

# EXHIBIT “A”

## PROFESSIONAL ENGINEERING SERVICES

**PROJECT DESCRIPTION:** The project will consist of approximately 3,500 linear feet of roadway design, pedestrian and street light improvements at the intersection of Heritage Parkway and Commerce Drive, a left turn lane on westbound Heritage Parkway at Commerce Drive, and a new roadway connection to the southbound US 287 service road south of Heritage Parkway. The approximate alignment of the proposed roadways are shown on the attached Exhibit B. The Professional’s scope of services is described below.

**SCOPE OF SERVICES:** Services to be performed by Professional are described below. Headings for tasks and services are for convenience only and not intended to indicate that tasks or services listed in this proposal are separable, or that they will be performed in a particular order. Except where specifically noted otherwise in the Agreement, all services to be provided by Professional are for on-site conditions only (within the limits of the subject property). Professional is not responsible for any items not specifically described in Professional’s scope of services.

**Task 1                      Topographic Survey Showing Site Boundary                      \$22,500 Not to Exceed**

Professional will provide a topographic survey of the Project Area as shown on the attached Exhibit B. The topographic survey will indicate the site boundary as well as easements which are shown on the most recent recorded plat (if any). The topographic survey will be in the form of a CAD file which will be used as a basis for Professional’s engineering design and will include the following:

- Provide one-foot elevation contours indicating the existing topography of the survey area.
- Locate vertically and horizontally the existing visible features contained within the survey area.
- Determine elevations of accessible subsurface utilities (i.e. manholes, inlets, etc.) within the survey area.

Note: This task does not include any other services other than performance of a topographic survey of the Project Area.

**Task 2                      Roadway Design                      \$250,000 Not to Exceed**

The Professional will prepare construction plans for paving, drainage, water, sanitary sewer, and street lighting improvements where applicable along the approximately 3,500 linear feet of roadway as depicted in Exhibit B. The design will include approximately 650 linear feet of 4 lane divided roadway, 2,850 linear feet of 2 lane roadway, and one roundabout. Design of franchise utilities is not included in the Professional’s scope of services.

The Professional will perform the following services for the tasks described above:

- Prepare alignment study and map for the proposed road(s).
- Prepare construction plans for the improvements specified above.
- Provide interim review sets to the City at 30%, 60%, 90%, and 100% complete.
- Prepare technical specifications for the Professional’s design.
- Provide applicable TxDOT standard traffic control details and worksheets.

**Task 3                      Limited Geotechnical Services                      \$12,500 Not to Exceed**

The Professional will engage a geotechnical engineer to prepare an engineering report to present the results of field and laboratory data together with an analysis of the results and recommendations. The report will address the following:

- General soil and water conditions.
- Provide recommendations for pavement subgrade stabilization.
- Provide guidelines for concrete pavement design in accordance with City of Mansfield Standards.
- Provide Culvert foundation recommendations
- Provide earthwork recommendations.

**Task 4                      Design Plans for Traffic Signal Modification                      \$35,000 Not to Exceed**

Professional will prepare design plans, specifications, and cost estimate for traffic signal modifications at the intersection of Heritage Parkway and Commerce Drive.

The Professional will perform the following services for the tasks described above:

- Preparation of traffic signal base map for the intersection specified.
- Prepare construction plans for the improvements specified above.
- Prepare technical specifications for the Professional's design.
- Professional will review the intersection geometrics and identify features that may impact the signal modification.
- Professional will visit the project intersection to photograph key intersection features and confirm the dimensions of the signal base map and identify the existing equipment to remain in place, potential pole foundation locations, electrical service location, and controller cabinet location, as needed.
- Provide interim review sets to the City at 60%, 90%, and 100% complete.

**Task 5                      USACE 404 Jurisdictional Waters Related Services                      \$18,000 Not to Exceed**

- **Jurisdictional Waters Determination**
- **Jurisdictional Waters Delineation**
- **USACE 404 Permit Application (Nationwide Permit)**

For projects requiring development in close proximity to an existing creek, pond, waterway or "wetland" area, an application may be required with the U.S. Army Corps of Engineers ("USACE") for a 404 Jurisdictional Waters permit. The initial step in the process is to perform a Jurisdictional Waters Determination to verify if the potential creek, pond, waterway or other "wetland" area is indeed a jurisdictional waters of the U.S. If it is determined that jurisdictional waters exist on the site, then the next step is to perform a Jurisdictional Waters Delineation to delineate the limits of the jurisdictional waters and determine if potential conflicts with the project exist which would require permitting through the USACE. This task includes preparation of a Nationwide Permit. Other permitting or site specific 404 permits are not included in the scope of services.

**Task 6                      SWPPP Preparation                      \$1,300 Not to Exceed**

Professional will provide a Storm Water Pollution Prevention Plan (SWPPP) for the construction of the on-site improvements to serve the project. The project's erosion control plan will be integrated into the SWPPP. Professional will not be responsible for making any submittals for the SWPPP, including NOI's and NOT's. Professional will not be responsible for any installation, inspections, or other implementation activities associates with the SWPPP. This task includes the printing cost for up to three copies of the SWPPP booklet.

**Task 7                    TxDOT Driveway/Roadway Application Assistance                    \$11,000 Not to Exceed**

Obtaining a Texas Department of Transportation (TxDOT) driveway/roadway permit is generally a two-step process. Step one involves obtaining approval of the driveway location by providing TxDOT with an exhibit of the driveway/roadway location including distances to other driveways or roadways. Step two involves submitting construction plans for the driveway/roadway approach designed to TxDOT specifications. Professional will prepare the roadway location exhibit and the construction drawings for the roadway connection onto the TxDOT road. The construction plans will be for the driveway/roadway approach between the existing TxDOT roadway pavement and the right-of-way line next to the property. Professional's time, including travel, for TxDOT related submittals, meetings, and site visits will be billed on a Per Each Per Person basis under Task 10 of this agreement. The fee indicated for this task does not include preparation of traffic control plans, traffic studies, traffic impact analysis, or the design of TxDOT roadway improvements, turn lanes, deceleration lanes, or traffic signals. Those items will be Additional Services if needed. Note: Professional cannot and does not guarantee TxDOT approval.

**Task 8                    Basic Floodplain Study                    \$59,000 Not to Exceed**

Professional will perform the following services to assist City in determining the feasibility of placing fill in the floodplain along the proposed roadway alignment. Professional will prepare a hydrologic study to determine the watershed contributing to the applicable floodplain area. Professional will prepare a hydraulic model of the applicable portion of the floodplain (pre-fill). Professional will prepare a hydraulic model of the applicable portion of the floodplain (post-fill). Professional will coordinate with the City (or County if applicable) regarding Professional's study.

**Task 9                    Floodplain Related Services \*(CLOMR/LOMR)                    \$41,000 Not to Exceed**

A Letter of Map Revision (LOMR) will be prepared and submitted once the final grading is completed in accordance with the approved construction plans. Professional cannot and does not guarantee FEMA approval. If necessary, a Conditional Letter of Map Revision (CLOMR) will be prepared and submitted once the flood study is complete and a grading design is established.

**Task 10                    Flood Study Grading Verification Survey                    \$6,000 Not to Exceed**

Professional will perform a flood study grading verification survey once grading work on site is substantially complete. The purpose of the survey is to confirm to the satisfaction of Professional that grading work on site has been performed in substantial conformance to Professional's design as it relates to the flood study. The level of detail to be performed for the survey is intended for flood study verification purposes only and the survey is not intended for any other use.

**Task 11                    Preparation of Right-of-Way Parcel Exhibits                    \$17,000 Not to Exceed**

Professional will prepare a Parcel sketch together with metes and bounds description(s) in support of proposed Right-of-way dedication for the proposed roadway. Right-of-Way Parcels will be performed in substantial compliance with the Rules and Regulations of the Texas Board of Professional Land Surveying governed by the Land Practices Act of 1979, as amended. Professional will place qualifying markers delineating the proposed right-of-way at all parent tract boundaries, angles points, and points of curve and tangency of all curves. Professional's responsibility is only for the specific scope of services described in this paragraph. Contract language, deed preparation, and other legal services are not the responsibility of Professional.

**Task 12                    Bidding Related Services                    \$30,000 Not to Exceed**

Professional will assist City with bidding the project as follows:

- Prepare project bid book.
- Prepare project contract specifications.
- Prepare notice to bidders. City will be responsible for issuing notice to bidders to selected Contractors or for advertising for bid.
- Answer potential bidder's questions and issue addendum(s).
- Prepare for and attend bid opening.
- Prepare bid tabulation and issue summary letter to City.

**Task 13                      Limited Construction Phase Services                      \$30,000 Not to Exceed**

Professional will, as needed, perform the following services for the fees indicated above. The fee is based on the assumption that not all services will be required and that the services will be performed on an as needed basis up to the limitations described below. Therefore, Professional will earn the entire fee even if not all services are performed.

- Review shop drawing submittals.
- Provide response to reasonable requests for information (RFIs).
- Coordinate with the Contractor or Architect (by phone or email) on construction issues regarding Professional's design.
- Attend a limited number of site visits and/or meetings with City, contractor, Authority Having Jurisdiction ("AHJ"), etc. The fee quoted for this task includes up to an aggregate total of three (3) site visits and/or meetings (inclusive of a pre-construction meeting) attended by one employee of Professional at each site visit or meeting. If more than three (3) trips are made by Professional, or more employees of Professional are required to attend, then Professional will be entitled to bill this time hourly as an Additional Service.
- Conduct substantial completion walk through. Prepare and issue punch list to City and Contractor.
- Conduct final walk through.
- Professional will prepare record drawings. Record drawings will be based on information provided by City or Contractor. Professional is not responsible to perform any surveys or assessments to determine or verify as-built conditions.

Note: Construction inspection is not the responsibility of Professional. Professional is not responsible for the construction practices, workmanship, materials, schedule, or safety issues of any contractor, subcontractor, or any other party during or after construction.

**Task 14                      Accessibility Review                      \$2,600 Not to Exceed**

Professional will obtain the services of a Registered Accessibility Specialist to perform a review of the Professional's design and to provide a post-construction inspection to ensure compliance with Texas Accessibility Standards. The fee indicated for this task includes TDL submittal fees.

## **PAYMENT FOR SERVICES**

The total fee for Budgeted Services (those services which have been scoped for this Project) shall be a fee not to exceed **\$535,900**. The Professional shall be entitled to additional compensation for services performed which are not included in the Budgeted Services.

Progress payments shall be made monthly upon receipt of an invoice from PROFESSIONAL outlining the work tasks actually performed and an estimated percent completion of the work along

with itemized charges for services performed during the period in accordance with the standard hourly rates.

The aggregate of monthly progress payments shall not exceed the following:

- A. Until satisfactory completion of 90% interim review plans and specifications hereunder, a sum not to exceed 90% of the total fee, less previous payments.
- B. Until satisfactory completion of 100% final review plans and specifications hereunder, a sum not to exceed 98% of the total fee, less previous payments.
- C. Balance of earnings to be due and payable upon completion and preparation of the "Record Drawings".

