of Agreement No. C-26-0435-08-18, provided in this Work Authorization; or on (_____ DATE)**. *If applicable:* Engineer shall conform to the approved “Work/Project Schedule”, attached hereto and incorporated by reference herein as **Attachment “C”**.

PART 6. RESPONSIBILITIES AND OBLIGATIONS

This Authorization does not waive the parties' responsibilities and obligations provided under the **Agreement No. C-26-0435-08-18.**

PART 7. ACCEPTANCE AND APPROVAL

This Work Authorization is hereby accepted and approved by the Hidalgo County Commissioners Court and hereby executed and effective as of the date indicated below.

APPROVED BY COMMISSIONERS' COURT ON AUGUST 18, 2026.

Agenda Item No. 104355

Executive Office: _____

VENDOR:

Scivle, PPLC

COUNTY:

COUNTY OF HIDALGO

Oscar Garza, President

Hon. Richard F. Cortez, County Judge

ATTEST:

Arturo Guajardo, Jr., County Clerk

LIST OF ATTACHMENTS:

Attachment "A" – *Scope of Services to be provided by Engineer*

Attachment "B" – *Fee Proposal*

Attachment "C" – *Approved Work/Project Schedule (If applicable)*



ATTACHMENT A

PROJECT SPECIFIC SCOPE OF SERVICES TO BE PROVIDED BY ENGINEER

ATTACHMENT A

SERVICES TO BE PROVIDED BY THE ENGINEER

The Engineer shall provide engineering services required for the preparation of plans, specifications and estimates (PS&E) and related documents, for one (1) off-system project within Hidalgo County listed below. These services may include, but are not limited to, preparing roadway design, traffic design, utility coordination, environmental documentation, and construction phase services necessary to support the design process.

Project Locations:

Mile 5 Road @ Abram Road

TASK DESCRIPTIONS AND FUNCTION CODES

The Engineer is responsible for designating and providing the services of the following individuals or entities:

1. **Utility Coordinator:** individual or entity performing Utility-related Services that are not required to be performed by a licensed engineer under Texas law.
2. **Utility Engineer:** individual or entity performing Utility-related Services that are required to be performed by a licensed engineer under Texas law.

The Engineer shall categorize each task performed to correspond with the Function Codes (FC) and Task Descriptions.

FUNCTION CODE 102(110) – FEASIBILITY STUDIES

ROUTE AND DESIGN STUDIES

110.1. Data Collection and Field Reconnaissance. The Engineer shall collect, review and evaluate data described below:

1. Data, if available, including “as-built plans”, existing schematics, right-of-way maps, Subsurface Utility Engineering (SUE) mapping, existing cross sections, existing planimetric mapping, environmental documents, existing channel and drainage easement data, existing traffic counts, accident data, Bridge Inspection records, Project Management Information system (PMIS) data, identified endangered species, identified hazardous material sites, current unit bid price information, current special provisions, special specifications, and standard drawings.
2. Documents for existing and proposed development along proposed route from local municipalities and local ordinances related to project development.

3. Utility plans and documents from appropriate municipalities and agencies.
4. Flood plain information and studies from the Federal Emergency Management Agency (FEMA), the United States Army Corps of Engineers (USACE), local municipalities, and other governmental agencies..
5. Conduct field reconnaissance and collect data including a photographic record of notable existing features.

110.2. Design Criteria. The Engineer shall develop the roadway design criteria based on the controlling factors specified by the State (*i.e.* 4R, 3R, 2R, or special facilities), by use of the funding categories, design speed, functional classification, roadway class and any other set criteria as set forth in *PS&E Preparation Manual*, *Roadway Design Manual*, *Bridge Design Manual*, *Hydraulic Design Manual*, and other deemed necessary State approved manuals.

110.3. Preliminary Cost Estimates. The Engineer shall develop a preliminary cost estimate using the Average Low Bid Unit Price. The Engineer shall estimate the total project cost including preliminary engineering, final engineering, right-of-way (ROW) acquisition, environmental compliance and mitigation, construction, utility relocation, and construction engineering inspection (CEI).

FUNCTION CODE 120(120) - SOCIAL/ECON/ENVIRON STUDIES

Right-of-Entry (ROE)

ROE

The engineer shall draft the ROE letter and submit to the OWNER for review. Upon approval of the ROE letters by the OWNER, the Engineer shall then mail out the ROE request letter to required properties. The Engineer shall prepare ROE request letter for the OWNER, for parcels within the proposed ROW of each Alternative. The Engineer shall attempt a second round of ROE to non-responders.

When specified, seek ROE from public or private landowners to perform environmental services. ROE permission shall be written and signed by the landowner. Letter or other materials seeking ROE shall contain explicit reference to the kinds of activities for which ROE is requested and an indication of the impacts that would result from performance of environmental services.

SOCIAL, ECONOMIC AND ENVIRONMENTAL STUDIES AND PUBLIC INVOLVEMENT

1. Environmental Documentation.

Each environmental service provided by the Engineer shall have a deliverable.

Deliverables shall summarize the methods used for the environmental services and

shall summarize the results achieved. The summary of results shall be sufficiently detailed to provide satisfactory basis for thorough review by the State, The Federal Highway Administration (FHWA), and (where applicable) agencies with regulatory oversight. All deliverables shall meet regulatory requirements for legal sufficiency and shall adhere to the requirements for reports enumerated in the State's NEPA MOU.

a. Quality Assurance/Quality Control Review

For each deliverable, the Engineer shall perform quality assurance quality control (QA/QC) reviews of environmental documents and on other supporting environmental documentation to determine whether documents conform with:

- Current Environmental Compliance Toolkit guidance published by the right-of-way's Environmental Affairs Division and in effect as of the date of receipt of the documents or documentation to be reviewed;
- Current state and federal laws, regulations, policies, guidance, agreements, and memoranda of understanding between the State and other state or federal agencies; and
- FHWA and American Association of State Highway and Transportation Officials (AASHTO) guidelines contained in "Improving the Quality of Environmental Documents, A Report of the Joint AASHTO and American Council of Engineering Companies (ACEC) Committee in Cooperation with the Federal Highway Administration" (May 2006) for:
 - Readability, and
 - Use of evidence and data in documents to support conclusions.

Upon request by the OWNER, the Engineer shall provide documentation that the QA/QC reviews were performed by qualified staff.

- a. Deliverables shall contain all data acquired during the environmental service. All deliverables shall be written to be understood by the public and must be in

accordance with the State's Environmental Toolkit guidance, documentation standards, current guidelines, policies and procedures.

- b. Electronic versions of each deliverable must be written in software which is compatible to the State and must be provided in a changeable format for future use by the State. The Engineer shall supplement all hard copy deliverables with electronic copies in searchable Adobe Acrobat™ (.pdf) format, unless another format is specified. Each deliverable shall be a single, searchable .pdf file that mirrors the layout and appearance of the physical deliverable. The Engineer shall deliver the electronic files on USB media, zip file, or BOX.

- c. Submission of Deliverables

"The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 16, 2014 and executed by FHWA and TxDOT."

- e. The OWNER shall provide the State's and other agency comments on draft deliverables to the Engineer. The Engineer shall revise the deliverable:
 - to include any commitments, findings, agreements, or determinations (e.g., wetlands, endangered species consultation, Section 106, or Section 4(f)), required for the Transportation Activity as specified by the State;
 - to incorporate the results of public involvement and agency coordination;
 - to reflect mitigation measures resulting from comments received or changes in the Transportation Activity; and
 - include with the revised document a comment response form (matrix) in the format provided by the State.
- f. All photographs shall be 3.5" x 5" color presentation printed on matte finish photographic paper or 3.5" x 5" color presentation printed on matte white, premium

or photo quality laser or inkjet paper. All photographs shall be well focused and clearly depict details relevant to an evaluation of the project area. Provision of photographs shall be one original print of each image or electronic presentations of comparable quality. Comparable quality electronic photograph presentations shall be at least 1200 x 1600 pixel resolution. Photographs shall be attached to separately labeled pages that clearly identify project name, project identification (ID) number, address or Universal Transverse Mercator (UTM) of resource, description of the picture and direction of the photographic view. In addition to the hard-copy prints, an electronic version of each will be submitted with the same identification information as the hard-copy.

2. Technical Reports and Documentation

Assumptions:

- This project classification would fit under a Categorical Exclusion.
- Additional ROW needed will not exceed 30 acres (including for roadway, ditches, culvert, ponds, etc.)
- Air Quality Forms and/or Air Quality Technical Report will not be needed for this project.

Definition of technical report and documentation for environmental services: a report, checklist, form, or analysis detailing resource-specific studies identified during the process of gathering data to make an environmental decision.

Technical reports and documentation must be produced before a Categorical Exclusion Checklist is prepared in order to identify issues early in the process. The State will determine what technical reports and documentation will be necessary for any given project. Technical reports and documentation must be prepared for the State with sufficient detail and clarity to support environmental determination(s). All technical reports shall be compliant with TxDOT Environmental Compliance Toolkits. The environmental document will reference the technical reports.

Environmental technical reports and documentation must include appropriate National Environmental Policy Act of 1969 (NEPA) or federal regulatory language in addition to the purpose and methodology used in delivering the service. Technical reports and forms must include sufficient information to determine the significance of impacts.

Some examples of environmental technical reports and documentation are listed below:

- Right of Entry Letters
- Species Analysis Form and Spreadsheet
- Archeological Background Study
- Archeological Survey Report
- Community Impacts Assessment
- Species Analysis Form
- Tier 1 Site Assessment Hazardous Materials ISA
- Historic Resources Report
- Stakeholder Meeting Summary Memos
- Surface Waters Analysis Form
- CE Checklist

"The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 16, 2014, 2019, and executed by FHWA and TxDOT."

Minimum Deliverables: (Additional deliverables to be identified based on work assigned.)

- Draft Document
- Final Document

CE Evaluation Form

- The Engineer shall prepare a CE Evaluation Form.
- The CE Evaluation Form shall meet the requirements of 23 CFR §771.119 and TAC, Title 43, Part 1, Chapter 2.

4. Community Impacts

Community Impacts includes land use, environmental justice, limited English proficiency, and other issues as addressed in TxDOT Environmental guidance.

The Engineer shall perform Community Impact Assessments including relocations and Environmental Justice analysis (in accordance with Executive Order 12898) and Limited English Proficiency analysis (in accordance with Executive Order 13166).

- Compile analysis to meet requirements of TA 6640.8A. Analysis must conform to applicable current State and FHWA guidance.
- Process for Community Impact Assessment should follow guidance provided in TxDOT's Community Impacts Assessment Toolkit.

5. Historic Resource Identification, Evaluation and Documentation Services

The Engineer shall perform limited non-archeological historic-age resource studies related to compliance with Section 106 and Section 110 of the NHPA (36 CFR 800). Prior to conducting formal historic resource investigations, a Project Coordination Requests (PCR) would be prepared and approved to determine if further studies would be warranted.

The PCR shall comply with the TxDOT Environmental Compliance Toolkits provided by the State's Environmental Affairs Division in effect as of the date of the receipt of the documents.

- The Engineer shall revise the PCR to address comments by the State at no additional cost to the OWNER and may be required to integrate the findings into another environmental document. The State assumes responsibility for transmitting the findings to THC and for transmitting THC comments to the Engineer's Technical Expert. Engineer's Technical Expert is an institution, firm, individual, or team that provides professional scientific services, including but not limited to archeologists, biologists, geologists, historians, or other environmental professions that conduct environmental or cultural assessments required by state or federal law for transportation projects.

- The Engineer shall conduct tasks associated with public involvement as requested during the historic resources reporting phase and conforming to the methodology outlined in the TxDOT Environmental Compliance Toolkits.

The Engineer shall contact interested parties when applicable in order to determine local knowledge of historic resources in the project area. Interested parties include but are not limited to: Certified Local Governments, Historic Preservation Offices, County Historical Commissions, Historic Bridge Foundation and other consulting parties. If the State determines that a Historic Resources Survey is not necessary after the review of the PCR, the Engineer's Technical Expert will not be responsible for any additional historic resource deliverables.

If the State determines that a survey is required, the Engineer's Technical Expert shall complete a Reconnaissance-level Historic Resources Research Design and subsequent Reconnaissance-level Historic Resources Survey and Survey Report. The Research Design and Historic Resources Survey Report (HRSR) shall comply with the TxDOT Environmental Compliance Toolkits provided by the State's Environmental Affairs Division in effect as of the date of the receipt of the documents. The Engineer's Technical Expert shall revise the Research Design and HRSR to address the State's comments, if required. The State assumes responsibility for coordinating the Research Design and HRSR with consulting parties and the THC, if required.

It is not anticipated that any intensive-level survey work or mitigation for historic resources would be required. However, if TxDOT requests that an Intensive-level Historic Resources Research Design, Survey, and Survey Report be completed on one or more properties, or mitigation to resolve adverse effects under Section 106 of the NHPA, such tasks would be completed under a separate scope and fee.

3. Archeological Background Studies and Survey Report

- The Background Study shall be produced by a professional archeologist as defined in 13 TAC §26.4(2).
- The Archeological Background Study shall conform to the current Review Standard for Archeological Background Studies, available from the State.
- Unless the Engineer has previously completed an Archeological Background Study for the project, the Archeological Background Study must define and consider all alternatives selected for detailed study, including all existing right of way, all proposed new right of way, easements (temporary and permanent), and any other project-specific location designated by the State. The Archeological Background study shall consider the likely depth of impacts resulting from the proposed project. The location of all alternatives selected for detailed study shall be presented on a map or maps as part of the Archeological Background Study.
- For projects in which an Archeological Background Study has already been completed by the Engineer and the project has materially changed --affecting the project limits, proposed new right of way (if any), easements (if any), any other project-specific location designated by the State, and/or the depth of impacts -- the Archeological Background Study shall incorporate the previous study by reference and focus on the project changes.
- To conduct the Archeological Background Study, the professional archeologist shall undertake a review of existing data, including, but not limited to, the Texas Archeological Sites Atlas, geologic maps, soil maps, Potential Archeological Liability Map (PALM) of the project area (if applicable), aerial photographs, and historic maps. Based on this review, the Archeological Background Study shall identify and plot on a map the areas that require field investigation to evaluate the project's effects on archeological resources and cemeteries and shall identify the areas in which the proposed project would have no effect on archeological resources and cemeteries. The Archeological Background Study shall identify any areas proposed for field investigation where impacts are deep, extending beyond three feet in depth.
- If the State determines that an archeological survey is required, the professional archeologist shall prepare an antiquities permit application and archeological

research design prior to any archeological survey work. Upon issuance of the antiquities permit and approval of the research design by the THC, the professional archeologist shall conduct the archeological survey in accordance with Section 106 of the NHPA, Antiquities Code, and Section 711 [Cemeteries] of the Health and Safety Code. The professional archeologist shall prepare an archeological survey technical report in accordance with the State's Environmental Toolkit as a stand-alone technical report deliverable.

- The Technical Expert shall submit One Texas Antiquities Permit application and scope of work for approval by the State and the THC prior to conducting the archeological survey. Permit applications for conducting archeological intensive survey shall follow the current TxDOT On-Line Environmental Compliance Toolkit for Individual Antiquities Permit Applications, which is available from the State.
- The professional archeologist will conduct an intensive survey as defined in 13 TAC 26.3(37) and 13 TAC 26.15(6) to satisfy Section 106 of the NHPA and Antiquities Code requirements for determining whether archeological sites are present in the project area, and whether test excavations or a higher level of archeological work is needed.
- Following the field survey, the professional archeologist shall prepare one archeological survey report for coordination with the State and the THC. The content for the Archeological Intensive Survey report shall follow the current TxDOT On-Line Environmental Compliance Toolkit for Archeological Survey Reports, which is also available from the State, and will feature documentation of all conditions affecting the potential integrity of archeological deposits in accordance with regulations 36 CFR 60.4 governing eligibility for inclusion in the NRHP and regulations 13 TAC 26.8, governing evaluation of archeological sites for designation as State Antiquities Landmarks (SALs). The draft and final report shall also fulfill the reporting requirements for the Texas Antiquities Permit.
- Testing to determine the NRHP or SAL eligibility of any archeological sites found during the survey is not included in this scope of work but can be added as a supplemental scope item if it is determined to be necessary.

All project-related materials shall be curated in accordance with terms and conditions of the Texas Antiquities Permit. Items for curation must be prepared in accordance with the most current standards published. This effort shall be a non-collection survey. The professional archeologist will contact ENV's Archeological Studies Section for a request for housing before sending items to the certified curation facility.

4. Water Quality Studies

The Engineer shall provide the following analyses based on request of the State:

- Surface Water Analysis Form, which can include analysis of:
 - Section 404 of the Clean Water Act
 - Section 303(d) of the Clean Water Act
 - General Bridge Act/Section 9 of the Rivers and Harbors Act
 - Section 10 of the Rivers and Harbors Act
 - Section 401 of the Clean Water Act
 - Executive Order 11990, Protection of Wetlands

All analysis must confirm to TxDOT's latest environmental guidance, toolkits, and templates. The Engineer must include as applicable the electronic shape files and meta data of geo-referenced GIS points of all relevant features.

Specifically, the Engineer shall:

- Address all water quality studies in accordance with Section 303(d) of the Clean Water Act as administered by the Texas Commission on Environmental Quality (TCEQ).
- Identify if the project is located within five miles of an impaired assessment unit and within the watershed of the impaired assessment unit.
- Identify whether the project drains to any impaired assessment unit.
- Provide the location of the project within the watershed of the impaired assessment unit.

- Identify the impaired assessment unit number, segment name, and segment number.
- Identify the pollutant(s) in the discharge for which the water body is listed, and the year of the 303(d) list used in the assessment
- If the impaired assessment unit has a Total Maximum Daily Load that has been approved by the Environmental Protection Agency, provide:
 - the name and date of the Total Maximum Daily Load,
 - the name and date of any corresponding Implementation Plan, and
 - a discussion of whether the project is consistent with the approved Total Maximum Daily Load and Implementation Plan.
- If unit does not have a Total Maximum Daily Load that has been the impaired assessment approved by the Environmental Protection Agency, indicate:
 - that the impaired assessment unit does not have a Total Maximum Daily Load that has been approved by the Environmental Protection Agency, and
 - if the project could discharge the pollutant identified in (d) above. If yes, discuss measures that will be taken to prevent or reduce the likelihood of such a discharge.
- Discuss the Best Management Practices that will be used-particularly at the discharge point to the water body to meet other water quality regulations, such as vegetative swales, silt fencing, compliance with the Texas Pollutant Discharge Elimination System (TPDES).

5. Threatened or Endangered Species

The Engineer shall perform biological services.

- a. Surveys for Protected Species or Habitat of Protected Species based on the most current State and TPWD Memorandum of Understanding (MOU Effective 2013.) The Engineer shall:
 - Perform surveys for habitat of protected species. This shall include:
 - All species listed by the United States Fish and Wildlife Service (USFWS) as threatened or endangered or proposed for listing as threatened or endangered (50 CFR 17.11-12),

- All species that are candidates for review for listing by USFWS as threatened or endangered (per most recently updated list in Federal Register),
 - Species listed as threatened or endangered species or species of greatest conservation need (SGCN) by the State of Texas Threatened and Endangered Species Listings, Texas Park and Wildlife Department (TPWD),
 - Species protected by the Migratory Bird Treaty Act (50 CFR 10.13) and the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c).
 - For projects located within United States Fish and Wildlife Service (USFWS) Karst Zones 1, 2, 3, and 4, a karst invertebrate habitat survey shall be performed, and must be signed and sealed by a Texas licensed Professional Geoscientist (P.G.)
- Examine existing data to determine the likelihood that rare species, protected species, their habitat, or designated critical habitat (per 50 CFR §17.94-95) could be impacted by the Transportation Activity. Existing data shall include the Element Occurrence Identification (EOID) records of the TPWD Natural Diversity Database, following the Guidelines set forth in the most current version of TPWD's Guidelines for TXNDD Data Analysis in TxDOT Environmental Documents.
 - Perform an effect determination pursuant to the Endangered Species Act (ESA) for all federally listed species. A determination of impact must be included for all state-listed species. The determination of effect and impact must be supported by evidence and may require a detailed assessment. Any technical reports used to support the determination(s) must be referenced and provided to the State.
 - Determine whether critical habitat is present in the study area and whether the Transportation Activity will affect that critical habitat.
 - Perform species-specific habitat surveys for protected species.
 - Furnish the State with completed Species Analysis Form and Spreadsheet and Tier 1 Site Assessment.
 - Coordinate between the State and USFWS or TPWD as directed by the State to verify proper rules, regulations and policies are followed for biological services.

All coordination between the Engineer's Technical Expert and resource agencies shall be approved in advance by the State.

6. Initial Assessment of Hazardous Materials Impacts

The Engineer shall:

- The Engineer shall perform an Initial Site Assessment (ISA) for potential hazardous materials impacts for the limits of the study area. The Engineer is responsible acquiring the latest version of TxDOT's Hazardous Materials Initial Site Assessment (ISA) located in the Hazardous Materials Toolkit (<http://www.txdot.gov/inside-txdot/division/environmental/compliance-toolkits/haz-mat.html>).
 - Note: The ISA shall determine the potential for encountering hazardous materials in the study area, including possible environmental liability, increased handling requirements (e.g. soil or groundwater), and potential construction worker health and safety issues.
 - Note: The Engineer is responsible for reviewing and being familiar with the State's guidance related to the development of the ISA and the Hazardous Material process. All guidance and information related to this can be found on the Hazardous Materials Toolkit.
- Produce and submit to the State a completed ISA using the State's ISA Environmental Compliance Toolkit guidance format.
- The Engineer's completed ISA shall include, when applicable, full copies of list search reports, including maps depicting locations, copies of agency file information, photographs, recommendations, and any other supporting information gathered by the Engineer to complete the ISA.
- Based on the ISA information, the Engineer shall provide the State a report discussing the known or potential hazardous materials impacts suitable for inclusion in the environmental document. The report of hazardous materials impacts shall include, when applicable:
 - A concise summary of relevant information gathered during the ISA, including sufficient information to show that the study area for the Transportation Activity was adequately investigated for known or potential hazardous material contamination.

- A concise description of the scope of the hazardous materials ISA, disclosure of any limitations of the assessment, and a statement indicating who performed the assessment.
- A concise summary of the findings of the assessment for each alternative considered, along with an opinion of the potential of an identified site to impact the project during construction.
- A discussion of any commitments recommended for performing further investigation of suspect areas, and justification for postponement of further investigation.
- A summary of efforts to be employed by the State to avoid or minimize involvement with known or suspected hazardous material contamination sites during construction, and justification for not avoiding contaminated sites within the preferred alternative or corridor alignment.
- Disclosure of known or suspected hazardous material contamination that is anticipated to be encountered during construction.
- A discussion of any required or recommended special considerations, contingencies or provisions to handle known or suspected hazardous material contamination during right-of-way negotiation and acquisition, property management, design and construction.
- A summary of any early coordination or consultation conducted with the regulatory agencies, local entities or property owners.
- A discussion of any further hazardous materials related coordination with, and approvals or permits required from, the regulatory agencies or other entities.
- Should the findings of the ISA conclude that additional investigation, special considerations, or other commitments from the State are required during future stages of project development, the Engineer shall review those findings and commitments with the State prior to completing the hazardous materials discussion for the environmental document.

7. Public Involvement (23 CFR §771.111)

The Engineer shall:

- Perform public involvement activities in accordance with TAC, Title 43, Part 1, Chapter 2 and 36 CFR 800.2.

8. Reference Documents

The Engineer shall adhere to the content of TxDOT's On-Line Environmental Compliance Toolkit guidance

FUNCTION CODE 160(150) – ROADWAY DESIGN

A. Design Surveys

Design Surveys and include performance of surveys associated with the gathering of survey data for topography, cross-sections, and other related work in order to design a project, or during layout and staking of projects for construction.

1. PURPOSE

The purpose of a design survey is to provide field data in support of transportation systems design.

2. DEFINITIONS

A design survey is defined as the combined performance of research, field work, analysis, computation, and documentation necessary to provide detailed topographic (3-dimensional) mapping of a project site. A design survey may include, but need not be limited to locating existing right-of-way, cross-sections or data to create cross-sections and Digital Terrain Models (DTM), horizontal and vertical location of utilities and improvements, detailing of bridges and other structures, review of right-of-way maps, establishing control points, etc.

3. TASKS TO BE COMPLETED

3.1. Design Surveys

The State will request design surveys on an as needed basis. The Engineer's Surveyor shall perform tasks including, but not limited to the following:

- Obtain or collect data to create cross-sections and digital terrain models.
- Locate existing utilities.
- Locate topographical features and existing improvements.
- Provide details of existing bridge structures.
- Provide details of existing drainage features, (e.g., culverts, manholes, etc.).
- Locate wetlands.
- Establish additional and verify existing control points. Horizontal and Vertical control ties must be made and tabulated, to other control points in the vicinity, which were established by other sources such as, the National Geodetic Survey (NGS), and the Federal Emergency Management Agency (FEMA), and any other local entities as directed by the State.
- Locate existing rights-of-way.
- Review right-of-way maps.
- Perform hydrographic surveys.
- Update existing control data and prepare survey control data sheets, as directed by the State for inclusion into a construction plan set.

The Engineer's Surveyors shall also prepare a *Survey Control Index Sheet* and a *Horizontal and Vertical Control Sheet(s)*, signed, sealed and dated by the professional engineer in direct responsible charge of the surveying and the responsible RPLS for insertion into the plan set. The *Survey Control Index Sheet* shows an overall view of the project control and the relationship or primary monumentation and control used in the preparation of the project; whereas, the *Horizontal and Vertical Control sheet(s)* identifies the primary survey control and the survey control monumentation used in the preparation of the project. Both the *Survey Control Index Sheet* and the *Horizontal and Vertical Control Sheet(s)* must be used in conjunction with each other as a set. The State's forms for these sheets can be downloaded from the State's website.

The following information shall be shown on the *Survey Control Index Sheet*:

- Overall view of the project and primary control monuments set for control of the project
- Identification of the control points
- Baseline or centerline
- Graphic (Bar) Scale
- North Arrow

- Placement of note *“The survey control information has been accepted and incorporated into this PS&E”* which shall be signed, sealed and dated by a Texas Professional Engineer
- RPLS signature, seal, and date
- The State’s title block containing District Name, County, Highway, and CSJ

The following information shall be shown on all *Horizontal and Vertical Control Sheets*:

- Location for each control point, showing baseline or centerline alignment and North arrow.
- Station and offset (with respect to the baseline or centerline alignments) of each identified control point.
- Basis of Datum for horizontal control (base control monument/benchmark name, number, datum).
- Basis of Datum for the vertical control (base control monument, benchmark name, number, datum).
- Date of current adjustment of the datum.
- Monumentation set for Control (Description, District name/number and Location ties).
- Surface Adjustment Factor and unit of measurement.
- Coordinates (State Plan Coordinates [SPC] Zone and surface or grid).
- Relevant metadata.
- Graphic (Bar) Scale.
- Placement of note *“The survey control information has been accepted and incorporated into this PS&E”* which shall be signed, sealed and dated by a Texas Professional Engineer.
- RPLS signature, seal and date.
- The State’s title block containing District Name, County, Highway, and CSJ.

4. TECHNICAL REQUIREMENTS

- 4.1. Design surveys and must be performed under the supervision of a RPLS currently registered with the TBPELS.
- 4.2. Horizontal ground control used for design surveys, furnished to the Engineer’s Surveyor by the State or based on acceptable methods conducted by the Engineer’s Surveyor, must meet the standards of accuracy required by the State.

Reference may be made to standards of accuracy for horizontal control traverses, as described in the TxDOT Survey Manual, latest edition, or the TSPS Manual of Practice for Land Surveying in the State of Texas, as may be applicable.

- 4.3. Vertical ground control used for design surveys, furnished to the Engineer's Surveyor by the State or based on acceptable methods conducted by the Engineer's Surveyor, must meet the standards of accuracy required by the State.

Reference may be made to standards of accuracy for vertical control traverses, as described in the TxDOT Survey Manual, latest edition, or the TSPS Manual of Practice for Land Surveying in the State of Texas, as may be applicable.

- 4.4. Side shots or short traverse procedures used to determine horizontal and vertical locations must meet the following criteria:
- i. Side shots or short traverses must begin and end on horizontal and vertical ground control as described above.
 - ii. Standards, procedures, and equipment (may be GPS Equipment, LiDAR, Total Stations, etc.) used must be such that horizontal locations relative to the control may be reported within the following limits:
 - Bridges and other roadway structures: less than 0.1 of one foot.
 - Utilities and improvements: less than 0.2 of one foot.
 - Cross-sections and profiles: less than 1 foot.
 - Bore holes: less than 3 feet.
 - iii. Standards, procedures, and equipment (may be GPS Equipment, LiDAR, Total Stations, etc.) used must be such that vertical locations relative to the control may be reported within the following limits:
 - Bridges and other roadway structures: less than 0.02 of one foot.
 - Utilities and improvements: less than 0.1 of one foot.
 - Cross-sections and profiles: less than 0.2 of one foot.
 - Bore holes: less than 0.5 of one foot.

5. AUTOMATION REQUIREMENTS

- Planimetric design files (DGN) must be fully compatible with the State's *MicroStation V8i* graphics program without further modification or conversion.
- Electronically collected and processed field survey data files must be fully compatible with the State's computer systems without further modification or conversion. All files must incorporate only those feature codes currently being used by the State.
- DTM must be fully compatible with the State's *OPENROADSDESIGNER* system without further modification or conversion. All DTM must be fully edited and rectified to provide a complete digital terrain model with all necessary break lines.

DELIVERABLES

The deliverables to be specified in individual work authorizations for design surveys and shall be any combination of the following:

- Digital Terrain Models (DTM) and the Triangular Irregular Network (TIN) files in a format acceptable by the State.
- Maps, plans, or sketches prepared by the Engineer's Surveyor showing the results of field surveys.
- Computer printouts or other tabulations summarizing the results of field surveys.
- Digital files or media acceptable by the State containing field survey data (ASCII Data files).
- Maps, plats, plans, sketches, or other documents acquired from utility companies, private corporations, or other public agencies, the contents of which are relevant to the survey.
- Field survey notes, as electronic and hard copies.
- An 8 ½ inch by 11 inch survey control data sheet for each control point which must include, but need not be limited to, a location sketch, a physical description of the point including a minimum of two reference ties, surface coordinates, a surface adjustment factor, elevation, and the horizontal and vertical datums used. A pre-

formatted survey control data sheet form in Microsoft Office Word 2010 format will be provided by the State.

- A digital and hard copy of all computer printouts of horizontal and vertical conventional traverses, GPS analysis and results, and survey control data sheets.
- All OPENROADSDESIGNER.
- Survey reports in a format requested by the State.

FUNCTION CODE 145(145,164) - MANAGING CONTRACTED/DONATED PE
CONTRACT MANAGEMENT AND ADMINISTRATION

The ENGINEER shall:

- Perform all work in accordance with the OWNER and State's latest practices, criteria, specifications, policies, procedures, and Environmental Compliance Toolkits. All documents shall be sufficient to satisfy the current Environmental Compliance Toolkits available from the State.
- Act as an agent for the OWNER when specified in a work authorization.
- Produce a complete and acceptable deliverable for each environmental service performed for environmental documentation.
- Incorporate environmental data into identification of alternatives.
- Notify the OWNER of its schedule, in advance, for all field activities.
- When specified, seek right of entry from public or private landowners to perform environmental services. Right of entry permission shall be written and signed by the landowner. Develop letters or other materials for seeking right of entry. Letters or other materials seeking right of entry shall not be distributed without prior approval of the OWNER. Letters or other materials seeking right of entry shall contain explicit reference to the kinds of activities for which right of entry is requested and an indication of the impacts (if any) that will result from performance of environmental services.
- Notify the OWNER as soon as practical, by phone and in writing, if performance of environmental services discloses the presence or likely presence of significant impacts (in accord with 40 Code of Federal Regulations (CFR) 1500-1508). Inform

the State of the basis for concluding there are significant impacts and the basis for concluding that the impacts may require mitigation.

- Notify the OWNER as soon as practical, by phone and in writing, if performance of environmental services results in identification of impacts or a level of controversy that may elevate the Transportation Activity's status from a categorical exclusion or environmental assessment, and the State will reassess the appropriate level of documentation.
- The Engineer shall provide the following formal regular updates on project status:
 - Monthly Progress Reports to Responsible Person in Charge (RPIC)

FUNCTION CODE 160(160) - ROADWAY DESIGN

160.1. Roadway Design.

The Engineer shall use Bentley's OpenRoads 3D Design technology in the design and preparation of the roadway plan sheets.

The Engineer shall use the versions of MicroStation and GEOPAK that are implemented at TxDOT at the time the work authorization is executed. However, TxDOT may approve the use of other versions.

The Engineer shall provide drawings using CADD standards as required by the State. The drawings must consist of a planimetric file of existing features and files of the proposed improvements. The roadway base map must contain line work that depicts existing surface features obtained from the schematic drawing. Existing major subsurface and surface utilities must be shown if requested by the State. Existing and proposed right-of-way lines must be shown. Plan and Profile must be shown on separate or same sheets (this depends upon width of pavement) for main lanes, frontage roads, and direct connectors.

The plan view must contain the following design elements:

1. Calculated roadway centerlines for mainlanes, ramps, cross streets and frontage roads, as applicable. Horizontal control points must be shown. The alignments must be calculated using OpenRoads horizontal geometry tools..
2. Pavement edges for all improvements (mainlanes, direct connectors, ramps, cross streets, driveways and frontage roads, if applicable).
3. Lane and pavement width dimensions.
4. The geometrics of ramps, auxiliary and managed lanes.
5. Proposed structure locations, lengths, and widths.
6. Direction of traffic flow on all roadways. Lane lines and arrows indicating the number of lanes must also be shown.

7. Drawing scale shall be 1"=100'
8. Control of access line, ROW lines and easements.
9. Begin and end superelevation transitions and cross slope changes.
10. Limits of riprap, block sod, and seeding.
11. Existing utilities and structures.
12. Benchmark information.
13. Radii call outs, curb location, Concrete Traffic Barrier (CTB), guard fence, crash safety items and American with Disabilities Act Accessibility Guidelines (ADAAG) compliance items.

The profile view must contain the following design elements:

1. Calculated profile grade for proposed mainlanes (cite direction), direct connectors, ramps, cross streets and frontage roads, if applicable. Vertical curve data, including "K" values must be shown. The profiles must be calculated using OpenRoads vertical geometry tools.
2. Existing and proposed profiles along the proposed centerline of the mainlanes, the outside shoulder line of ramps, and the outside gutter line of the designated (north, south, east or west) bound frontage roads.
3. Water surface elevations at major stream crossing for 2, 5, 10, 25, 50, and 100 year storms.
4. Calculated vertical clearances at grade separations and overpasses, taking into account the appropriate superelevation rate, superstructure depth and required clearance.
5. The location of interchanges, mainlanes, grade separations and ramps (shall include cross sections of any proposed or existing roadway, structure, or utility crossing).
6. Drawing vertical scale to be 1"=10'.

160.2. Typical Sections: The Engineer shall prepare typical sections for all proposed and existing roadways and structures. Typical sections must include width of travel lanes, shoulders, outer separations, border widths, curb offsets, managed lanes, and ROW. The typical section must also include Proposed Profile Grade Line (PGL), centerline, pavement design, longitudinal joints, side slopes, sodding or seeding limits, concrete traffic barriers and sidewalks, if required, station limits, common proposed and existing structures including retaining walls, existing pavement removal, riprap, limits of embankment and excavation, etc.

160.3. Pavement Design. If applicable, the Engineer shall incorporate the pavement design developed by the State for this project. If the pavement design is not available, the State may request the Engineer to perform pavement design and submit to State for review and approval.

FUNCTION CODE 160(162) - ROADWAY DESIGN

SIGNING, PAVEMENT MARKINGS AND SIGNALIZATION (PERMANENT)

162.1. Signing. The Engineer shall prepare drawings, specifications, and details for all signs. The Engineer shall coordinate with the State (and other Engineers as required) for overall temporary, interim and final signing strategies and placement of signs outside contract limits. The Engineer shall:

- Prepare sign detail sheets for large guide signs showing dimensions, lettering, shields, borders, corner radii, etc., and shall provide a summary of large and small signs to be removed, relocated, or replaced.
- Designate the shields to be attached to guide signs.
- Illustrate and number the proposed signs on plan sheets.
- Select each sign foundation from State Standards.

162.2. Pavement Marking. The Engineer shall detail both permanent and temporary pavement markings and channelization devices on plan sheets. The Engineer shall coordinate with the State (and other Engineers as required) for overall temporary, interim, and final pavement marking strategies. The Engineer shall select Pavement markings from the latest State standards.

The Engineer shall provide a 3D corridor model with the proposed pavement marking stenciled onto the model.

The Engineer shall provide the following information on sign and pavement marking layouts:

- Roadway layout.
- Center line with station numbering.
- Designation of arrow used on exit direction signs
- Culverts and other structures that present a hazard to traffic.
- Location of utilities.
- Existing signs to remain, to be removed, to be relocated or replaced.
- Proposed signs (illustrated, numbered and size).
- Proposed overhead sign bridges to remain, to be revised, removed, relocated, or replaced.
- Proposed overhead sign bridges, indicating location by plan.
- Proposed markings (illustrated and quantified) which include pavement markings, object markings and delineation.
- Quantities of existing pavement markings to be removed.
- Proposed delineators, object markers, and mailboxes.
- The location of interchanges, mainlanes, grade separations, frontage roads and ramps.
- The number of lanes in each section of proposed highway and the location of changes in numbers of lanes.
- Right-of-way limits.
- Direction of traffic flow on all roadways.

162.3. Traffic Signal Design. Based upon the results of the Traffic Warrant Studies, the Engineer shall identify and prepare Traffic Signal Plans for all warranted traffic signals. The Engineer shall confirm the power source for all signals and coordinate with the appropriate utility agency. Traffic Signal Plans must be signed and sealed by a Texas Registered Professional Engineer. The Engineer shall develop all quantities, general notes, specifications and incorporate the appropriate agency standards required to complete construction. Traffic signal poles, fixtures, signs, and lighting must be designed per the Green Ribbon Report recommendations and standards.

The Engineer shall provide the following information in the Traffic Signal Plans:

1. Layout
 - a. Estimate and quantity sheet
 - (1) List of all bid items
 - (2) Bid item quantities
 - (3) Specification item number
 - (4) Paid item description and unit of measure
 - b. Basis of estimate sheet (list of materials)
 - c. General notes and specification data.
 - d. Condition diagram
 - (1) Highway and intersection design features
 - (2) Roadside development
 - (3) Traffic control including illumination
 - e. Plan sheet(s)
 - (1) Existing traffic control that will remain (signs and markings)
 - (2) Existing utilities
 - (3) Proposed highway improvements
 - (4) Proposed installation
 - (5) Proposed additional traffic controls
 - (6) Proposed illumination attached to signal poles.
 - (7) Proposed power pole source
 - f. Notes for plan layout
 - g. Phase sequence diagram(s)
 - (1) Signal locations
 - (2) Signal indications
 - (3) Phase diagram
 - (4) Signal sequence table
 - (5) Flashing operation (normal and emergency)
 - (6) Preemption operation (when applicable)
 - (7) Contact responsible Agency to obtain interval timing, cycle length and offset
 - h. Construction detail sheets(s)

- (1) Poles (State standard sheets)
 - (2) Detectors
 - (3) Pull Box and conduit layout
 - (4) Controller Foundation standard sheet
 - (5) Electrical chart
 - i. Marking details (when applicable)
 - j. Aerial or underground interconnect details (when applicable)
- 2. General Requirements
 - a. Contact local utility company
 - (1) Confirm power source
 - b. Prepare governing specifications and special provisions list
 - c. Prepare project estimate
 - d. Conduct traffic counts and prepare Traffic Signal Warrant Studies for all proposed and existing traffic signals at designated locations.
- 3. Summary of Quantities
 - a. Small signs tabulation
 - b. Large signs tabulation including all guide signs
- 4. Sign Detail Sheets
 - a. All signs except route markers
 - b. Design details for large guide signs
 - c. Dimensioning (letters, shields, borders, etc.)
 - d. Designation of shields attached to guide signs

FUNCTION CODE 160(163) - ROADWAY DESIGN

MISCELLANEOUS (ROADWAY)

The Engineer shall provide the following services:

163.1. Traffic Control Plan, Detours, Sequence of Construction. The Engineer shall prepare Traffic Control Plans (TCP) including TCP typical sections, for the project. The Engineer shall complete Form 2229-Significant Project Procedures along with Page 4 of Form 1002, specifically titled Accelerated Construction Procedures. A detailed TCP must be developed in accordance with the latest edition of the TMUTCD. The Engineer shall implement the current Barricade and Construction (BC) standards and TCP standards as applicable. The Engineer shall interface and coordinate phases of work, including the TCP, with adjacent Engineers. The Engineer shall:

- 1. Provide a written narrative of the construction sequencing and work activities per phase and determine the existing and proposed traffic control devices (regulatory signs, warning signs, guide signs, route markers, construction pavement markings, barricades, flag personnel,

temporary traffic signals, etc.) to be used to handle traffic during each construction sequence. The Engineer shall show proposed traffic control devices at grade intersections during each construction phase (stop signs, flag person, signals, etc.). The Engineer shall show temporary roadways, ramps, structures (including railroad shoo-fly) and detours required to maintain lane continuity throughout the construction phasing. If temporary shoring is required, prepare layouts and show the limits on the applicable TCP.

2. Develop each TCP to provide continuous, safe access to each adjacent property during all phases of construction and to preserve existing access. The Engineer shall notify the State in the event existing access must be eliminated, and must receive approval from the State prior to any elimination of existing access.
3. Prepare each TCP in coordination with the State. The TCP must include interim signing for every phase of construction. Interim signing must include regulatory, warning, construction, route, and guide signs. The Engineer shall interface and coordinate phases of work, including the TCP, with adjacent Engineers, which are responsible for the preparation of the PS&E for adjacent projects.
4. Make every effort to prevent detours and utility relocations from extending beyond the proposed Right-of-way lines. If it is necessary to obtain additional permanent or temporary easements and Right-of-Entry, the Engineer shall notify the State in writing of the need and justification for such action. The Engineer shall identify and coordinate with all utility companies for relocations required.
5. Describe the type of work to be performed for each phase of sequence of construction and any special instructions (e.g. storm drain, culverts, bridges, railing, illumination, signals, retaining walls, signing, paving surface sequencing or concrete placement, ROW restrictions, utilities, etc.) that the contractor should be made aware to include limits of construction, obliteration, and shifting or detouring of traffic prior to the proceeding phase.
6. Include the work limits, the location of channelizing devices, positive barrier, location and direction of traffic, work area, stations, pavement markings, and other information deemed necessary for each phase of construction.

163.2. Illumination. The Engineer shall refer to TxDOT's *Highway Illumination Manual* and other deemed necessary State approved manuals for design of continuous lighting and safety lighting for all conventional, high-mast, ramps and underpass lighting. The Engineer shall include safety lighting as part of each design on each flashing beacon. The Engineer shall provide a preliminary layout for initial review and approval by the State. The Engineer shall prepare circuit wiring diagrams showing the number of luminaries on each circuit, electrical conductors, length of runs, service pole assemblies. Underpass lighting must be used on all structures

within each project. The Engineer shall integrate existing illumination within the project limits into the proposed design.

163.3. Storm Water Pollution Prevention Plans (SW3P). The Engineer shall develop SW3P, on separate sheets from (but in conformance with) the TCP, to minimize potential impact to receiving waterways. The SW3P must include text describing the plan, quantities, type, phase and locations of erosion control devices and any required permanent erosion control.

163.4. Compute and Tabulate Quantities. The Engineer shall provide the summaries and quantities within all formal submittals.

163.5. Miscellaneous Structural Details. The Engineer shall provide necessary details required to supplement standard details.

163.6. Estimate. The Engineer shall independently develop and report quantities necessary to construct the contract in standard State bid format at the specified milestones and Final PS&E submittals. The Engineer shall prepare each construction cost estimates using Estimator or any approved method. The estimate shall be provided at each milestone submittal or in TxDOT CONNECT format at the 95% and Final PS&E submittals per State's District requirement.

163.7. Contract time determination. The Engineer shall prepare a detailed contract time estimate to determine the approximate time required for construction of the project in calendar and working days (based on the State standard definitions of calendar and working days) at the 95% and Final PS&E milestone. The schedule must include tasks, subtasks, critical dates, milestones, deliverables, and review requirements in a format which depicts the interdependence of the various items and adjacent construction packages. The Engineer shall provide assistance to the State in interpreting the schedule.

163.8. Specifications and General Notes. The Engineer shall identify necessary standard specifications, special specifications, special provisions and the appropriate reference items. The Engineer shall prepare General Notes from the District's *Master List of General Notes*, Special Specifications and Special Provisions for inclusion in the plans and bidding documents. The Engineer shall provide General Notes, Special Specifications and Special Provisions in the required format.

163.9. Constructability Review. The Engineer shall provide Independent Quality Review of the constructability of the PS&E sets.

The Engineer shall perform constructability reviews at major project design milestones (e.g. 30%, 60%, 95%, and final plan) to identify potential constructability issues and options that would provide substantial time savings during construction. The constructability review must be performed for all

roadway and structural elements such as Sequence of Work and Traffic Control, Drainage (Temporary and Permanent), Storm Water Pollution Prevention Plan (SW3P), Environmental Permits, Issues and Commitments (EPIC) addressed, identify Utility conflicts; ensuring accuracy and appropriate use of Items, Quantities, General Notes, Standard and Special Specifications, Special Provisions, Contract Time/Schedule, Standards; and providing detailed comments in an approved format. Reviews must be captured in a Constructability Log identifying areas of concern and potential conflict. The Engineer shall provide the results of all Constructability reviews and recommendations to the State at major project design milestone submittals.

Deliverables

Plans

The Engineer shall provide the following information at each submittal:

1. 30% Plans Submittal

- 1.1. Eight sets of 11" x 17" plan sheets for the State District Review.
- 1.2. Estimate of construction cost.
- 1.3. Engineer's internal QA and QC markup set.
- 1.4. Form 1002 and Design Exceptions with existing and proposed typical sections, location map and design exception exhibits.
- 1.5. A Preliminary 3D corridor model, in the most current format, created using Bentley's OpenRoads tools, and with detail to verify the design of the 30% plan sheets.

2. 60% Plans Submittal:

- 2.1. Eight sets of 11" x 17" plan sets for the State District review.
- 2.2. Estimate of construction cost.
- 2.3. Engineer's internal QA and QC marked up set.
- 2.4. A preliminary 3D corridor model, in the most current format, created using Bentley's OpenRoads tools, and with detail to verify the design of the 60% plan sheets. The level of detail of the surface and subsurface features will be at the direction of the State.

3. District Review Submittal (95%):

- 3.1. 12 sets of 11" x 17" plan sheets for the State district review
- 3.2. List of governing Specifications and Special Provisions in addition to those required.
- 3.3. Marked up general notes.
- 3.4. Plans estimate.

- 3.5. New Special Specifications and Special Provisions with Form 1814, if applicable.
 - 3.6. Triple Zero Special Provisions.
 - 3.7. Engineer sign, seal and date supplemental sheets (8 ½" x 11").
 - 3.8. Contract time determination summary.
 - 3.9. Significant project procedures form.
 - 3.10. Right-of-Way and utilities certification.
 - 3.11. Temporary road closure letters.
 - 3.12. Construction speed zone request.
 - 3.13. Engineer's internal QA and QC marked-up set.
 - 3.14. Other supporting documents.
 - 3.15. A detailed 3D corridor model, in the most current format, created using Bentley's OpenRoads tools, and with detail to verify the design of the 95% plan sheets. The level of detail of the surface and subsurface features will be at the direction of the State.
4. Final submittal (100%).
- 4.1. 14 paper sets of 11" x 17"
 - 4.2. Revised supporting documents from 95% review comments.
 - 4.3. A final 3D corridor model, in the most current format created using Bentley's OpenRoadsCivil tools. The level of detail of the surface and subsurface features will be at the direction of the State.
 - 4.4. A final 3D earthwork model in either .XML or .ICM format (as directed by the State) created using Bentley's OpenRoads tools. The level of detail of the surface and subsurface features will be at the direction of the State.

Electronic Copies

The Engineer shall furnish the State with a CD or DVD of the final plans in the format of current CADD system used by the State, .pdf format, and in the State's File Management System (FMS) format.

The Engineer shall also provide separate CD or DVD containing cross section information (in dgn, XLR, & ASCII formats) for the State contractor to use.

The Engineer shall provide an electronic copy of Primavera file or the latest scheduling program used by the State for construction time estimate.

With the approval of the State, and in lieu of the above, the Engineer may maintain the project files in the State's ProjectWise container. The handoff of the electronic files will be via email to the State, with a URN link to the project location in ProjectWise provided in the email.

Calculations

The Engineer shall provide the following:

Working copies of all spreadsheets and output from any programs utilized on a CD or DVD in a universally reliable format.

The Engineer may provide the calculations in .pdf format in lieu of the bound hard copies. The .pdf file should be submitted on a CD, DVD, or in ProjectWise (if applicable).



ATTACHMENT B

FEE PROPOSAL

Attachment B
Fee Schedule - Itemized
Method of Payment - Lump Sum

TASK DESCRIPTION	PROJECT MANAGER	QUALITY MANAGER	DESIGN ENGINEER	ENGINEER IN TRAINING	SENIOR ENGINEER TECH	CADD OPERATOR	TOTAL LABOR HRS. & COSTS
HSIP - Project No. 26-0435 - MILE 5 & ABRAM RD							
PRIME PROVIDER - SCIVLE, PLLC.							
FC 110 - FEASIBILITY STUDIES	8	12		40			
FC 120 - ENVIRONMENTAL DOCUMENTATION	4	8	30	42			
FC 145 - CONTRACT MANAGEMENT AND ADMINISTRATION	2	30					
FC 162 - SIGNING, PAVMENT MARKING, SIGNALIZATION	4	8	40	44			
FC 163 - MISCELLANEOUS ROADWAY	2	4	20	50	38	40	
HOURS SUB-TOTALS	20	62	90	176.0797	38.42191846	40	426.5016185
CONTRACT RATE PER HOUR	\$ 216.05	\$ 184.78	\$ 118.97	\$ 97.16	\$ 113.71	\$ 80.42	
TOTAL LABOR COSTS	\$ 4,321.00	\$ 11,456.36	\$ 10,707.30	\$ 17,107.90	\$ 4,368.96	\$ 3,216.80	\$ 51,178.32
% DISTRIBUTION OF STAFFING	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
SUBTOTAL							\$ 51,178.32
TASK DESCRIPTION	RPLS - PROJECT MANAGER	RPLS - TASK LEADER	SENIOR SURVEY TECH	TOTAL LABOR HRS. & COSTS			
MILE 5 & ABRAM RD							
				0			
FC 160(150) - DESIGN SURVEYS	2	4	6				
Survey Control Sheets and reports							
ROW topographic Maps and reports				0			
HOURS SUB-TOTALS	2	4	6	12			
CONTRACT RATE PER HOUR	\$ 163.77	\$ 141.72	\$ 105.21				
TOTAL LABOR COSTS	\$ 327.54	\$ 566.88	\$ 631.26	\$ 1,525.68			
% DISTRIBUTION OF STAFFING	0.00%	0.00%	0.00%				
SUBTOTAL - LABOR				\$ 1,525.68			
UNIT COST	QUANTITY	RATE	UNIT	COST			
FC 160(150) DESIGN SURVEY AND CONSTRUCTION							
2-PERSON SURVEY CREW	8	\$162.00	HOUR	\$1,296.00			
SUBTOTAL - UNIT COST				\$1,296.00			
TOTAL - MILE 5 @ ABRAM RD	\$ 54,000.00						



ATTACHMENT C

APPROVED WORK/PROJECT SCHEDULE

ATTACHMENT C
Project Schedule
TxDOT HSIP PROJECTS - Project No. 26-0435

Task Description	Begin Date	End Date	Total Calendar Days	Jul 2026	Aug 2026	Sep 2026	Oct 2026	Nov 2026	Dec 2026	Jan 2027	Feb 2027
FC 145 – Contract MGT and ADMIN	8/01/2026	2/28/2027	212								
FC 110, FC 120, FC 162, FC 163	8/01/2026	9/30/2026	61								
FC 160 (150) DESIGN SURVEYS	8/01/2026	8/31/2026	31								
Bidding & Contract Award	9/1/2026	9/30/2026	30								
Construction	10/15/2026	2/28/2027	137								
Project Closeout	1/31/2027	2/28/2027	29								

Basic Services
Special Services
Construction Stage