

**Exhibit A – Scope of Services**  
**Woodhurst Drive Street Reconstruction**  
Westra Project No. CPL20029

**Project Description**

The Project involves the design of paving, drainage, and utility improvements of approximately 3,400 linear feet of residential roadway reconstruction of Woodhurst Drive in the City of Coppell. The scope of work for BASIC Engineering Services involves Conceptual, Preliminary and Final Design, Project Plans, Specifications and Cost Opinions on Roadway, Water, Wastewater and Storm Drainage.

The proposed improvements are described below along with the specific scope tasks to be provided with the Project. The term “Owner” shall refer to the City of Coppell and the term “Consultant” shall refer to Westra Consultants.

Residential roadway reconstruction limits on Woodhurst Drive shall include the following:

- a) Full Pavement replacement (6” Concrete Pavement)
- b) Sidewalk and driveway reconstruction
- c) Sanitary sewer line improvements
- d) Water line improvements
- e) Storm drain improvements
- f) Concrete flume improvements (at the end of the Cul-de-sac)
- g) Culvert improvements to Unnamed Tributary to Duck Pond (Including Hydraulics and Hydrologic analysis)
- h) Upgrade all handicap ramps to be compliant with ADA requirements
- i) Include pavement markings, signs, and streetlights location within the project limits

**Project Management & Coordination**

- a) The Consultant shall lead, manage, and direct design team activities, communicate with the Owner and team members and ensure quality control is practiced in performance of the work.
- b) The Consultant shall Attend a pre-design project kickoff meeting with Owner staff to confirm and clarify scope, understand Owner objectives, and ensure economical and functional designs that meet Owner requirements.
- c) The Consultant shall attend up to two (2) public hearings or Owner Council/Commission meetings, as requested by the Owner.
- d) The Consultant shall attend One (1) public meeting on site at kick off.
- e) The Consultant shall conduct review meetings with the Owner at the end of each design phase.
- f) The Consultants shall prepare and submit monthly invoices in the format acceptable to the Owner.
- g) The Consultants shall coordinate with other agencies and entities as necessary for the design of the proposed infrastructure and provide and obtain information needed to prepare the design.
- h) The Consultants shall submit TDLR/TAS required plans for review and will address comments and incorporate changes in the construction plans prior to bidding.

**Utility Clearance**

- a) The Consultant will coordinate with the Owner, public utilities, private utilities, and government

agencies to determine the approximate location of above and underground utilities, and other facilities (current and future) that have an impact or influence on the project. Consultant will design Owner facilities to avoid or minimize conflicts with existing utilities and consider known potential future utilities in designs. Consultant will provide plans to and coordinate with utility Owner(s) related to the relocation efforts of franchise utilities that remain in conflict with the proposed construction.

### **Conceptual Design (30% Submittal)**

The Conceptual Design shall be submitted to Owner per the approved Project Schedule. The purpose of the conceptual design is for the Consultant to

- a) Meet with the Owner to clarify and define Owner's requirements for the Project and review/obtain available data.
- b) Perform a site visit with the Owner to present and discuss utility alignment options and to collect field information needed to complete the Concept Design.
- c) Recommend the alternatives that successfully address the design problem and obtain the OWNER's endorsement of the selected concept.

Consultant will develop the conceptual design of the infrastructure as follows.

- a) Data Collection
  - i) In addition to data obtained from the Owner, Consultant will research proposed improvements in conjunction with any other planned future improvements known by the OWNER that may influence the project.
  - ii) The Consultant will also identify and seek to obtain data for existing conditions that may impact the project including but not limited to; utilities, agencies (TxDOT and USACE), Owner Master Plans, and property Ownership as available from the Tax Assessor's office.
  - iii) The data collection efforts will also include conducting special coordination meetings with affected property Owners as necessary to develop the design.
- b) Conceptual (30%) Design Package shall include the following:
  - i) Roadway Plan and Profile sheets
  - i) Water/Wastewater Plan View sheets
  - ii) Storm Drain Plan and Profile sheets
  - iii) Drainage Area Map
  - iv) Culvert Plan and Profile sheet
- c) Submit two (2) half sized 11"x17" sets of conceptual 30% plans, conceptual opinion of probable construction costs, and digital set to the Owner for review.

### **Preliminary Design (60% Submittal)**

- a) Preliminary (60%) Design Package shall include the following:
  - i) Cover Sheet
  - ii) General Notes
  - iii) Quantity Sheet
  - iv) Project Layout & Control Sheet
  - v) Roadway Plan and Profile sheets
  - vi) Water/Wastewater Plan and Profile view sheets

- vii) Storm Drain Plan and Profile sheets
  - viii) Drainage Area Map
  - ix) Culvert Plan and Profile sheet
  - x) Erosion Control Plans
  - xi) Detail sheets
- b) Assemble Owner's standard construction contract documents and modify special technical specifications, if needed, for the project (if any).
  - c) Prepare an estimate of construction quantities and develop the preliminary opinion of probable construction costs.
  - d) Submit two (2) half sized 11"x17" sets of preliminary 60% plans, one (1) digital PDF copy and preliminary opinion of probable construction costs to the Owner for review.

### **Final Design (90% & 100% Submittals)**

- a) Revise preliminary plans incorporating comments from the Owner.
- b) Submit two (2) half sized 11"x17" sets of 90% plans, two (2) set of 90% construction contract documents, one (1) digital PDF set and 90% opinion of probable construction costs for Owner review.
- c) Incorporate final Owner review comments into the plans and construction contract documents to finalize construction plans for proposed improvements.
- d) Finalize construction contract documents including Owner standard specifications, special technical specifications, and special conditions (if any).
- e) Estimate of final construction quantities and final opinions of construction cost.
- f) Submit four (4) sealed (100%) half size 11"x17" sets of final plans and construction documents and DWG. files for Owner use.

### **Bidding and Construction Phase Services**

Consultant will support the bid phase of the project as follows.

- a) Assist during the bidding process including preparation of advertisements, distribution of documents and addenda, attending the bid opening, tabulating bids, recommendation for award, and preparation of contract documents.
- b) Attend a preconstruction meeting with the Owner and the Contractor.
- c) The Consultant shall review shop drawings and material test reports for compliance with the Contract Documents, as requested by the Owner
- d) After the pre-construction conference, the Consultant shall provide project exhibits and attend public meeting, if any, to help explain the proposed project to residents. The Owner shall select a suitable location and mail the invitation letters to the affected customers.
- e) The Consultant shall attend a final inspection and prepare a final "punch list" for the contractor.
- f) Prepare construction "Record Drawings" based upon mark-ups and information provided by the construction contractor(s). Submit one (1) set of the record drawings to the Owner on a flash drive containing scanned 22"x34" black and white PDF images. A copy of the project base file in DWG format will also be provided.

## **Direct Expenses**

Included in this item are usual and customary expenses normally incurred during performance of the services described. These expenses could include courier delivery charges, copies of existing engineering plans and/or maps, printing, and reproduction (either in-house or by reproduction company) and mileage.

## **Special Services**

### **Topographic Survey**

- a) Perform topographic survey of all existing above ground features for the Project limits. The Consultant will locate existing GPS local survey monuments and establish control for the Project based on the Owner datum. Topographic Survey limits shall include the existing right-of-way and up to 15 feet past the right of way along the entire length of the street. The Consultant shall tie existing features/improvements in the right of way and within the 15 feet as described above. At the intersection of alleys and streets the topographic survey will extent 20 feet past the right of way. Driveways shall be surveyed up to the garage. At the Duck Pond culvert crossing, the topographic survey will include the headwall and channel cross sections 50 feet upstream and downstream of the culvert crossing.
- b) The topographic survey will include ties to all visible features and break lines including franchise and Owner utilities, overhead utility lines, drainage and sanitary sewer structures and flowlines, trees 6" or larger in diameter (no driplines), landscaped areas, bushes, shrubs, mailboxes, sidewalks, driveways, retaining walls, curb lines, edges of pavement, flumes, gutters, ramps, fences, and gates. The topographic survey will include a base map to be used for design purposes. No irrigation systems will be surveyed or shown on the construction plans. It is assumed that the contractor will locate all irrigation systems within the R.O.W during construction. The Consultant will provide the Owner with an AutoCAD file of the completed survey base map for internal design purposes.
- c) Property Locations: The Consultant will collect ROW and property line information for the Project and prepare a ROW strip map. Front property pins located in conjunction with the topographic survey efforts will be tied down and used to approximate property limits. No property boundary surveys will be provided. All ROW and property information for the Project shall be shown as "approximate" on the plans using evidence collected and processed during the performance of Task "a" above, available plat information, and the Owner's GIS property data.
- d) ROW/Easements: Preparation of ROW /Easement Documents are not included as part of the Scope of Services. ROW/easements if needed, will be considered Additional Service.

### **Geotechnical Investigation**

The Consultants shall perform soil investigations at reasonable intervals including field and laboratory tests, borings, and related engineering analysis for determining soil conditions and pavement section recommendations. The field personnel will drill the borings using truck-mounted and portable equipment. Cohesive and non-cohesive soil samples will be obtained using 3-inch diameter Shelby tube samplers and 2-inch diameter standard split-spoon samplers, respectively. In addition, rock encountered will be evaluated by use of Texas Department of Transportation (TXDOT) cone penetration tests. A soils logger will extrude the samples in the field, check the samples for consistency with a hand penetrometer, carefully wrap them to preserve their condition, and return

them to the laboratory for testing. A log of each boring will be prepared to document field activities and results.

Consultant will stake the boring locations using normal taping procedures. Approximate locations of the borings will be shown on the plan of borings. At the completion of drilling operations, boreholes will be backfilled with drill cuttings and plugged at the surface by hand tamping.

Considering the current onsite facilities, anticipated soil conditions and geology, laboratory tests will be required for classification purposes, and to determine strength characteristics. The specific types and quantities of tests will be determined based on geologic conditions encountered in the borings. An engineering report will be prepared to present the results of the field and laboratory data together with our analyses of the results and recommendations.

Items other than those specified above, which are revealed by these studies or are necessitated by a change in project scope, may require revised field, laboratory, and engineering services. These services, if required and requested, will be performed as Additional Services.

### **CCTV inspection**

The Consultants shall provide One Operator and One TV Truck to perform CCTV Inspection on approximately 1,500 feet of the existing storm drain system in Woodhurst Drive.

### **Clarifications**

- a) Except as otherwise stated herein, the scope of service does not include by-pass pumping.
- b) Any corrections, repairs, or extractions required due to existing structural defects or failures are excluded from the Work.
- c) The scope of service does not include cleaning. Cleaning can be performed as additional service, if needed.
- d) In the case of collapsed lines requiring reverse setup, CCTV inspection footage shall be based on the manhole-to-manhole length of the pipe segment.
- e) The CCTV inspection will be performed using a robotic camera capable of recording the condition of the pipe. Data will be generated in DVD and physical report format and will provide logged information of pipe condition, calling out defects (such as root intrusions, pipe separations, cracks, and crumbling) as necessary.

### **Assumptions**

- a) The Client shall provide free access to the work site. The Consultant reserves the right to charge Client if additional mobilizations are required if access is not available.
- b) The Client shall coordinate the Work with any private property owners.
- c) The Client shall provide environmentally responsible disposal site if cleaning occurs.
- d) The Client shall provide water for cleaning and access to hydrant and hydrant meter if cleaning occurs.
- e) The Consultant assumes that there are no hazardous materials present in the project area.

### **Channel Analysis – Unnamed Tributary to Duck Pond**

- a) Surveyed cross sections will be obtained along the centerline of the channel and will be spaced no more than 250 feet. Field survey will be used between the channel banks with LiDAR contours provided by the Owner for the overbanks to determine the overall channel section.
- b) Consultant will prepare a drainage area map that contributes flow to the existing culverts at Woodhurst Drive. The drainage area will be delineated based on Owner provided contours and aerial topography. The hydrologic model and peak flow calculations will be conducted in accordance with the Owner's Drainage Design Manual.
- c) Consultant will develop a hydraulic model based on Owner's contours and surveyed cross sections using a combination of ESRI ArcMap and HEC-RAS programs. The intent of the hydraulic model is to size the culverts at Woodhurst Drive to convey the 100-year storm without overtopping the roadway. HEC-RAS analysis will be conducted in accordance with Owner's current design criteria.
- d) Consultant will develop a hydraulic work map that shows the 100-year floodplain delineation with the Owner's contour data.
- e) No CLOMR or LOMR submittal is anticipated for this Project.

### **Additional Services**

Services not specifically identified in the Scope of Services above shall be considered additional and shall be performed on an individual basis upon authorization by Owner. Compensation for Additional Services shall be based on the hourly rates in effect at the time services are performed or on a pre-negotiated fee. Such services shall include, but not be limited to the following:

- a) Traffic signal design
- b) Landscape or irrigation design
- c) Structural engineering
- d) Subsurface utility engineering
- e) Survey/Locate/Show existing irrigation systems
- f) Plan reviews by a Registered Accessibility Specialist
- g) Water or sanitary sewer system modelling
- h) Traffic control or phasing plans
- i) Storm Water Pollution Prevention Plans (SWPPP) – Erosion Control Plans are included
- j) Easement acquisition and/or negotiation
- k) Franchise utility design and coordination meetings
- l) Permitting and submittal fees
- m) Construction observation or inspection services
- n) LOMR/CLOMR Preparation
- o) Phase II Environmental Site Assessments

**Compensation:**

For all professional services included in EXHIBIT 'A', Scope of Services, the Consultant shall be compensated a lump sum fee of **\$359,500** as summarized below. The total lump sum fee shall be considered full compensation for the services described in Exhibit A, including all labor materials, supplies, and equipment necessary to deliver the services.

<b>Basic Services</b> including Project Management, Coordination & Permitting, Conceptual Design, Preliminary Design, Final Design, and Bidding and Construction Phase Services	\$295,800.00
<b>Direct Expenses</b>	\$1,500.00
<b>Special Services</b>	
Topographic Survey	\$24,200.00
Geotechnical Investigation	\$7,500.00
TV Inspection	\$5,000.00
Channel Analysis	\$22,500.00
TDLR Inspection Services	\$3,000.00
<b>TOTAL</b>	<b>\$359,500.00</b>

**Method of Payment:**

The Consultant shall be paid monthly payments as described in Article 3 of the Agreement. The cumulative sum of such monthly partial fee payments shall not exceed the total current project budget including all approved Amendments. Each invoice shall be verified as to its accuracy and compliance with the terms of this Agreement by an officer of the Consultant. Fees will be invoiced monthly based upon the percentage of services completed as of the invoice date. Payment is due within 30 days of the receipt of the invoice.

Reimbursable expenses include general office related expenses performed in-house such as printing, plotting, PDF files, scanning, photocopies, certain clerical expenses, supplies, postage, etc. are included in the standard rates for personnel and will not be billed separately. Subcontracted expenses travel related expenses, and outsourced expenses such as permits/fees, express mail/shipping, printing/reprographics, or rental of specialized equipment will be billed at the actual rate plus 10% with a Not to Exceed amount as indicated above. Mileage for trips beyond a 50-mile radius of the Engineer's office will be billed at the standard mileage rate established by the Internal Revenue Service as of the effective date of this contract and subject to annual adjustment.

Services not specifically identified in the Exhibit A - Scope of Services above shall be considered additional and shall be performed on an individual basis upon authorization by Client. Compensation for Additional Services will be on a reimbursable basis at a rate of **\$150/ hour** or on a pre-negotiated fee.