


**AGENDA PLACEMENT FORM**

(Submission Deadline – Monday, 5:00 PM before Regular Court Meetings)

Date: 4/1/26  
Meeting Date: 4/13/26  
Submitted By: Colt Friedrich  
Department: Engineering  
Signature of Elected Official/Department Head:  


**Court Decision:**  
This section to be completed by County Judge's Office



4-13-2026

**Description:**

Consider and approve Task Authorization for Freese and Nichols, Inc. to provide engineering support for the following projects as outlined in the Agreement executed on May 27, 2025: 1.2 Downtown Godley Feasibility Study; 1.6 US 67 and CR 1119 Intersection Improvements; 4.4 US 67 and IH-35W Feasibility Study; and 3.2 Renfro Street Rehabilitation, provided that the associated fees are within the budgets established in the previously approved program plan. Funding for projects will be paid with proceeds from the Transportation Bond Program. With authorization for County Judge to sign.

(May attach additional sheets if necessary)

Person to Present: Colt Friedrich

(Presenter must be present for the item unless the item is on the Consent Agenda)

Supporting Documentation: (check one)     PUBLIC     CONFIDENTIAL

(PUBLIC documentation may be made available to the public prior to the Meeting)

Estimated Length of Presentation: 3 minutes

Session Requested: (check one)

Action Item     Consent     Workshop     Executive     Other \_\_\_\_\_

Check All Departments That Have Been Notified:

County Attorney     IT     Purchasing     Auditor  
 Personnel     Public Works     Facilities Management

Other Department/Official (list) \_\_\_\_\_

**Please List All External Persons Who Need a Copy of Signed Documents  
In Your Submission Email**



JOHNSON COUNTY, TEXAS

2 N. Main Street

Cleburne, Texas 76033

MASTER PROFESSIONAL SERVICES AGREEMENT

TASK AUTHORIZATION #2

FNI Project: JFS25466

Client Contract: Johnson County Transportation Bond Program

Date: 4/13/2026

<b>Project Name:</b>	Program Management and Engineering Design Services for Johnson County Bond Program On-System Projects
<b>Description of Services:</b>	Phase 1 Projects Package (see attached for detailed scopes of work)
<b>Deliverables:</b>	See Attached

Total \$1,751,655 (as allocated below)

	Project Name	Basic Services (Lump Sum)	Special Services (Not to Exceed)	TOTAL
<b>Amount Authorized:</b>	1.2 Downtown Godley Feasibility Study	\$293,367	--	\$293,367
	1.6 US 67 and CR 1119 Improvements	\$264,199	\$240,283	\$504,482
	3.2 Renfro Pavement Rehabilitation	\$372,924	\$438,390	\$811,314
	4.4 US 67 and IH-35 Feasibility Study	\$142,492	--	\$142,492
	<b>Totals</b>	<b>\$1,072,982</b>	<b>\$678,673</b>	<b>\$1,751,655</b>

The services described above shall proceed upon execution of this Task Authorization. All other provisions, terms, and conditions of the Master Professional Services Agreement which are not expressly amended shall remain in full force and effect.

To the extent that the Client may issue a formal purchase order in connection with, in addition to, or in lieu of signing this Task Authorization, the terms and conditions contained on the purchase order, if any, shall be null, void, and unenforceable, and the Client shall be deemed to have accepted this Task Authorization.

JOHNSON COUNTY, TEXAS

FREESE AND NICHOLS, INC.

By:   
 Name: Christopher Boedeker  
 Title: County Judge  
 Date: 4-13-2026

By: \_\_\_\_\_  
 Name: \_\_\_\_\_  
 Title: \_\_\_\_\_  
 Date: \_\_\_\_\_

Scope of Services for

**1.2 Downtown Godley Feasibility Study**

The scope set forth herein defines the work to be performed by Freese and Nichols, Inc. (ENGINEER) and Johnson County (CLIENT) in completing the Project. Both the CLIENT and ENGINEER have attempted to clearly define the work to be performed and address the needs of the Project.

Study Area:

The study area will include the segments of SH171 and Links Dr between FM 2331 and FM 917, and segments of FM 2331 and FM 917 between SH 171 and W Links Dr. The study roadway segments and key intersections are shown in Error! Reference source not found..



Figure 1. Study Area for Downtown Godley Feasibility Study

## PROJECT DESCRIPTION AND ASSUMPTIONS

The objective of the project is to conduct a feasibility study for the City of Godley downtown area in Johnson County to identify and evaluate roadway and intersection improvement alternatives aimed at enhancing vehicular and pedestrian mobility and safety. The study will include stakeholder and public engagement to identify the most effective solutions.

### Study Assumptions:

- All project coordination and review meetings with the CLIENT will be conducted virtually. Stakeholder and public Meetings will be conducted in person as noted in the scope.
- The proposed fee includes one (1) in-person final presentation to the CLIENT.
- All deliverables will be provided in an electronic format via email.

### **Basic Services**

- Task 1. Project Management and Meetings**
- Task 2. Existing Conditions Review and Analysis**
- Task 3. Stakeholder and Public Involvement**
- Task 4. Alternatives Development and Analysis**
- Task 5. Recommendations and Implementation Plan**
- Task 6. Prepare Technical Report**

ENGINEER will render the following professional engineering services in connection with the development of the project:

### **BASIC SERVICES**

#### **TASK 1. PROJECT MANAGEMENT AND MEETINGS**

ENGINEER will manage the work outlined in this scope to make efficient and effective use of ENGINEER's and CLIENT's time and resources. ENGINEER will manage change, communicate effectively, coordinate internally and externally as needed, and proactively address issues with the CLIENT's Project Manager and others as necessary to make progress on the work. ENGINEER will:

- A. Provide Project Management services including project coordination and communications with the CLIENT and monthly status updates.
- B. Conduct a kick-off meeting (virtual) with the CLIENT staff to discuss the study approach methodology, data collection, deliverables, and schedule for completion.
- C. Conduct up to five (5) review/coordination meetings (virtual) with the CLIENT staff to review results of the analyses, study recommendations, and project coordination, as needed.
- D. Conduct stakeholder and public involvement meetings as outlined in the scope.

- E. Prepare presentation slides summarizing the feasibility study process and recommendations for make one (1) final presentation to the County Commissioners.

## **DELIVERABLES**

- i. Meeting summaries with decisions and action items
- ii. Baseline study schedule and necessary updates
- iii. Monthly Invoices and Project Status Reports

## **TASK 2. EXISTING CONDITIONS REVIEW AND ANALYSIS**

FNI will use the baseline data and information provided by the stakeholders, site visit, a review of any previous studies and plans, analysis of existing traffic conditions, and crash data to develop an understanding of mobility and safety issues within the corridor.

- A. **Gather and Review Existing Data:** Perform desktop review of the study area and assemble data necessary for subsequent traffic and safety analyses to include:
  - a. Existing roadway network, adjacent land use, traffic access, and circulation.
  - b. Existing roadway and intersection geometry and type of existing intersection traffic control within the study area.
  - c. Any site plans, development programs, and land use densities for all uses planned within the study area. The CLIENT will help identify and define level and intensity of any proposed development, and planned roadway improvements including implementation timeline.
  - d. Crash records will be gathered from TxDOT's Crash Records Information System (CRIS) query tool.
  - e. Information related to railroad operation, frequency, and any issues related to the three at grade crossings.
  - f. Information related to pick-up and drop-off operations for schools adjacent to the study roadways and related traffic issues.
  - g. Existing traffic signal timing and phasing plans to be provided by the CLIENT.
  
- B. **Collect Traffic Counts:** Collect current traffic count data necessary for traffic analyses to include:
  - a. Peak period intersection turning movement counts (TMC) at Fifteen (15) locations and 24-hr bi-directional roadway counts at four (4) locations within the study area as identified below. FNI will engage GRAM Traffic, NTX to collect necessary traffic data within the study area. Traffic counts will be collected on a Tuesday, Wednesday, or Thursday while schools are in session.

Peak Period Intersection Turning Movement Counts (7-9 AM and 3-6 PM):

- 1. SH 171 @ N Pearson St
- 2. SH 171 @ S 6th St
- 3. SH 171 @ FM 917
- 4. FM 917 @ Railroad St
- 5. FM 917 @ E Godley Ave
- 6. FM 917 @ W Godley Ave

7. FM 917 @ Graham Ave
8. FM 917 @ Allen Ave
9. FM 917 @ Nelson St
10. FM 917 @ Links Dr
11. N Pearson St @ W Links Dr
12. N Pearson St @ W Allen Ave
13. N Pearson St @ W Graham Ave
14. N Pearson St @ W Godley Ave
15. N Pearson St @ Railroad St

24-hr Bi-directional Roadway Counts:

1. SH 171 – West of S 6th St
  2. FM 917 – S of Links Dr
  3. W Links Dr – W of Turner Ave
  4. N Pearson St – N of Wildcat
- b. Historic traffic volume count information as available from the CLIENT, NCTCOG and TXDOT to supplement newly collected data.
- c. Review and summarize the traffic count data for input into the Traffic Engineering Study.
- C. **Conduct Field Visit:** Conduct a field visit to make observations and gather data such as roadway and intersection geometry, traffic operations, traffic patterns, congestion, queuing, and safety issues.
- D. **Existing Conditions Traffic Analysis:** Perform existing conditions traffic operations analysis for AM and PM peak hours at key intersections utilizing the traffic count data collected for the study. The intersection operations analysis will use vehicular delay and Level of Services (LOS) as measures of effectiveness. The analysis will be performed using the SYNCHRO traffic analysis software.
- E. **Analysis of Historical Crash Data:** The ENGINEER shall review and analyze historical crash data obtained from TxDOT's Crash Records Information System (CRIS) for latest 3 full calendar years (January 1st to December 31st) with respect to crash characteristics such as severity, crash types, frequency, rates, patterns, clusters, and their relationship to crash contributing factors. The purpose of the historical crash analyses is to determine safety performance of the existing conditions to understand any safety issues within the study area and inform alternatives development and analysis phase of the study.
- F. **Documentation of Existing Conditions:** Once organized, the data acquired under this task in combination with input gathered from the stakeholders and the public will form the knowledge base from which the alternatives will be developed. FNI will summarize and document the data gathered, and findings from the existing conditions assessments.

## DELIVERABLES

- i. Traffic count data summaries

- ii. Documentation of Existing Conditions

### **TASK 3. STAKEHOLDER AND PUBLIC INVOLVEMENT**

FNI will work collaboratively with the CLIENT to engage the stakeholders and the public to solicit input and feedback on the potential enhancements to the downtown study area roadway network.

- A. **Public Involvement Plan:** The ENGINEER will collaborate with the CLIENT to develop a Public Involvement Plan (PIP) to outline goals and objectives, identify target audiences, determine vehicles for communications, and lay out a schedule for meetings, and deployment of communication and participation tools.

The ENGINEER will collaborate with the CLIENT to identify project stakeholders. It is anticipated that the project stakeholders would include the CLIENT, TxDOT, City of Godley, Godley Independent School District, and Fort Worth and Western Railroad.

- B. **Stakeholder and Public Meetings:** The ENGINEER will conduct up to two (2) rounds of community meetings and up to two (2) rounds of stakeholder meetings for the study. The CLIENT will assist with stakeholder coordination and reserving the meeting locations. The ENGINEER will be responsible for sending out meeting notices, conducting the meetings, and developing the outreach materials including presentations, exhibits, maps, etc. required to conduct and document the input. The stakeholder and public meetings will be held in two rounds with specific objectives as described below:

- a. *Round 1:* Conducted during the early phase of the study. The purpose of these meetings would be to introduce the project, solicit input and feedback from stakeholders and the public on the study area issues and needs, establish goals and objectives, and identify potential alternatives to be investigated.
- b. *Round 2:* Conducted after the analysis phase. The goal of these meetings would be to present conceptual alternatives, the results of the alternatives analysis, and to solicit feedback on the preferred alternative to help further refine and preferred alternative and develop an implementation plan.

Each round of meetings will be conducted in a workshop format including a series of individual or group stakeholder meetings during the day, followed by a public open house meeting in the evening of that same day.

### **DELIVERABLES**

- i. Public Involvement Plan
- ii. Meeting and presentation materials, promotional materials
- iii. Meeting summaries
- iv. Documentation of public and stakeholder involvement

#### **TASK 4. ALTERNATIVES DEVELOPMENT AND ANALYSIS**

The ENGINEER will utilize the data, analysis results, input and feedback obtained in Tasks 2 and 3 to develop and analyze alternatives.

- A. **Develop Conceptual Alternatives:** The ENGINEER will develop up to three (3) conceptual alternatives for the study area roadway network focusing on network access, circulation, safety, and intersection configurations. Formulation of alternatives will consider the following:
- Alternatives will be aimed at enhancing the mobility and safety for vehicles and pedestrians on study area roadway network.
  - The alternatives will consider the local as well as regional traffic flows using the study area roadway network.
  - Alternatives will consider input from the stakeholder and public involvement process.
  - Alternatives will consider corridor constraints including right-of-way (ROW), adjacent land use, access needs, known environmentally sensitive areas/sites, historic/cultural properties, etc.
  - Alternatives will consider impacts to railroad crossings and access and circulation of emergency vehicles.

While the alternatives will be developed based on findings from Tasks 2 and 3, it is anticipated that one of the alternatives will include reconstruction of specific intersections and roadways to address configuration and capacity issues while maintaining the existing traffic flow patterns. At least one other alternative would consider converting FM 2331 and FM 917 to a pair of one-way roadways between SH 171 and Links Drive.

- B. **Develop Traffic Volumes for Alternatives Analysis:** Estimates of future traffic volumes will be developed for one future analysis year (10-year horizon) for the No-build condition and Build condition alternatives as described below. Traffic projections will be developed for the AM and PM peak hours. The traffic projections will be developed in consultation with CLIENT staff and will utilize a growth rate developed based on the analysis of historical traffic growth trends in the study area and review of the regional travel demand model forecasts developed by the North Central Texas Council of Governments (NCTCOG).
- a. 2036 No-build Condition: An estimate of the traffic volumes on the study area roadway network in 2036 under existing roadway and intersection configurations. This scenario will create the baseline to compare to the Build Condition improvements.
  - b. 2036 Build Condition: An estimate of the traffic volumes on the study area roadway network in 2036 under the proposed improvements to the roadway and intersection configurations. The build condition volumes will be developed by reallocating the no-build condition volumes onto the build condition network based on the revised traffic patterns.

- c. **Straight Line Diagram Graphics:** The projections will include graphic representations of the anticipated daily and peak hour movements along the corridors in the study area.

**C. Traffic operations Analysis of Alternatives:** The traffic operations analysis will be conducted for the AM and PM peak hours for the following scenarios as described in the previous section.

- 2036 No-build Condition (AM and PM peak hours)
- 2036 Build Alternative 1 (AM and PM peak hours)
- 2036 Build Alternative 2 (AM and PM peak hours)
- 2036 Build Alternative 3 (AM and PM peak hours)

Traffic analysis will include:

- a. *Intersection Operations Analysis:* Perform traffic operational analysis using Synchro software to evaluate delay and the Level of Service (LOS) for key study intersections, using the methods Highway Capacity Manual (latest edition). Additional evaluation parameters such as queue lengths will be used as applicable. The LOS results will be compiled into a tabular format and reviewed with CLIENT staff.
- b. *Roadway Network Analysis:* addition to intersection analysis using Synchro, the ENGINEER will develop a traffic simulation model using SimTraffic software to evaluate network wide measure of effectiveness such as total network delay, network travel time, and number of stops to compare performance of different alternatives.

## **DELIVERABLES**

- i. Documentation of alternatives development and analysis results
- ii. Output reports from traffic analysis software

## **TASK 5. RECOMMENDATIONS AND IMPLEMENTATION PLAN**

- A. **Identify and Recommend Preferred Alternative Configuration:** Based on the findings of the alternatives analysis in Task 4, and input from the CLIENT and project stakeholders, identify the preferred alternative configuration. A list of recommended improvements under the preferred alternative configuration would be developed. These recommended improvements could include intersection reconfiguration, roadway reconfiguration, need for added turn lanes, signal timing and phasing optimization, changes to signage and striping, etc.
- B. **Develop Cost Estimates:** Planning level cost estimates for the recommended improvements under the preferred alternative will be developed for the study area.
- C. **Develop Implementation plan:** Develop a phased implementation plan to construct the recommended improvements. An implementation table will be developed

identifying the type and description of improvements, implementation timeline, planning level costs, potential funding sources, and responsible agency.

## **DELIVERABLES**

- i. Implementation plan summary table

## **TASK 6. PREPARE TECHNICAL REPORT**

- A. **Draft Technical Report:** Prepare a draft technical report documenting the data, analysis, findings, recommendations, and implementation plan of the feasibility study and submit to the CLIENT for review and comment. The CLIENT will provide one consolidated set of CLIENT Staff review comments. The draft report will be submitted in electronic PDF format.
- B. **Final Technical Report:** Prepare a final technical report (PDF format) addressing the draft review comments and submit to the CLIENT.

## **CLIENT FURNISHED INFORMATION AND RESPONSIBILITIES**

As the CLIENT will serve as a conduit for information, the CLIENT shall provide information pertaining to applicable ordinances, studies, and available data. If data is required from other public agencies or applicants for development, the CLIENT will assist in making requests for such data. The CLIENT shall perform the following tasks:

- A. Designate in writing a person to act as CLIENT's representative with respect to the services to be rendered under this Agreement. Such person shall have contract authority to transmit instructions, receive information, interpret and define the CLIENT's policies and decisions with respect to the ENGINEER's services for the Project.
- B. Assist ENGINEER by placing at ENGINEER's disposal all available information pertinent to the Project including previous reports and any other data relative to the Project.
- C. Provide electronic base mapping of corridor areas (CAD GIS format), as needed.
- D. Provide any available long-range travel forecasts (NCTCOG) to assist in the preparation of studies.
- E. Provide existing conditions data and information for the study corridors including observed or reported existing operational and safety issues, and existing traffic signal and timing plans.
- F. Provide data related to approved or planned future development and approved or planned future roadway or intersection improvements within corridor study area.
- G. Examine all studies, reports, sketches, drawings, specifications, proposals and other documents presented by Engineer, obtain advice of an attorney, insurance counselor and other consultants as CLIENT deems appropriate for such examination and render

in writing decisions pertaining thereto within a reasonable time so as not to delay the services of Engineer.

- H. Provide such accounting, independent cost estimating, and insurance counseling services as may be required for the Project, such legal services as CLIENT may require or ENGINEER may reasonably request with regard to legal issues pertaining to the Project.

Scope for Engineering Design Related Services for  
**1.6 US-67 at CR 1119 Reconstruction and Restriping**

The scope set forth herein defines the work to be performed by Freese and Nichols, Inc. (ENGINEER) and Johnson County (CLIENT) in completing the project. Both the CLIENT and ENGINEER have attempted to clearly define the work to be performed and address the needs of the Project.

**PROJECT DESCRIPTION AND ASSUMPTIONS**

This project seeks to reconstruct the roadway connection between CR 1119 and US-67. As a part of that scope, the intersection between CR 1119 and CR 1234 will also need to be reconfigured. Additional pavement width will be added to US-67 to accommodate a new turn lane for the proposed connection. The project limits include approximate 5,500 linear feet of roadway. Signing and striping, topographic and boundary survey, SUE, utility coordination, ROW acquisition, geotechnical investigation and environmental analysis will also be included in the work. An image of the proposed improvements is below.



Design assumptions:

- Project will be designed in accordance with the latest Texas Department of Transportation (TxDOT) design guidelines and specifications.
- Project will utilize the latest version of the Texas Manual on Uniform Traffic Control Devices (TMUTCD)

- Design speed will be 35 mph on CR 1119 and CR 1234.
- The project will be funded using local funding sources.
- There is no utility design as a part of this project.
- TxDOT will perform 2 reviews and provide comments only on the portion of the road as it connects to or affects US-67.
- Proposed intersection at CR 1119 and CR 1234 will be stop controlled to CR 1234, and the proposed connection between US-67 and CR 1119 will be stop controlled to CR 1119.
- No hydraulic analysis is required other than showing drainage boundaries, and no storm system will be constructed as a part of this project. Drainage scope is limited to modifying roadside ditches as needed.
- Project will require TxDOT district concurrence and a ROW permit. No driveway permits or utility permits are expected. Preparation of TxDOT Form 1002 is not included unless specifically requested by TxDOT.
- No safety study, access justification report, or corridor study is included.

#### WORK TO BE PERFORMED

##### **Basic Services**

- Task 1. Project Management
- Task 2. Conceptual Design (30%)
- Task 3. Pre-Final and Final Design and Construction Drawings (90% & 100%)
- Task 4. Bid Phase Services
- Task 5. Construction Phase Services (not a part of this scope)

##### **Special Services**

- Task 6. Geotechnical Investigation
- Task 7. Environmental Services
- Task 8. Topographic and Boundary Survey and Survey Documents
- Task 9. Subsurface Utility Engineering (SUE)
- Task 10. Franchise Utility Coordination
- Task 11. Professional Right of way/Land Acquisition Services

ENGINEER will render the following professional engineering services in connection with the development of the project:

## **BASIC SERVICES**

### **TASK 1. PROJECT MANAGEMENT**

ENGINEER will manage the work outlined in this scope by performing the following tasks:

- A. Leading, managing and directing design team activities
- B. Ensuring quality control is practiced in performance of the work
- C. Tasking and allocating team resources
- D. Completing internal project setup.
- E. Conducting pre-design project kickoff meeting with CLIENT.
- F. Conducting and documenting up to five (5) project update or review meetings with CLIENT Project Manager.
- G. Conducting monthly internal design team coordination meetings (up to 12).
- H. Preparing and submitting monthly invoices with project status reports (up to 12).
- I. Preparing baseline design schedule and schedule updates as needed.

### **DELIVERABLES**

- i. Meeting summaries with decisions and action items
- ii. Baseline design schedule and necessary updates
- iii. Monthly Invoices and Project Status Reports

### **TASK 2. CONCEPTUAL DESIGN (30%)**

ENGINEER will complete conceptual design by performing the following tasks:

- A. ENGINEER will collect relevant project data from CLIENT and other available sources.
- B. In addition to data obtained from the CLIENT, ENGINEER will make efforts to obtain information to aid in coordination of the proposed improvements with any planned future improvements that may influence the project.
- C. ENGINEER will seek to obtain data for existing conditions that may impact the project including topographic and boundary survey and SUE levels A-D.
- D. ENGINEER will make up to two (2) site visits to become familiar with site and observe existing conditions.
- E. ENGINEER will develop one (1) conceptual design. The conceptual design will include the following sheets:
  - o COVER SHEET

- INDEX OF SHEETS
- PROJECT LAYOUT AND SURVEY CONTROL DATA
- HORIZONTAL ALIGNMENT DATA
- TYPICAL SECTIONS
- REMOVAL PLAN
- ROADWAY PLAN & PROFILE
- SIGNING AND STRIPING PLAN
- EXISTING DRAINAGE AREA MAP
- PROPOSED DRAINAGE AREA MAP
- CROSS SECTIONS

- F. ENGINEER will develop an opinion of probable construction cost (OPCC). Sources of data used in the preparation of the OPCC include construction data aggregation services, similar past project performed by ENGINEER, bid results from previous CLIENT projects of similar type, and ENGINEER experience and engineering judgement.
- G. ENGINEER will conduct QA/QC of the design deliverables.
- H. ENGINEER will upload set to TxDOT for preliminary review.

#### **DELIVERABLES**

- i. Two (2) printed half-size copies of Plan set, two (2) printed copies of Opinion of probable construction cost (OPCC).
- ii. One (1) half-size PDF copy of the Plan set and one (1) electronic PDF copy of the OPCC.

### **TASK 3. PRE-FINAL AND FINAL DESIGN AND CONSTRUCTION DRAWINGS (90% & 100%)**

After review and approval of the 30% Design by the CLIENT, ENGINEER will provide 90% Design services:

- A. ENGINEER will continue to develop the design and provide the following sheets for the 90% pre-final design:

#### GENERAL

- COVER SHEET
- INDEX OF SHEETS
- GENERAL NOTES
- QUANTITY SUMMARY
- PROJECT LAYOUT AND SURVEY CONTROL DATA
- HORIZONTAL ALIGNMENT DATA
- TYPICAL SECTIONS

#### CONSTRUCTION PHASING PLAN

- CONSTRUCTION PHASING NARRATIVE

- TRAFFIC CONTROL PLANS
- DETOUR PLAN
- TxDOT STANDARDS

**ROADWAY**

- REMOVAL PLAN
- ROADWAY PLAN AND PROFILE
- TxDOT STANDARDS

**DRAINAGE**

- EXISTING DRAINAGE AREA MAP
- PROPOSED DRAINAGE AREA MAP

**TRAFFIC**

- PAVEMENT MARKING AND SIGNAGE PLAN
- SMALL SIGNAGE SUMMARY
- TxDOT STANDARDS

**ENVIRONMENTAL**

- EROSION CONTROL PLAN
- EPIC SHEET
- TxDOT STANDARDS

**CROSS SECTIONS**

- CROSS SECTIONS

- A. ENGINEER will prepare construction specification documents utilizing ENGINEER standard documents for the 90% Design.
- B. After review and approval of the 90% Design by the CLIENT, ENGINEER will provide 100% Design services.
- C. ENGINEER will provide 100% design services by progressing, updating, or revising the plans and specifications listed in the 90% design submittals.
- D. ENGINEER will develop an opinion of probable construction cost (OPCC) based on each design submittal. Sources of data used in the preparation of the OPCC include construction data aggregation services, similar past project performed by ENGINEER, bid results from previous CLIENT projects of similar type, and ENGINEER experience and engineering judgement.
- E. ENGINEER will upload 90% and 100% plans to TxDOT for review.

**DELIVERABLES**

- i. Two (2) printed half-size copies of Plan set, two (2) printed copies of Opinion of probable construction cost (OPCC) and two (2) printed copies of the construction specifications.
- ii. One (1) half-size electronic PDF copy of the Plan set, one (1) electronic PDF copy of the OPCC and one (1) electronic PDF copy of the construction specifications.
- iii. QC/QA Documentation (Upon request)

#### **TASK 4. BID PHASE SERVICES**

- A. ENGINEER will provide the CLIENT with bid documents including bid schedule, drawings, and project specification documents.
- B. ENGINEER will host and upload, or post, all bid documents to online bidding site, civcast and FNI manager.
- C. ENGINEER will provide a copy of the Notice to Bidders for CLIENT to use in notifying construction news publications and publishing appropriate legal notice. The cost for publications will be paid by CLIENT.
- D. ENGINEER will create a pre-bid meeting agenda and lead one (1) in person pre-bid meeting.
- E. ENGINEER will assist CLIENT by responding to questions and interpreting bid documents. ENGINEER will prepare and issue addenda to the bid documents to CLIENT, if necessary. ENGINEER will upload addenda to online bidding site.
- F. ENGINEER will assist in the tabulation and review of all bids received for the construction of the improvements and shall make recommendations for award to the CLIENT.
- G. ENGINEER will furnish CLIENT with issued for construction sets including four (4) copies of half size (11"x17") drawings, four (4) copies of the project specifications, and PDF copies of the above items.

#### **DELIVERABLES**

- i. Bid documents
- ii. Notice to bidders
- iii. Recommendation of award for lowest bidder
- iv. Four (4) printed half-size copies of Plan set, and four (4) printed copies of the construction specifications.

#### **TASK 5. CONSTRUCTION PHASE SERVICES**

Construction Phase Services are not a part of this scope of services.

## SPECIAL SERVICES

### **TASK 6. GEOTECHNICAL INVESTIGATION**

#### Scope of Services

To evaluate the subsurface conditions for the proposed improvements, a subsurface exploration consisting of a series of soil borings will be performed. The borings will be extended to the proposed depth unless auger refusal causes them to be terminated at a shallower depth. Our geotechnical services will also include laboratory testing of representative soil samples, and engineering analyses presented in a site-specific engineering report. The proposed geotechnical scope of work for the project will consist of field exploration, laboratory testing, engineering analysis, and reporting, as presented below.

#### Utility Clearance

Per state law, we will contact Texas 811 the public utility to locate underground utilities at the site. Typically, Texas 811 will not locate utilities beyond the point of distribution (meters or gauge points) on private property. The risk of hitting utilities that Texas 811 did not mark can be reduced by engaging a private utility locating service. The risks include hitting electric lines, electrocution, gas explorations, loss of services to businesses, and fiber optic lines can result in tremendous costs for lost business, interruption of service, and repair along with potential legal liability.

We included the cost of a private utility line locator in our estimate. Please read the following section on private utility locator services. Private utility locator services can identify utilities that incorporate significant iron content in the conduit materials. However, utilities that are more difficult to detect are utilities without significant ferrous (iron) content which includes most sanitary sewer alignments, copper or PVC water lines, fiber optic lines without tracer ribbons, copper electric lines with no surface exposure, drainage tiles/pipes, irrigation lines, etc.

Using a private utility locator does not guarantee that all utilities will be identified. However, this service lowers the risk and potential liability of the client, while also protecting the safety of our field exploration crews.

We will coordinate our exploration locations around marked utilities, and utilities pointed out to us by the owner/client. However, we will not be responsible for any utilities not marked or not pointed out to us by the landowner or client.

#### Site Access

Based on our review of available aerial photographs, the site appears to be accessible for a truck mounted drill rig.

With regard to site access, we have made the following assumptions:

- We will obtain permits from the TxDOT to drill borings within the US-67 ROW. Client will assist us if any additional documents are required by TxDOT.

- Traffic control (signage, flaggers, arrow boards, etc.) will be required for the proposed borings on CR 1119, CR 1234, and US-67.

### Field Exploration

ECS proposes to perform the following in general accordance with the local standards and practices listed:

- Field locate the test locations by handheld GPS unit and available plans. Elevations will be interpolated from the plans provided/or referenced from published topographical maps.
- Obtain a public utility locate ticket for location of underground lines. See further information in the Utility Clearance section above.
- Mobilize a truck mounted drilling rig to the site.
- As requested, we plan to perform five (5) soil test borings on the site. Please see below:
  - One (1) boring will be drilled on the existing pavements for CR 1119 to a depth of about 15 feet below the existing grade.
  - One (1) boring will be drilled on the existing pavements for CR 1234 to a depth of about 15 feet below the existing grade.
  - One (1) boring will be drilled in the grass areas between US -67 and CR to a depth of about 15 feet below the existing grade.
  - The remaining two (2) borings will be drilled on both shoulders of the US-67 to a depth of about 15 feet below the existing grade. The approximate proposed locations are shown in the figure below.



- Perform testing and sampling in general accordance with ASTM standards and local practices
- Measure the depth of groundwater within each exploration location at the time of drilling and prior to backfilling.

The explorations will be extended to the depths listed above or to mechanical refusal (shallow rock or other impenetrable obstructions), whichever occurs first.

Site Departure Conditions

Upon completion of subsurface exploration, we will backfill each of the locations with the soil removed and mound the excess spoils back up over the test location. In pavement areas, we will patch the surface with concrete of an equivalent or greater thickness. Some post drilling settlement of the boreholes should be expected and may require future maintenance to repair any settlement and prevent a tripping hazard. This maintenance is not included in our scope of services or fees. No other restoration will be provided. ECS will not be responsible for restoration of, but not limited to grass, shrubs, trees, flower beds, or ruts caused by drilling operations. The client must communicate areas that must not be disturbed in advance of field operations.

Typically, we will not provide site repairs beyond what is outlined above unless specifically contracted. Alternatively, we will remove excess spoils from job sites and dispose of them in an approved manner for a negotiated fee.

Please note that some disturbance to off-pavement, gravel-covered and grass-covered areas might occur. We will attempt to limit such disturbance; however, we have not budgeted for site repairs including filling of tire ruts, seeding of lawn areas, replacement of bushes or the planting of trees, etc. If necessary, additional site repairs can be provided at an additional cost.

Laboratory Testing

Upon completion of field exploration operations, the samples will be returned to our laboratory for further identification, visual classification, and testing. Laboratory testing may include the following:

Laboratory Test
Natural moisture content
Gradation analysis
Atterberg Limits
Unconfined Compression
Proctor
Soluble Sulfate

Engineering Report

Upon completion of the field exploration, laboratory testing, and engineering analyses, we will prepare a written engineering report that will include:

- a. A review of published soils mapping and/or geologic information.
- b. Observations from our site reconnaissance and personnel on the drill rig, including current site conditions, drainage features, and surface topographic conditions, and/or available satellite imagery.
- c. A description of the field exploration and laboratory tests performed.
- d. A site location diagram and a field exploration diagram.
- e. Logs of the soil borings in general accordance with industry standard practices for geotechnical engineering. Elevations will be interpolated from civil drawings or referenced from topographic information that you supply.

- f. The results of the laboratory tests will be plotted on the final exploration logs and/or included on separate test report pages.
- g. Discussion of the subsurface materials encountered along with groundwater conditions observed.
- h. Subsurface cross section that graphically represents the general subsurface conditions.
- i. Evaluation of the on-site soil characteristics and a discussion of their suitability for reuse as engineered fill to support proposed pavement. We will also include compaction recommendations and suitable material guidelines.
- j. Pavement design recommendations (asphalt and concrete pavements) according to the Pavement Manual from Texas Department of Transportation (Revised June 2021).
- k. Testing and recommendations for pavement design related to sulfates.

## **TASK 7. ENVIRONMENTAL SERVICES**

Johnson County proposes to construct the U.S. Highway 67 and CR 1119 intersection improvements project. The project will not include federal funding subject to NEPA. However, the project will include roadway improvements and new ROW along U.S. Highway 67, a TxDOT facility. Therefore, it is our understanding that the on-system portion of the project will require TxDOT environmental clearance. This scope includes preparation of technical documentation support for review by TxDOT, to be prepared in accordance with the most recent guidance. This scope assumes that the proposed project will be environmentally cleared as a Categorical Exclusion (CE) and will include the following:

### **TxDOT Categorical Exclusion**

1. TxDOT Environmental Scoping: FNI will review preliminary design information, environmental database information, and prepare and submit the Environmental Project Definition and Work Plan Development Form to TxDOT for review. FNI will attend one meeting with the TxDOT environmental reviewer to discuss the form and determine what analysis and tech reports would be required for environmental clearance and address one round of TxDOT comments on the Environmental Project Definition and Work Plan Development Form.
2. Field Data Collection and Processing: FNI will collect and process the field data required for TxDOT environmental clearance.
3. Technical Analysis/Reports: FNI will conduct the required technical analysis and prepare the required technical reports for TxDOT environmental clearance. Technical analyses and reports for environmental services might include a report, checklist, form, or analysis detailing resource-specific studies identified during the process of gathering data to make an environmental decision. This scope includes the use of TxDOT templates and forms. The anticipated environmental technical reports are listed below:
  - a. Hazmat ISA
  - b. Species Analysis
  - c. Surface Water Analysis
  - d. Farmland Protection Policy Act Analysis (FPPA)
  - e. Community Impacts Assessment Summary

- f. Project Coordination Request (PCR) for historical studies
  - g. Archeological Background Study (ABS)
4. Public Involvement Support: FNI will prepare the Notice and Opportunity to Comment and Public Comments Summary.
  5. Project Coordination: The TxDOT environmental clearance process requires additional coordination and meetings with the Client, design team, environmental team, and TxDOT. FNI's environmental task leads will handle this coordination, keep everyone informed, and keep the project moving forward.

#### ASSUMPTIONS

- The project will require new ROW and easements.
- The project will be a TxDOT CE and will not require an EA or EIS.
- The improvements along U.S. Highway 67 would not be considered a Type I project requiring a traffic noise analysis.
- The project will not require a Section 4(f), 6(f), or Chapter 26 evaluation.

#### DELIVERABLES:

Draft technical reports

Final technical reports

**ADDITIONAL SERVICES:** Additional Services to be performed by FNI, if authorized by the Client, which are not included in the above-described scope of work:

1. NEPA Environmental Assessment (EA) or Environmental Impact Statement (EIS)
2. USFWS Section 7 Consultation
3. Presence/Absence Survey for State or Federally Listed Threatened and Endangered Species
4. Biological Assessment for State or Federally Listed Threatened and Endangered Species
5. Water Features Delineation and Report
6. Section 404 permit application for nationwide permit or individual permit authorization
7. Phase II/III ESA
8. Tree Survey and Mitigation
9. Stream and Wetland Condition Assessment
10. Traffic noise analysis and report
11. Traffic noise workshop
12. Other environmental services not included in the scope of work

#### **TASK 8. TOPOGRAPHIC AND BOUNDARY SURVEY AND SURVEY DOCUMENTS**

The following itemized surveying services are to be provided by ENGINEER:

All survey services will be based on NAD-83 State Plane Coordinate System, Texas North Central Zone (4202), with data derived from the Alterra VRS Network. Data shall be provided in surface coordinates obtained by using a Johnson County grid to surface adjustment factor. The survey may be referenced to Texas Department of Transportation (TxDOT) survey control monuments, if available.

All services shall be in accordance with the Rules and Acts of the Texas Board of Professional Engineering and Land Surveying.

PJB Surveying will comply with the TxDOT safety standards for work conducted with State right of way. Proposed services include the following:

- A. Right of Entry: Right of entry will be obtained by letter via Certified Mail and/or by verbal authorization for affected and adjacent property owners. Documented right of entry will be obtained and logged into a spreadsheet prior to entering any private property or private properties.
- B. Project Control: Primary control shall be established around the entire project area. Control shall be located in stable locations (i.e. iron rods) located outside future construction areas. Each control point will have Northing, Easting, and elevation established. Vertical control will be established utilizing a closed level loop. Control data sheets for primary control points will be prepared.
- C. Right of way/boundary Recovery and Delineation:
  - Public records research; Research County records for ownership deeds and/or plats describing property boundaries. Research TxDOT records for right of way maps of US Highway No. 67.
  - Physical boundary evidence collection; Search and recover sufficient monuments marking property corners and right of way together with any other evidence necessary to assist with the reconstruction of the property boundaries.
  - Right of way delineation; The right of way and private property boundaries will be verified, reconstructed and delineated using evidence obtained from records research and from field measurements of the boundary monuments found. Authority (i.e. deed, dedication, or easement) of right of way will be provided. Deliverables will reflect the recording information (if applicable) of all rights of way, plats, and vesting deeds.
- D. Design Survey: Conduct field service necessary to provide the following:
  - A standard topographic survey will include cross-sections at no more than 100-foot intervals with an average survey width of 75 feet on both sides of the centerline of the new road alignments for County Road No. 1119 and for County Road No. 1234, from the tie in points for the existing County Roads to the tie in point of existing US Highway No. 67. Features shall include, but not limited to, edges of pavements, crown of road, fences, traffic signs, grade breaks, toe of slope, top of bank, drainage ditches, drainage pipes, headwalls, utility signs, overhead electric lines and guy wires, manholes, water valves, and gas valves.
  - The topography survey shall include the mapping of existing traffic striping US Highway No. 67 within the project scope area.
  - Measure the elevations of wastewater manhole flowlines, storm drain manhole flowlines, storm drain pipe flowlines, and top of nut of water valves.
  - Map the locations of trees 6 inches or greater and provide the common name of tree species if known by the survey crew. Tree assessment services beyond common species name and caliber size or services requiring an arborist are

excluded from this scope of survey and will be considered additional scope of work for additional fees.

E. Parcel Documents:

- Prepare parcel exhibit documents (parcel map with parcel description) for new right of way acquisitions up to 4 parcels at the direction of Freese and Nichols.
- Monument new right of way acquisitions with a 1/2" iron rod with red cap stamped "PJB SURVEYING" unless noted otherwise.

Deliverables

The following data shall be provided:

- A. Copies of the right of entry letters mailed to the property owners, copies of the signed right of entry letters returned by the property owners, and/or any notes related to accessing the properties.
- B. PDF's of control point sketches.
- C. PDF's of all field sketches including all manhole measure down data. Measure down data includes X,Y,Z values of top of structure, measure to flowline(s), material, and pipe sizes (as best determined).
- D. Survey data point list in ASCII format.
- E. CAD file containing all survey data including planimetrics, contours, boundary and right of way lines, SUE information, and traffic striping.
- F. TIN file.
- G. Copies of plats, deeds, easements, or other research uncovered and used to delineate the right of way line of US Highway No. 67, County Road No. 1119, and County Road No. 1234.
- H. Three (3) signed and sealed copies of new right of way acquisition parcel exhibits.

**TASK 9. SUBSURFACE UTILITY ENGINEERING (SUE)**

ENGINEER will perform the SUE Investigation required for this project in general accordance with the recommended practices and procedures described in ASCE Publication CI/ASCE 38-02 (Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data). As described in the mentioned ASCE publication, four levels have been established to describe the quality of utility location and attribute information used on plans. The four quality levels are as follows:

- Quality Level D (QL-D) – Information derived from existing records.
- Quality Level C (QL-C) – QL D information supplemented with information obtained by surveying visible above-ground utility features (i.e. valves, hydrants, meters, manhole covers, etc.)
- Quality Level B (QL-B) – Two-dimensional (x, y) information obtained through the application and interpretation of non-destructive surface geophysical

methods. Also known as “designating” this quality level provides the approximate horizontal position of subsurface utilities.

- Quality Level A (QL-A) – Also known as “locating”, this quality level provides precise three-dimensional (x, y, z) information at critical locations by exposing specific utilities. Non-destructive vacuum excavation equipment is used to expose the utilities at specific points which are then tied down by survey.

Subsurface Utility Engineering (SUE) Quality Level A and Quality Level B: Perform SUE field work in accordance with the recommended practices and procedures described in American Society of Civil Engineers (ASCE) Publication CI/ASCE 38-22 (Standard Guidelines for Investigating and Documenting Existing Utilities).

- Quality Level B services will utilize geophysical prospecting equipment to designate the horizontal position of existing underground utilities within the existing right of way and proposed design corridor.
- Quality Level A services will excavate up to two (2) test holes utilizing non-destructive vacuum techniques to expose the utilities at the direction of Freese and Nichols.
- Contact representatives of utility companies to acquire as-built documentation.
- Survey the locations of the SUE designation markings and test hole points. Deliver the field findings in a CAD based format.

#### **TASK 10. FRANCHISE UTILITY COORDINATION**

- A. Utility adjustment coordination includes utility coordination meetings with individual utility companies, communication and coordination with utilities, and conflict assessment and analysis. Utility coordination activities will be in accordance with the Texas Administrative Code (TAC) standards. There are three (3) utilities anticipated along the project limits.
- B. Utility coordination during design phase will include the following tasks:
  - Develop Utility Contact List: ENGINEER will establish contact with existing utility companies within and adjacent to the project area and create a utility contact list. This list will be maintained throughout the project.
  - Initial Project Notification Contact: ENGINEER will notify all known utility owners within and adjacent to the project site.
  - Utility Layouts: ENGINEER will maintain a rough layout of proposed utility locations to better communicate with utility owners.
  - Conflict Assessment: ENGINEER will utilize the existing utility layout provided by SUE to perform a conflict assessment to determine utility conflicts within the proposed roadway alignment. This assessment will be provided at 30%, 90%, and 100% submittals.
  - Individual Utility Meetings: ENGINEER will hold two (2) individual meetings with each utility prior to the 90% and 100% submittals to discuss the updated project alignment and any correlating new and/or removed conflicts.

- Utility Schedule and Sequencing: ENGINEER will review the utility adjustment schedule in relation to construction sequencing and schedule for timely relocation of the utility.
  - Utility Agreements: ENGINEER will coordinate with reimbursable utility owners to prepare and execute utility agreements (up to 2). CLIENT to provide standard utility agreement forms.
  - Utility Certifications: ENGINEER will prepare utility certifications for project bidding and identify anticipated utility clearance dates.
- C. Utility coordination during utility relocation phase will include the following tasks:
- Utility Field Meetings: ENGINEER will meet with utilities in the field to discuss relocation efforts and confirm relocation is complete when necessary. ENGINEER assumes up to two (2) field meetings total.

## **DELIVERABLES**

- A. Utility contact list
- B. Utility conflict matrix
- C. Meeting minutes

## **TASK 11. PROFESSIONAL RIGHT-OF-WAY/LAND ACQUISITION SERVICES**

The Project includes land acquisition and related services in and along US 67 in Johnson County, Texas. The project consists of Fee simple ROW acquisition for a total of three (3) parcels based on our review of the information provided.

Appraisal: Pinnacle Group has relationships with multiple Appraisal Firms throughout the State that employ Texas certified Appraisers all licensed by the Texas Appraiser Licensing and Certification Board. Once the proposed acquisition area and property ownership are identified, Pinnacle Group will begin coordinating with the appraisers assigned to the project to schedule initial appraisal inspections to develop the relationship with the landowners. Once the appraisal is completed, we will then submit to the Client requesting approval. Upon receipt of the approval of the appraisal report, our agents will present the initial offer to the property owner.

Title: Pinnacle Group has title specialists who have right of way experience. They are well-versed not only in researching and reviewing title, but in exploring methods to resolve title curative issues both for the timely closing of parcels by deed and for use in the preparation of condemnation packages consistent with Client's policies. Pinnacle Group will research ownership and appraisal district records and verify offers are being made to the correct landowners. In the event ownership is not able to be verified at 100% interest, or there are existing encumbrances that will affect the project, Pinnacle Group will notify the Client of any curative measures that will be needed. At the option of the Client, Pinnacle Group will coordinate ordering title commitments from a local title company, work with the title company to cure title issues, as well as move forward with closing and final title policy issuance.

Right of Entry (ROE): Pinnacle Group will work closely with our client to provide Right of Entry services. Once title and ownership is confirmed, Pinnacle Group will prepare a ROE form that is approved by the Client, for each parcel, as well as letter to the owners requesting them to allow access for surveyors or other personnel onto their property for this project, including a request for them to sign and return the enclosed approved ROE form. Pinnacle Group will mail out to all property owners, via regular mail and by certified mail, return receipt requested (CMRRR), as well as include a self-addressed stamped envelope (SASE) for return of the executed form. Should we receive no response from the above mailing within the Client's desired timeframe, we will initiate a phone conversation with the property owners. Pinnacle Group has access to TLO, a subscribed platform for contact information utilized on all projects.

In the event the property owner requests any special provisions for ROE, Pinnacle Group will relay those to the Client and request approval. Once the coordination for the execution of the ROE form is complete, the signed form will be provided to the Client for their file.

Negotiation: Pinnacle Group will work closely with our clients to provide negotiation services. Pinnacle Group agents will utilize their knowledge of the area, and the provided Real Estate Appraisal approved by the Client to determine the amount of Initial Offer. Pinnacle Group will prepare an Offer Package including the Landowner Bill of Rights in accordance with the Uniform Act, Agency Standards, Senate Bill 18 and the Property Code for each assigned parcel. In addition, Pinnacle Group will meet with respective landowners and landowner's representatives. Pinnacle Group will respond in a timely manner to both landowners and/or their representatives both orally and in writing. Pinnacle Group will utilize detailed contact reports for each contact made with landowner and/or their representatives and retain these reports in the master file. The administrative settlement and condemnation process will be explained in detail to the landowners and/or landowner's representatives. In addition, Pinnacle Group will provide the necessary information to the Client for the administrative settlement procedure. Subsequent to any settlement hearing or review, Pinnacle Group will notify the landowners and/or their representatives regarding the Client's decision relative to their counteroffer. Pinnacle Group will prepare a final offer package, including a final offer letter, conveyance document and Landowner Bill of Rights.

Settlements: Pinnacle Group has experience working with agencies and property owners to seek design and compensation alternatives on previous projects resulting in settlements on parcels that otherwise would end up in Eminent Domain. Flexibility in the process has always been the quality needed for a successful outcome.

Commissioners Court Executive Session: Pinnacle Group will prepare the appropriate Court Agendas and Memorandums for all packages needing to be approved in Executive Session by Commissioners Court. This includes submitting the request to the appropriate party by the required deadline to get on the Agenda, as well as attending Commissioners Court and presenting to the panel during Executive Session in an effort to obtain approval.

Condemnation Support: If negotiations should fail, and at the direction of the Client, the condemnation process will be timely initiated to maintain the compressed parcel acquisition process. In the event that condemnation is necessary, Pinnacle Group will provide all condemnation support and will conform to all applicable laws, rules and regulations, governing the right of way condemnation by the Client. Upon preparation and mailing of the final offer letter, Pinnacle Group will prepare documentation for the Condemning Attorney for special commissioner hearing purposes. Pinnacle Group, and the Client will determine what services will be needed and make any adjustments to the proposal and contract at this time.

Quality Control: From Pinnacle Group's previous experience, staff has been thoroughly trained in the Quality Assessment/Quality Control (QA/QC) process. This program adds an independent review of all packages prior to submission to the Client. While it is an extra step in the right of way acquisition and condemnation support processes, it allows the Client more efficiency throughout the project as it minimizes the chances for errors. It is also recommended that a onetime sample package for each submission stage of the process, whether it be an offer, condemnation, or payment, be submitted to the Client's office in the early stages of the project to ensure that all client expectations are identified and satisfied. Pinnacle Group has established a formal QA/QC program that achieves the following critical elements:

- Identifies agency's objectives and priorities
- Establishes QA/QC policies and requirements for each respective phase of the project
- Identifies quality control management approach
- Formulates applicable criteria to be used
- Establishes project schedules with milestone dates
- Utilizes google sheets to track project tasks

#### **ADDITIONAL SERVICES NOT INCLUDED IN THE EXISTING SCOPE OF SERVICES**

Additional Services not included in the existing Scope of Services – CLIENT and ENGINEER agree that the following services are beyond the Scope of Services described in the tasks above. However, ENGINEER can provide these services, if needed, upon the CLIENT's written request. Any additional amounts paid to the ENGINEER as a result of any material change to the Scope of the Project shall be agreed upon in writing by both parties before the services are performed. These additional services include the following:

- Signal/Traffic Engineering and Design.
- Schematic design.
- Services required to resolve bid protests or to rebid the projects for any reason.
- Construction management or inspection services.
- Materials testing or specialty testing services.
- Land acquisition or negotiation services.
- Condemnation support services (eminent domain, prepare condemnation package, testify as an expert witness in eminent domain proceedings, complex appraisals, etc.).
- Public involvement or outreach services.
- Landscape architecture or urban design services.
- Grant application or grant administration services.
- GIS mapping services or assistance with these services.
- TDLR/PROWAG plan review or construction inspection.
- LOMR or CLOMR related services.

- Providing value engineering studies or reviews
- Tree survey or mitigation.
- Nationwide permit pre-construction notification (PCN) submittal to the USACE
- Meetings or consultation with the USACE or other resource agencies, except as specifically noted in the scope of services.
- Additional field investigations or analysis required to respond to public or regulatory agency comments.
- NEPA Environmental Assessment (EA) or Environmental Impact Statement (EIS).
- USFWS Section 7 Consultation.
- Presence/Absence Survey for State or Federally Listed Threatened and Endangered Species.
- Biological Assessment for State or Federally Listed Threatened and Endangered Species.
- Permittee responsible mitigation plan for impacts to Waters of the US.
- Phase I/II/III Environmental Site Assessment (ESA).
- Stream and Wetland Condition Assessment.
- Conducting an archeological and/or historic properties survey within the proposed project area of potential effects (APE).
- Preparation of an individual 404 permit application (IP).
- Preparation of a compensatory mitigation plan.
- Presence/absence surveys for federally listed threatened/endangered species.
- Preparation of a biological assessment for conference with USFWS.
- Conducting tree surveys and/or preparation of tree removal or preservation plans.
- Application for Texas Parks & Wildlife Department Sand and Gravel Permit.
- Application for General Land Office Easement.
- Consultation with the U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act.
- Other environmental services not included in the scope of work.
- Site visits and meetings in excess of the number of trips included.
- Providing renderings, models, and mock-ups requested by the CLIENT not already included in the project scope.
- Providing services to investigate existing conditions or facilities, or to make measured drawings thereof, or to verify the accuracy of drawings or other information furnished by CLIENT.

- Services related to development of the CLIENT's project financing and/or budget.
- Assisting CLIENT in claims disputes with CONTRACTOR(s).
- Assisting CLIENT in the defense or prosecution of litigation in connection with or in addition to those services contemplated by this AGREEMENT. Such services, if any, will be furnished by ENGINEER on a fee basis negotiated by the respective parties outside of and in addition to this AGREEMENT.
- Preparing data and reports for assistance to CLIENT in preparation for hearings before regulatory agencies, courts, arbitration panels or any mediator, giving testimony, personally or by deposition, and preparations therefore before any regulatory agency, court, arbitration panel or mediator.
- Performing investigations, studies, and analysis of work proposed by construction CONTRACTOR(s) to correct defective work.
- Design, contract modifications, studies, or analysis required to comply with local, State, Federal or other regulatory agencies that become effective after the date of this agreement.
- Providing services to review or evaluate construction CONTRACTOR(s) claim(s), provided said claims are supported by causes not within the control of ENGINEER.
- Expert representation at legal proceedings or at contested hearings.
- Investigations, analyses, and studies requested by the CONTRACTOR and approved by the CLIENT, for substitutions of equipment and/or materials or deviations from the drawings and specifications.
- Services related to disputes over pre-qualification, bid protests, bid rejection and re-bidding of the contract for construction.
- Services necessary due to the default of the CONTRACTOR.
- Field layouts or the furnishing of construction line and grade surveys (to be provided by the CONTRACTOR).
- Services related to damages caused by fire, flood, earthquake or other acts of God.
- Services related to warranty claims, enforcement and inspection after final completion.
- Services to support, prepare, document, bring, defend, or assist in litigation undertaken or defended by the CLIENT.
- Revising design/documents when such revisions are 1) inconsistent with approvals or instructions previously given by the CLIENT or 2) due to other causes not solely within the control of FNI.
- Providing basic or additional services on an accelerated time schedule.
- Preparing statements for invoicing or other documentation for billing other than for the standard invoice for services attached to this professional services agreement.

## **CLIENT RESPONSIBILITIES**

CLIENT's responsibilities shall include the following:

- A. Designate in writing a person to act as CLIENT's representative with respect to the services to be rendered under this Agreement. Such person shall have contract authority to transmit instructions, receive information, interpret and define the CLIENT's policies and decisions with respect to the ENGINEER's services for the Project.
- B. Provide all criteria and full information as to CLIENT's requirements for the Project, including design objectives and constraints, space, capacity and performance requirements, flexibility and expandability, and any budgetary limitations; and furnish copies of all design and construction standards which CLIENT will require to be included in the plans and specifications.
- C. Assist ENGINEER by placing at ENGINEER's disposal all available information pertinent to the Project including previous reports and any other data relative to the Project.
- D. Provide construction inspection on the Project.
- E. Arrange for access to and make all provisions for Engineer to enter upon public and private property as required for Engineer to perform services under this Agreement.
- F. Examine all studies, reports, sketches, drawings, specifications, proposals and other documents presented by Engineer, obtain advice of an attorney, insurance counselor and other consultants as CLIENT deems appropriate for such examination and render in writing decisions pertaining thereto within a reasonable time so as not to delay the services of Engineer.
- G. Provide such accounting, independent cost estimating, and insurance counseling services as may be required for the Project, such legal services as CLIENT may require or ENGINEER may reasonably request with regard to legal issues pertaining to the Project.

Scope for Engineering Design Related Services for

**3.2 E. Renfro Street (CR 529 to FM 917) Safety Improvements**

The scope set forth herein defines the work to be performed by Freese and Nichols, Inc. (ENGINEER) and Johnson County (CLIENT) in completing the project. Both the CLIENT and ENGINEER have attempted to clearly define the work to be performed and address the needs of the Project.

PROJECT DESCRIPTION AND ASSUMPTIONS

The project scope includes an evaluation of the corridor to enhance safety by adding shoulders at key locations, installing guardrails, and pavement rehabilitation.

Design assumptions:

- Project will be designed according to current Texas Department of Transportation (TxDOT) design guidelines.
- The project will be approximately 3.3 miles long with limits along E. Renfro Street from approximately 200 ft south of CR 529 to FM 917.
- Design speed will be 40 mph.
- The project will be funded using local funding sources.
- ENGINEER will be conducting franchise utility coordination efforts.
- The project will be designed to meet current permitting and design standards based on the date of the signing of this contract.

## WORK TO BE PERFORMED

### **Basic Services**

- Task 1. Design Management
- Task 2. Conceptual Design (30%)
- Task 3. Preliminary Design (60%)
- Task 4. Final Design (90% and 100%)
- Task 5. Bid Phase Services

### **Special Services**

- Task 6. Topographic Survey
- Task 7. Subsurface Utility Engineering (SUE)
- Task 8. Geotechnical Engineering
- Task 9. Franchise Utility Coordination
- Task 10. Traffic Analysis

ENGINEER will render the following professional engineering services in connection with the development of the project:

## **BASIC SERVICES**

### **TASK 1. DESIGN MANAGEMENT**

ENGINEER will manage the work outlined in this scope to ensure efficient and effective use of ENGINEER's and CLIENT's time and resources. ENGINEER will manage change, communicate effectively, coordinate internally and externally as needed, and proactively address issues with the CLIENT's Project Manager and others as necessary to make progress on the work. ENGINEER will:

- A. Complete internal project setup.
- B. Conduct pre-design project kickoff meeting with CLIENT.
- C. Conduct and document up to six (6) project update or review meetings with CLIENT Project Manager (not including post-submittal meetings).
- D. Conduct monthly internal design team coordination meetings.
- E. Prepare and submit monthly invoices with project status reports (up to 12).
- F. Prepare baseline design schedule and schedule updates as needed.
- G. Make up to three (3) site visits to become familiar with site and observe existing conditions.

### **DELIVERABLES**

- i. Meeting summaries with decisions and action items
- ii. Baseline design schedule and necessary updates
- iii. Monthly Invoices and Project Status Reports

## **TASK 2. CONCEPTUAL DESIGN (30%)**

- A. ENGINEER will collect relevant project data (such as contour data, aerial imagery, and record drawings) from CLIENT and other available sources.
- B. In addition to data obtained from the CLIENT, ENGINEER will research and make efforts to obtain pertinent information to aid in coordination of the proposed improvements with any planned future improvements that may influence the project. ENGINEER will also identify and seek to obtain data for existing conditions that may impact the project.
- C. ENGINEER will develop up to one (1) plan set to include:

### GENERAL

- o COVER SHEET (1)
- o INDEX OF SHEETS (1)
- o GENERAL NOTES (13)
- o QUANTITY SHEETS (1)
- o PROJECT LAYOUT AND SURVEY CONTROL (4)
- o HORIZONTAL ALIGNMENT DATA (1)
- o TYPICAL SECTIONS (4)

### ROADWAY

- o REMOVAL PLAN (18)
- o PAVING PLAN AND PROFILE (35)

### TRAFFIC

- o PAVEMENT MARKING AND SIGNAGE PLAN (18)

- D. ENGINEER will determine the right-of-way and easement needs necessary for the construction of the project and furnish information to the CLIENT.
- E. ENGINEER will detail the necessary land survey, Deed and Abstract Records search, right-of-way maps, and descriptions of properties to be acquired.
- F. ENGINEER will develop an opinion of probable construction cost (OPCC). Sources of data used in the preparation of the OPCC include construction data aggregation services, similar past project performed by ENGINEER, bid results from previous CLIENT projects of similar type, and ENGINEER experience and engineering judgement.
- G. ENGINEER will conduct QA/QC of the design deliverables.
- H. Deliverables will be delivered to CLIENT in PDF format.

## **DELIVERABLES**

- i. One (1) 30% submittal plan set (PDF)

- ii. 30% Opinion of Probable Costs (OPCC)

### **TASK 3. PRELIMINARY DESIGN (60%)**

- A. After review and approval of the 30% Design by the CLIENT, ENGINEER will provide 60% Design services.
- B. ENGINEER will provide 60% Design services to the CLIENT with the following design plans. All information listed will be provided on the design plans:

#### GENERAL

- COVER SHEET (1)
- INDEX OF SHEETS (1)
- GENERAL NOTES (13)
- QUANTITY SHEETS (1)
- PROJECT LAYOUT AND SURVEY CONTROL (4)
- HORIZONTAL ALIGNMENT DATA (1)
- TYPICAL SECTIONS (4)

#### TRAFFIC CONTROL

- TRAFFIC CONTROL PLAN SHEETS (18)

#### ROADWAY

- REMOVAL PLAN (18)
- ROADWAY PLAN AND PROFILE (35)
- INTERSECTION GRADING PLAN (if needed) (24)

#### TRAFFIC

- PAVEMENT MARKING AND SIGNAGE PLAN (18)

#### CROSS SECTIONS

- CROSS SECTIONS (58)

#### STANDARD DETAILS

- ROADWAY STANDARD DETAILS (9)
- TRAFFIC SIGNAL STANDARD DETAILS (9)
- TRAFFIC CONTROL STANDARD DETAILS (4)
- EROSION CONTROL STANDARD DETAILS (5)
- WASTEWATER STANDARD DETAILS (4)
- PAVEMENT MARKING AND SIGNAGE STANDARD DETAILS (2)

- C. ENGINEER will develop an opinion of probable construction cost (OPCC) based on each design submittal. Sources of data used in the preparation of the OPCC include construction data aggregation services, similar past project performed by ENGINEER, bid results from previous CLIENT projects of similar type, and ENGINEER experience and engineering judgement.
- D. ENGINEER will prepare construction specification documents utilizing CLIENT or ENGINEER standard documents.
- E. ENGINEER will conduct QA/QC and constructability review of the design deliverables.
- F. ENGINEER will attend one (1) post-submittal meeting with CLIENT.
- G. Design Plans, Specifications, and OPCC deliverables will be delivered to CLIENT in PDF format.

## **DELIVERABLES**

- i. 60% Design Plans
- ii. 60% Specifications
- iii. 60% Opinion of Probable Costs (OPCC)

## **TASK 4. FINAL DESIGN (90% AND 100%)**

- A. After review and approval of the 60% Design by the CLIENT, ENGINEER will provide 90% Design services.
- B. ENGINEER will provide 90% Design services to the CLIENT with the following design plans. All information listed will be provided on the design plans:

### GENERAL

- COVER SHEET (1)
- INDEX OF SHEETS (1)
- GENERAL NOTES (13)
- QUANTITY SHEETS (1)
- PROJECT LAYOUT AND SURVEY CONTROL (4)
- HORIZONTAL ALIGNMENT DATA (1)
- TYPICAL SECTIONS (4)

### TRAFFIC CONTROL

- TRAFFIC CONTROL PLAN SHEETS (18)

### ROADWAY

- REMOVAL PLAN (18)
- ROADWAY PLAN AND PROFILE (35)
- INTERSECTION GRADING PLAN (if needed) (24)

### TRAFFIC

- PAVEMENT MARKING AND SIGNAGE PLAN (18)

### CROSS SECTIONS

- CROSS SECTIONS (58)

### STANDARD DETAILS

- ROADWAY STANDARD DETAILS (9)
  - TRAFFIC SIGNAL STANDARD DETAILS (9)
  - TRAFFIC CONTROL STANDARD DETAILS (4)
  - EROSION CONTROL STANDARD DETAILS (5)
  - WASTEWATER STANDARD DETAILS (4)
  - PAVEMENT MARKING AND SIGNAGE STANDARD DETAILS (2)
- C. After review and approval of the 90% Design by the CLIENT, ENGINEER will provide 100% Design services.
- D. ENGINEER will provide 100% design services by progressing, updating, or revising the plans listed in the 60% and 90% design submittals.
- E. ENGINEER will develop an opinion of probable construction cost (OPCC) based on each design submittal. Sources of data used in the preparation of the OPCC include construction data aggregation services, similar past project performed by ENGINEER, bid results from previous CLIENT projects of similar type, and ENGINEER experience and engineering judgement.
- F. ENGINEER will prepare construction specification documents utilizing ENGINEER standard documents for the 90% and 100% Design.
- G. ENGINEER will conduct QA/QC and constructability review of the design deliverables for each submittal.
- H. ENGINEER will attend one (1) post-submittal meeting (virtual) with CLIENT after each submittal.
- I. Design Plans, OPCC, and specifications deliverables will be delivered to CLIENT in pdf format.

### **DELIVERABLES**

- i. 90% and 100% Design Plans
- ii. 90% and 100% Specifications
- iii. 90% and 100% Opinion of Probable Costs (OPCC)
- iv. QA/QC Documentation

### **TASK 5. BID PHASE SERVICES**

- A. CLIENT will host and upload, or post, all bid documents to online bidding site.
- B. ENGINEER will provide a copy of the Notice to Bidders for CLIENT to use in notifying construction news publications and publishing appropriate legal notice. The cost for publications will be paid by CLIENT.
- C. ENGINEER will attend one (1) in person or virtual pre-bid meeting and assist to create a pre-bid meeting agenda.
- D. ENGINEER will assist CLIENT by responding to questions and interpreting bid documents. ENGINEER will prepare and issue up to two (2) addenda to the bid documents to CLIENT, if necessary. CLIENT will upload addenda to online bidding site.

- E. ENGINEER will assist in the tabulation and review of all bids received for the construction of the improvements and shall make recommendations for award to the CLIENT.
- F. ENGINEER will furnish CLIENT with issued for construction sets including four (4) copies of half size (11"x17") drawings, four (4) copies of the project specifications, and PDF copy of the above items.
- G. The project will only be bid once. Any additional bidding efforts would be considered Additional Services.

## **DELIVERABLES**

- i. Recommendation of Award
- ii. Issued for construction plan set

## **SPECIAL SERVICES**

### **TASK 6. TOPOGRAPHIC SURVEY**

ENGINEER will perform an on-the-ground survey under the direct supervision of a Registered Professional Land Surveyor. The limits of the survey shall be from 25-feet beyond each right-of-way.

Included in this item:

- Location of permanent improvements on and immediately adjacent to, the above defined limits (structures and improvements extending past the stated limits will be surveyed only to the extents of said limits and not in their entirety).
- Spot elevations on 50-foot intervals.
- Contours on one foot intervals.
- Top of curb and gutter elevations for paving on, and adjacent to, the site.
- Location of visible utilities and appurtenances.
- Plot easements or setbacks of which the surveyor has knowledge or has been made aware. This item does not include an abstract of title.
- Retrieve subdivision plats, maps and/or deeds delineating the ownership for the project.
- Limited field measurements to only those existing boundary monuments, deemed necessary by the surveyor, to approximate the location of the rights-of-way.
- Indicate scale, orientation, and date of the survey.
- Include legend of symbols and abbreviations used on the survey.

Not included in this item:

- Right-of-Entry efforts for private property.
- Monumentation.
- Sealed or certified drawings.
- Boundary reconciliation.
- Metes & bounds property descriptions.

- Location of irrigation control valves.

ENGINEER will set semi-permanent control along the alignment at 1500-foot intervals under the direct supervision of a Registered Professional Land Surveyor. Horizontal and Vertical control will be established utilizing global positioning system (GPS) observations. The horizontal datum will be Texas State Plane Coordinate System – NAD 83, North Central Zone 4202. The vertical datum will be North American Vertical Datum 1988 – NAVD88 with orthometric heights determined by GEOID18. A list of all control points shall be included with the survey deliverables.

## **TASK 7. SUBSURFACE UTILITY ENGINEERING (SUE)**

### Quality Level “B” SUE

Perform Subsurface Utility Engineering (SUE) Quality Level B in general accordance with the recommended practices and procedures described in American Society of Civil Engineers (ASCE) Publication CI/ASCE 38-22 (Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data). Utilize geophysical prospecting equipment to designate the horizontal position of existing underground utilities that are within the existing corridor. This level of work includes acquiring as-built documentation from utility companies and making contact with their representatives. The QL “B” SUE field findings will be surveyed and delivered in the form of a .dwg CAD base file.

### Quality Level “A” SUE

Perform up to five (5) Subsurface Utility Engineering (SUE) Quality Level A test holes, in areas to be identified, in general accordance with the recommended practices and procedures described in American Society of Civil Engineers (ASCE) Publication CI/ASCE 38-02 (Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data). The scope of work involves QL “B” designating of the utilities to layout the test holes as initiated by ENGINEER. The QL “A” field findings will be surveyed and delivered in the form of a .dwg CAD base file.

## **TASK 8. GEOTECHNICAL ENGINEERING**

USGS indicates the project lies within the Woodbine geologic formation.

The proposed geotechnical scope of work for the project will consist of field exploration, laboratory testing, engineering analysis, and reporting, as presented below.

### **Task 1 – Field Exploration**

1. Select and mark 10 boring locations and contact Texas811, the County, TxDOT and other agencies to request location and marking of existing underground utilities prior to the field exploration.
2. Subcontract with a geotechnical drilling contractor to drill a total of ten borings: 4 at fifteen-foot deep; 4 at twenty-five-foot deep at culverts and two at fifty-foot deep at the bridge. Samples will be collected intermittently using hollow stem or solid stem augers and either split-spoon or tube samplers. Rock and rock-like materials will be tested insitu using a Standard Penetration Test or Texas Cone Penetrometer, as appropriate for the material. At completion, the boreholes will be backfilled with auger cuttings and pavement will be patched.
3. Traffic Control will be provided for the borings located within the existing roadways or existing rights-of-way and relevant ROW permits will be obtained.
4. Provide an Engineer or Geologist experienced in logging borings to direct the drilling, log the borings, and handle and transport the samples. Visual classification of the subsurface stratigraphy shall be provided per the Unified Soil Classification System (USCS).

### **Task 2 – Laboratory Testing**

1. Testing shall be performed on samples obtained from the borings to determine soil classification and pertinent engineering properties of the subsurface materials. FNI will select samples for laboratory testing, assign tests, and review the test results. Testing will be performed by a geotechnical testing subcontractor.
2. Laboratory tests will be assigned based on the specific subsurface materials encountered during exploration. Test type and quantity may vary, but are expected to include:
  - a. Classification tests (liquid and plastic limits and percent passing the no. 200 sieve or gradation)
  - b. Moisture content
  - c. Dry unit weight
  - d. Unconfined Compression tests
  - e. Soluble Sulfate tests
  - f. Lime Series

### Task 3 – Engineering Analysis

1. Prepare a technical memorandum of the geotechnical investigation to include:
  - a. Appendix with the boring locations, boring logs, laboratory test results, and a key to the symbols used.
  - b. Discussion of subsurface conditions and soil properties indicated by the field and laboratory work, and the implications for design. Recommendations for subgrade treatment and preparation and bridge and culvert foundations.
  - c. General discussion of expected construction related issues.
  - d. Earthwork related recommendations for use during development of the plans and specifications.

### Assumptions

1. Borings will be accessible with a truck mounted drilling rig.
2. Mowing, brush clearing, or dirt work will not be required for access.

### **TASK 9. FRANCHISE UTILITY COORDINATION**

- A. Utility adjustment coordination includes utility coordination meetings with individual utility companies, communication and coordination with utilities, and conflict assessment and analysis. Utility coordination activities will be in accordance with the Texas Administrative Code (TAC) standards.
- B. Utility coordination during design phase will include the following tasks:
  - a. Develop Utility Contact List: ENGINEER will establish contact with existing utility companies within and adjacent to the project area and create a utility contact list. This list will be maintained throughout the project.
  - b. Initial Project Notification Contact: ENGINEER will notify all known utility owners within and adjacent to the project site.
  - c. Utility Layouts: ENGINEER will maintain a rough layout of proposed utility locations to better communicate with utility owners
  - d. Conflict Assessment: ENGINEER will utilize the existing utility layout provided by SUE to perform a conflict assessment to determine utility conflicts within the proposed roadway alignment. This assessment will be provided at 60%, 90%, and 100% submittals.
  - e. Individual Utility Meetings: ENGINEER will hold one (1) individual meeting with each utility prior to the 90% and 100% submittals to discuss the updated project alignment and any correlating new and/or removed conflicts.
  - f. Utility Schedule and Sequencing: ENGINEER will review the utility adjustment schedule in relation to construction sequencing and schedule for timely relocation of the utility.



- Environmental analysis services.
- Public involvement or outreach services.
- Landscape architecture or urban design services.
- Grant application or grant administration services.
- GIS mapping services or assistance with these services.
- TDLR/PROWAG plan review or construction inspection.
- LOMR or CLOMR related services.
- Providing value engineering studies or reviews
- Tree survey or mitigation.
- Nationwide permit pre-construction notification (PCN) submittal to the USACE
- Meetings or consultation with the USACE or other resource agencies, except as specifically noted in the scope of services.
- Additional field investigations or analysis required to respond to public or regulatory agency comments.
- NEPA Environmental Assessment (EA) or Environmental Impact Statement (EIS).
- USFWS Section 7 Consultation.
- Presence/Absence Survey for State or Federally Listed Threatened and Endangered Species.
- Biological Assessment for State or Federally Listed Threatened and Endangered Species.
- Permittee responsible mitigation plan for impacts to Waters of the US.
- Phase I/II/III Environmental Site Assessment (ESA).
- Stream and Wetland Condition Assessment.
- Other environmental services not included in the scope of work.
- Site visits and meetings in excess of the number of trips included.
- Providing renderings, models, and mock-ups requested by the CLIENT not already included in the project scope.
- Providing services to investigate existing conditions or facilities, or to make measured drawings thereof, or to verify the accuracy of drawings or other information furnished by CLIENT.
- Services related to development of the CLIENT's project financing and/or budget.
- Assisting CLIENT in claims disputes with CONTRACTOR(s).

- Assisting CLIENT in the defense or prosecution of litigation in connection with or in addition to those services contemplated by this AGREEMENT. Such services, if any, will be furnished by ENGINEER on a fee basis negotiated by the respective parties outside of and in addition to this AGREEMENT.
- Preparing data and reports for assistance to CLIENT in preparation for hearings before regulatory agencies, courts, arbitration panels or any mediator, giving testimony, personally or by deposition, and preparations therefore before any regulatory agency, court, arbitration panel or mediator.
- Performing investigations, studies, and analysis of work proposed by construction CONTRACTOR(s) to correct defective work.
- Design, contract modifications, studies, or analysis required to comply with local, State, Federal or other regulatory agencies that become effective after the date of this agreement.
- Providing services to review or evaluate construction CONTRACTOR(s) claim(s), provided said claims are supported by causes not within the control of ENGINEER.
- Expert representation at legal proceedings or at contested hearings.
- Investigations, analyses, and studies requested by the CONTRACTOR and approved by the CLIENT, for substitutions of equipment and/or materials or deviations from the drawings and specifications.
- Services related to disputes over pre-qualification, bid protests, bid rejection and re-bidding of the contract for construction.
- Services necessary due to the default of the CONTRACTOR.
- Field layouts or the furnishing of construction line and grade surveys (to be provided by the CONTRACTOR).
- Services related to damages caused by fire, flood, earthquake or other acts of God.
- Services related to warranty claims, enforcement and inspection after final completion.
- Services to support, prepare, document, bring, defend, or assist in litigation undertaken or defended by the CLIENT.
- Revising design/documents when such revisions are 1) inconsistent with approvals or instructions previously given by the CLIENT or 2) due to other causes not solely within the control of ENGINEER.
- Providing basic or additional services on an accelerated time schedule.
- Preparing statements for invoicing or other documentation for billing other than for the standard invoice for services attached to this professional services agreement.

## **VALUE ENGINEERING**

ENGINEER shall not be responsible for CLIENT's directive or substitution, or for CLIENT's acceptance of non-conforming Work, made or given without ENGINEER's written approval. In the event ENGINEER is asked to participate in any "value engineering" process, including but not limited to, utilizing substitution requests made by CLIENT, CONTRACTOR, CLIENT's

Consultants, Subcontractors or others, CLIENT acknowledges that this entails certain inherent risks. These include, but are not limited to, reduced performance, increased life cycle costs, coordination impacts pertaining to other elements of the project, unforeseen code implications, unanticipated schedule implications, and diminished overall value as a result of the proposing parties having a vested interest in such recommendations. If ENGINEER has recommended to CLIENT in writing that CLIENT should not accept a value engineering proposal and if CLIENT chooses to accept and/or directs CLIENT to make revisions to the Construction Documents to include the objected to value engineering proposal and/or materials substitution proposals made by others, CLIENT agrees to accept these risks and the costs and consequences associated with them in order to achieve the perceived benefits of reduced construction costs and/or schedule acceleration, and CLIENT covenants not to sue and/or fully waives any claim against ENGINEER for the aforementioned value engineering.

### **CLIENT STAFF RESPONSIBILITIES**

CLIENT's responsibilities shall include the following:

- A. Designate in writing a person to act as CLIENT's representative with respect to the services to be rendered under this Agreement. Such person shall have contract authority to transmit instructions, receive information, interpret and define the CLIENT's policies and decisions with respect to the ENGINEER's services for the Project.
- B. Provide all criteria and full information as to CLIENT's requirements for the Project, including design objectives and constraints, space, capacity and performance requirements, flexibility and expandability, and any budgetary limitations; and furnish copies of all design and construction standards which CLIENT will require to be included in the plans and specifications.
- C. Assist ENGINEER by placing at ENGINEER's disposal all available information pertinent to the Project including previous reports and any other data relative to the Project.
- D. Provide construction inspection on the Project.
- E. Arrange for access to and make all provisions for Engineer to enter upon public and private property as required for Engineer to perform services under this Agreement.
- F. Examine all studies, reports, sketches, drawings, specifications, proposals and other documents presented by Engineer, obtain advice of an attorney, insurance counselor and other consultants as CLIENT deems appropriate for such examination and render in writing decisions pertaining thereto within a reasonable time so as not to delay the services of Engineer.
- G. Provide such accounting, independent cost estimating, and insurance counseling services as may be required for the Project, such legal services as CLIENT may require or ENGINEER may reasonably request with regard to legal issues pertaining to the Project.

Scope of Services for

**4.4A - US 67 and IH-35W Feasibility Study**

The scope set forth herein defines the work to be performed by Freese and Nichols, Inc. (ENGINEER) and Johnson County (CLIENT) in completing the Project. Both the CLIENT and ENGINEER have attempted to clearly define the work to be performed and address the needs of the Project.

Study Area:

The study area will include the segment of US 67 between Percifield Trail S and Business I-35V, and IH-35W Frontage Roads between US 67 and W Cotter Street as shown in Figure 1.

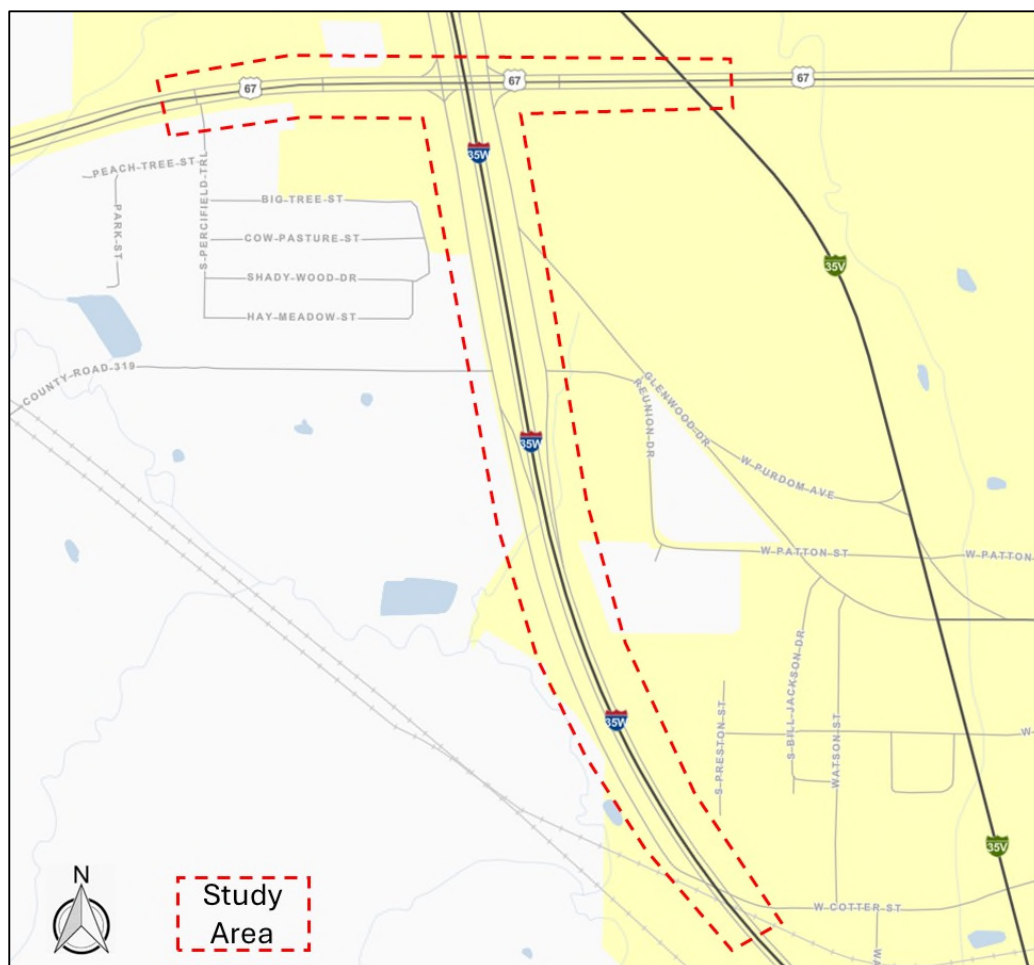


Figure 1. Study Area for US 67 and IH-35W Feasibility Study

## PROJECT DESCRIPTION AND ASSUMPTIONS

The project objective is to conduct a feasibility study for the interchange of US 67 with IH-35W in Johnson County within the identified study area to evaluate specific operational and safety issues including traffic congestion, safety, and access coordination. The study will identify and recommend potential near-term improvements to alleviate these issues in advance of the planned long-term improvements being developed by TxDOT as part of the I-35W Segment 2 project.

### Study Assumptions:

- All project coordination and review meetings will be conducted virtually. The proposed fee includes one (1) in-person final presentation to the CLIENT
- All deliverables will be provided in an electronic format via email.

### **Basic Services**

- Task 1. Project Management and Meetings**
- Task 2. Data Collection and Review**
- Task 3. Perform Feasibility Study**
- Task 4. Prepare Technical Report**

ENGINEER will render the following professional engineering services in connection with the development of the project:

### **BASIC SERVICES**

#### **TASK 1. PROJECT MANAGEMENT AND MEETINGS**

ENGINEER will manage the work outlined in this scope to make efficient and effective use of ENGINEER's and CLIENT's time and resources. ENGINEER will manage change, communicate effectively, coordinate internally and externally as needed, and proactively address issues with the CLIENT's Project Manager and others as necessary to make progress on the work. ENGINEER will:

- A. Provide Project Management services including project coordination and communications with the CLIENT and monthly status updates.
- B. Conduct a kick-off meeting (virtual) with the CLIENT staff to discuss the study approach methodology, data collection, deliverables, and schedule for completion.
- C. Conduct up to five (5) review/coordination meetings (virtual) with the CLIENT staff to review results of the analyses, study recommendations, and project coordination, as needed.
- D. Make one (1) final presentation to the county staff and prepare presentation slides.

#### **DELIVERABLES**

- i. Meeting summaries with decisions and action items
- ii. Baseline study schedule and necessary updates

- iii. Monthly Invoices and Project Status Reports

**TASK 2. DATA COLLECTION AND REVIEW**

- A. **Gather and Review Existing Data:** Perform desktop review of the study area and assemble data necessary for subsequent traffic and safety analyses to include:
  - a. Existing roadway network, adjacent land use, traffic access, and circulation.
  - b. Existing roadway and intersection geometry and type of existing intersection traffic control within the study area.
  - c. Review of the TxDOT conceptual schematics dated November 2022 developed as part of the I-35W Segment 2 project.
  - d. County Master Throughfare Plan and Future Land Use to gather information on planned thoroughfares in the study area and potential future development.
  - e. Any site plans, development programs, and land use densities for all uses planned within the study area. The CLIENT will help identify and define level and intensity of any proposed development, and planned roadway improvements including implementation timeline.
  - f. Crash records will be gathered from TxDOT’s Crash Records Information System (CRIS) query tool.
  - g. Existing traffic signal timing and phasing plans to be provided by the CLIENT.

- B. **Collect Traffic Counts:** Collect current traffic count data necessary for traffic analyses to include:
  - a. 24-hr Peak period intersection turning movement counts (TMC) at nine (9) locations and 24-hr bi-directional roadway counts at three (3) locations within the study area as identified below. FNI will engage GRAM Traffic, NTX to collect necessary traffic data within the study area. Traffic counts will be collected on a Tuesday, Wednesday, or Thursday while schools are in session.

<b>24-hr Intersection Counts</b>	<b>24-hr Bi-directional Roadway Counts</b>
<ul style="list-style-type: none"> <li>• US 67 @ Deerfield Trail S</li> <li>• US 67 @ QT North Driveway</li> <li>• US 67 @ I-35 SBFR</li> <li>• US 67 @ I-35 NBFR</li> <li>• US 67 @ Taco Bell Driveway</li> <li>• US 67 @ I-35V Business</li> <li>• I-35W SBFR @ CVS Driveway</li> <li>• I-35W SBFR @ FM-319</li> <li>• I-35 NBFR @ Glenwood Dr</li> </ul>	<ul style="list-style-type: none"> <li>• I-35W SB On-ramp from US 67</li> <li>• I-35W NB Off-ramp to US 67</li> <li>• W Cotter St under I-35W</li> </ul>

- b. Historic traffic volume count information as available from the CLIENT, NCTCOG and TXDOT to supplement newly collected data.
- c. Review and summarize the traffic count data for input into the Traffic Engineering Study.

- C. **Conduct Field Visit:** Conduct a field visit to make observations and gather data such as roadway and intersection geometry, signal operations, traffic patterns, congestion, and queuing.

### **TASK 3. PERFORM FEASIBILITY STUDY**

- A. **Existing Conditions Assessment:** Perform existing conditions traffic operations analysis for AM and PM peak hours at key intersections utilizing the traffic count data collected for the study. The intersection operations analysis will use vehicular delay and Level of Services (LOS) as measures of effectiveness. The analysis will be performed using the SYNCHRO traffic analysis software.
- B. **Evaluate Crash Data:** The Engineer shall review and analyze historical crash data obtained from TxDOT's Crash Records Information System (CRIS) for latest 3 full calendar years (January 1st to December 31st) with respect to crash characteristics such as severity, crash types, frequency, rates, patterns, clusters, and their relationship to crash contributing factors. The purpose of the historical crash analyses is to determine safety performance of the existing conditions to understand any safety issues within the study area and inform near-term safety improvement strategies.
- C. **Develop Traffic Volumes for Analysis:** Estimates of future traffic volumes will be developed for one future analysis year (10-year horizon) for the No-build and Build conditions as described below. Traffic projections will be developed for the daily, AM, and PM peak hours. The traffic projections will be developed in consultation with CLIENT staff and will utilize a growth rate developed based on the analysis of historical traffic growth trends in the study area and review of the regional travel demand model forecasts developed by the North Central Texas Council of Governments (NCTCOG).
  - a. 2036 No-build Condition: An estimate of the traffic volumes on the study area roadway network in 2036 under existing roadway and intersection configurations. This scenario will create the baseline to compare to the Build Condition improvements.
  - b. 2036 Build Condition: An estimate of the traffic volumes on the study area roadway network in 2036 under the proposed improvements to the roadway and intersection configurations. The build condition volumes will be developed by reallocating the no-build condition volumes onto the build condition network based on the revised traffic patterns. The build conditions will include:
    - i. Addition of the missing northbound frontage road between W. Cotter St. and Reunion Dr.
    - ii. Conversion of frontage roads to one-way between US 67 and W. Cotter St.
    - iii. Access modifications and added capacity at/near the intersections of US 67 at IH-35W frontage roads.
  - c. Straight Line Diagram Graphics: The projections will include graphic representations of the anticipated daily and peak hour movements along the corridors in the study area.

- D. **Traffic operations Analysis of Future Conditions:** Develop a traffic operational analysis model using Synchro software to evaluate delay and the Level of Service (LOS) for key study intersections, using the methods Highway Capacity Manual (latest edition). Additional evaluation parameters such as queue lengths will be used as applicable. The LOS results will be compiled into a tabular format and reviewed with CLIENT staff. The traffic operations analysis will be conducted for the AM and PM peak hours for the following scenarios as described in the previous section.
  - a. 2036 No-build Condition (AM and PM peak hours)
  - b. 2036 Build Condition (AM and PM peak hours)
  
- E. **Identify and Recommend Potential Mitigation Measures:** Based on the findings of the operational and safety evaluation, identified impacts, and input from the CLIENT and project stakeholders, measures to mitigate current and anticipated operational and safety issues will be identified and evaluated in combination with the proposed build condition improvements. These measures could include ways to reduce delays and risk of accidents, need for added turn lanes, extended turn lanes, signal timing and phasing optimization, and changes to signage and striping. Based on the analysis, develop a set of near-term recommendations.
  
- F. **Develop Cost Estimates:** Planning level cost estimates for the recommended improvements will be developed for the study area.
  
- G. **Develop Implementation plan:** Develop a phased implementation plan to construct the recommended improvements as an interim measure before the planned long-term improvements to the IH-35W Corridor are implemented by TxDOT. An implementation table will be developed identifying the type and description of improvements, implementation timeline, planning level costs, potential funding sources, and responsible agency.

#### **TASK 4. PREPARE TECHNICAL REPORT**

- A. **Draft Technical Report:** Prepare a draft technical memorandum documenting the data, analysis, findings, and recommendations of the study and submit to the CLIENT for review and comment. The CLIENT will provide one consolidated set of CLIENT Staff review comments. The draft report will be submitted in electronic PDF format.
  
- B. **Final Technical Memorandum:** Prepare a final technical report (PDF format) addressing the draft review comments and submit to the CLIENT.

#### **CLIENT FURNISHED INFORMATION AND RESPONSIBILITIES**

As the CLIENT will serve as a conduit for information, the CLIENT shall provide information pertaining to applicable ordinances, studies, and available data. If data is required from other

public agencies or applicants for development, the CLIENT will assist in making requests for such data. The CLIENT shall perform the following tasks:

- A. Designate in writing a person to act as CLIENT's representative with respect to the services to be rendered under this Agreement. Such person shall have contract authority to transmit instructions, receive information, interpret and define the CLIENT's policies and decisions with respect to the ENGINEER's services for the Project.
- B. Assist ENGINEER by placing at ENGINEER's disposal all available information pertinent to the Project including previous reports and any other data relative to the Project.
- C. Provide electronic base mapping of corridor areas (CAD GIS format), as needed.
- D. Provide any available long-range travel forecasts (NCTCOG) to assist in the preparation of studies.
- E. Provide existing conditions data and information for the study corridors including observed or reported existing operational and safety issues, and existing traffic signal and timing plans.
- F. Provide data related to approved or planned future development and approved or planned future roadway or intersection improvements within corridor study area.
- G. Examine all studies, reports, sketches, drawings, specifications, proposals and other documents presented by Engineer, obtain advice of an attorney, insurance counselor and other consultants as CLIENT deems appropriate for such examination and render in writing decisions pertaining thereto within a reasonable time so as not to delay the services of Engineer.
- H. Provide such accounting, independent cost estimating, and insurance counseling services as may be required for the Project, such legal services as CLIENT may require or ENGINEER may reasonably request with regard to legal issues pertaining to the Project.