



August 12th, 2024

City of Temple
Attn: Richard Wilson, PE
City Engineer
2 N. Main Street
Temple, Texas 76501

RE: Professional Services Scope of Work for roadway and utility design in south Temple adjacent to future TISD school site and connecting to FM 93

Dear Mr. Wilson,

Turley Associates, Inc. appreciates the opportunity to submit a Scope of Work and Engineering and Surveying Proposal to the City of Temple for the above referenced project. This project will develop 100% final design for the construction of a 4-lane divided median roadway connecting to FM, and a two-lane round-a-bout extending the road south through 165.54 acres known as BellCAD ID 5290. This project will also consist of 9,100 L.F. of sewer line design, 7,900 L.F. of waterline design, TxDOT coordination, landscaping design, TxDOT turn lane design, and 2-signalized intersections. The final design will include final plans for construction, specifications, and Opinion of Probable Cost (OPC) ready for construction. Based on current bidding for projects of this nature, we estimate the total cost of construction to be \$11,145,355.00 which contains a contingency of 10% but excludes all professional fees. We have included an exhibit and OPC breakdown for your reference.

Turley Associates, Inc. will perform quality control and quality assurance on all deliverables associated with the project.

The following services will be included as a part of this project:

1. Right-of-Way and Easement Coordination/Acquisition
 - a. Review property ownerships, deeds, easements, etc. to obtain current ownerships. (Confirm with Cities Legal Department)
 - b. Prepare a parcel map with ownership and approximate size of ROW, easements, or Temporary Construction Easement (TCE). We will assign and identify all areas where these will be needed and confirm with City.
 - c. Obtain Right-of-Entry from property owners to be able to begin survey work. This includes sending letters to the property owners.
 - d. Prepare overall Right-of-Way (ROW) plan sets for the City of Temple for ROW, Easement, TCE acquisition on adjacent properties.
 - e. Once the city has approved ROW the consultant will prepare final field notes and exhibits for ROW and Easement needed.
 - f. ROW staking where easement is to be executed will be provided as necessary.
 - g. Documents will be sent to the City's Legal Department to acquire the ROW/Easements/Temporary Construction Easements.

2. Franchise Utility Relocations.
 - a. Coordinate with all franchise utilities in the proposed ROW, on relocating their lines
 - b. Franchise Utilities in the public ROW or Utility easements shall be designed and moved at the expense of the Franchise. Private Easement will need to be evaluated, and if the utility needs to be moved will be at the City's expense.



- c. Relocations will begin once all plans have been accepted, ROW/Easements have been acquired, Possession & Use Agreements, or Memorandum of Agreements are all in place. (City to perform or execute any agreements or acquisitions).
3. Drainage
 - a. Complete a pre and post drainage analysis for subject property and all offsite flows.
 - b. Finalize drainage areas, hydrology, and hydraulics as it pertains to the proposed roadway and surrounding watershed.
 - c. Prepare final design for stormwater collection systems, cross drainage structures and conveyance to existing streams and channels.
 - d. Prepare field notes and exhibits for Drainage Easements to be used by the City of Temple to acquire easements.
 - e. Develop Erosion Control Plan and prepare Storm Water Pollution Prevention Plan (SWPPP).
4. Roadway
 - a. Prepare preliminary horizontal and vertical alignments for subject project.
 - b. Finalize the horizontal and vertical alignments and typical sections.
 - c. Prepare finalized plan and profile sheets for the project with existing and proposed topography.
 - d. Prepare demo plan.
 - e. Prepare driveway removal and replacement plan and details.
 - f. Prepare miscellaneous details as required.
 - g. Prepare Traffic Control Plan.
 - h. Prepare Signage and Striping Plans
 - i. Prepare Roadway Cross Sections.
 - j. Design sidewalks and pedestrian walkways associated with this project.
 - k. Incorporate existing and proposed utilities into plan and profile drawings.
5. TxDOT
 - a. Coordinate with TxDOT location of new connection.
 - b. Design decel lanes on both sides of intersection along with all accompanying documents required for 100% plans for driveway and turn lanes.
 - c. Coordinate with traffic engineer to prepare signalized intersections for both FM 93/FM 93 Spur and Old 95/FM 93.
 - d. Assist with donation agreement documents required by TxDOT.
6. Dry Utility Coordination
 - a. Turley Associates, Inc. will coordinate with all dry utility contractors for power, street lighting and power for signalized intersections.
7. Traffic Impact Analysis
 - a. Turley Associates, Inc. will engage a traffic engineering firm to complete a Traffic Impact Analysis for the new alignment of FM 93 Spur and FM 93.
8. Archeological Investigation
 - a. Turley Associates, Inc will subcontract work to complete field work per the Texas Historical Commission request for an Archeological Survey.
 - b. Reporting and curation of findings from fieldwork.
 - c. Follow ups as needed based on findings of fieldwork.



9. Geotechnical Investigation
 - a. Turley Associates, Inc. will subcontract with a Geotechnical company to have roadway bores completed and structural sections designed for new roadways.
10. Environmental Study
 - a. Turley Associates, Inc. will subcontract with an environmental company to have a Phase 1 study completed on the property.
11. Utility Design
 - a. Prepare final layout for the extension of waterlines and sanitary sewer lines.
 - b. Prepare Plan and Profile drawings and construction details.
 - c. Coordinate with Oncor for streetlight design.
 - d. Work with dry utility companies on relocations.
 - e. Design conduit crossings and identify locations for sleeves.
12. Landscaping Design
 - a. Turley Associates, Inc. will subcontract with a landscaping company to Design all Landscaping and Irrigation for the new roadways.
13. TDLR Review
 - a. Turley Associates, Inc. will subcontract with a TDLR review company to review all sidewalk, ramps and slopes are compliant with Texas Accessibility Standards.

Our professional fee to complete 100% design as listed above will be: \$1,121,500.00. Completion of 100% design per this scope of work will be 12 months after award of contract.

Per the engineering proposal, specific tasks are broken down as follows for the project:

Engineering Roadway & Pavement Design	\$ 335,000.00
Engineering Drainage Design:	\$ 185,000.00
Engineering Water Line Design:	\$ 125,000.00
Engineering Sewer Line Design:	\$ 125,000.00
Engineering Grading Design:	\$ 90,000.00
Land Surveying:	\$ 65,000.00
Geotechnical Report:	\$ 9,500.00
TIA:	\$ 15,000.00
FM 93 Spur Traffic Signal Design:	\$ 35,000.00
Old 95 Traffic Signal Design:	\$ 32,000.00
Environmental Study (Phase I Study & Archaeological):	\$ 15,000.00
Landscaping Design:	\$ 90,000.00



Turley Associates, Inc. will coordinate with the City of Temple staff during each stage of the design process. Once all parties have agreed on a layout and design, Turley Associates, Inc. will proceed with the next step. If changes are requested after approval from both parties, these will be completed on an hourly basis.

Additional items are not shown above but can be provided at an hourly rate are shown below:

- Detention pond design
- Construction Phase Services
- Wetland assessment
- Endangered species assessment
- Trench safety plan
- Traffic signal design
- Inspection services
- Platting
- Structural design
- Lift station design

Turley Associates, Inc. appreciates the opportunity to submit this proposal and is available at your convenience to meet and discuss this scope of work. We look forward to working with the City of Temple on this project.

Sincerely,
TURLEY ASSOCIATES, INC.

A handwritten signature in black ink, appearing to read 'B.J. Little', is written over a faint, light-colored signature line.

B.J. Little, S.I.T.
Vice President of Operations



August 12, 2024

Engineer's Opinion of Probable Cost for:
FM 93 Spur Improvements and Extension

Item	Description	Quantity	Units	Unit Cost	Item Cost
A. ROADWAY					
(1)	24" Standard Curb and Gutter Base Subsidiary	15000	L.F.	\$28.00	\$420,000.00
(2)	24" Ribbon Curb	100	L.F.	\$28.00	\$2,800.00
(3)	2" HMAC Asphalt	24225	S.Y.	\$20.00	\$484,500.00
(4)	12" Crushed Limestone Base	30550	S.Y.	\$18.00	\$549,900.00
(5)	Geogrid or Lime Stabilized Subgrade	30550	S.Y.	\$18.00	\$549,900.00
(6)	Unclassified Roadway Excavation	10200	C.Y.	\$10.00	\$102,000.00
(7)	8' Concrete Sidewalk	3750	L.F.	\$100.00	\$375,000.00
(8)	5' Concrete Sidewalk	3350	L.F.	\$50.00	\$167,500.00
(9)	Reconnect Existing Driveways along 93 Spur	7	EACH	\$5,000.00	\$35,000.00
(10)	Connect 93 Spur to proposed road (To be built as a typical rural roadway section as existing)	1	Lump Sum	\$150,000.00	\$150,000.00
(11)	Curlex Seed & irrigate right-of-way until grass is established	1	LUMP SUM	\$30,000.00	\$30,000.00
(12)	Sawcut, Remove and Dispose of Existing Asphalt	1	LUMP SUM	\$40,000.00	\$40,000.00
(13)	Clearing, Removal & Disposal/Burning of Trees and Brush	1	LUMP SUM	\$10,000.00	\$10,000.00
(14)	Re-grade existing ROW once existing road is removed	1	LUMP SUM	\$50,000.00	\$50,000.00
(15)	Proposed Striping for Lanes, turns and stop bars, crossings, round-a-bout	1	LUMP SUM	\$35,000.00	\$35,000.00
(16)	Proposed Street signage	1	LUMP SUM	\$7,500.00	\$7,500.00
(17)	Construction Entrance	1	LUMP SUM	\$3,000.00	\$3,000.00
(18)	Rock filter dam	2	EA	\$1,500.00	\$3,000.00
(19)	Silt Fence	7500	L.F.	\$4.00	\$30,000.00
(20)	Curb & Flume Inlet Protection	20	each	\$175.00	\$3,500.00
ROADWAY					\$3,048,600.00
10% CONTINGENCY					\$304,860.00
ROADWAY IMPROVEMENTS					\$3,353,460.00

Item	Description	Quantity	Units	Unit Cost	Item Cost
B. DRAINAGE					
(1)	20' Recessed and Depressed Curb Inlet	20	EACH	\$11,000.00	\$220,000.00
(2)	4'x4' Junction Box	5	EACH	\$5,500.00	\$27,500.00
(3)	18" RCP	1600	L.F.	\$120.00	\$192,000.00
(4)	24" RCP	1000	L.F.	\$140.00	\$140,000.00
(5)	30" RCP	350	L.F.	\$160.00	\$56,000.00
(6)	36" RCP	150	EACH	\$180.00	\$27,000.00
(7)	36" Precast S.E.T	2	L.F.	\$5,000.00	\$10,000.00
(8)	6-12" Rock RipRap	100	S.F.	\$15.00	\$1,500.00
(9)	SWPPP	1	LUMP SUM	\$25,000.00	\$25,000.00
DRAINAGE					\$699,000.00
10% CONTINGENCY					\$69,900.00
DRAINAGE IMPROVEMENTS					\$768,900.00

Item	Description	Quantity	Units	Unit Cost	Item Cost
C. TxDOT					
(1)	Grading in ROW, approximate 4,000 C.Y.>	1	LUMP SUM	\$80,000.00	\$80,000.00
(2)	Unclassified Roadway Excavation	2000	C.Y.	\$20.00	\$40,000.00
(3)	Seed and irrigate right-of-way until grass is established Includes Topsoil	1	LUMP SUM	\$30,000.00	\$30,000.00

(4) Soil retention blankets (Class 1, Type C).	8750 S.Y.	\$4.00	\$35,000.00
(5) HMA Fine Base Type B	2650 TONS	\$110.00	\$291,500.00
(6) HMA Tack Coat (0340 6272)	500 GALLONS	\$5.00	\$2,500.00
(7) Superpave Type SP-C	1250 TONS	\$130.00	\$162,500.00
(8) Striping and Signage	1 LUMP SUM	\$40,000.00	\$40,000.00
(9) Re-work existing residential drive	1 LUMP SUM	\$10,000.00	\$10,000.00
(10) Saw cut, remove and dispose of existing asphalt and stabilized base	1 LUMP SUM	\$10,000.00	\$10,000.00
(11) Hauling demolished asphalt offsite	1 LUMP SUM	\$5,000.00	\$5,000.00
(12) Traffic control	1 LUMP SUM	\$35,000.00	\$35,000.00
(13) Driveway culvert with S.E.T.s	2 EACH	\$20,000.00	\$40,000.00
(14) Stoplight at FM 93 and FM 93 Spur	1 EACH	\$350,000.00	\$350,000.00
(15) Stoplight at FM 93 and Old Highway 95	1 EACH	\$350,000.00	\$350,000.00
(16) SWPPP	1 LUMP SUM	\$15,000.00	\$15,000.00
TxDOT			\$1,496,500.00
10% CONTINGENCY			\$149,650.00
		TxDOT IMPROVEMENTS	\$1,646,150.00

Item Description	Quantity	Units	Unit Cost	Item Cost
D. WATERLINE				
(1) 12" CL 150/C900 PVC Waterline	7900	L.F.	\$90.00	\$711,000.00
(2) 8" CL 150/C900 PVC Waterline	600	L.F.	\$65.00	\$39,000.00
(3) Fire Hydrant Assembly	18	EACH	\$8,000.00	\$144,000.00
(4) 12" x 12" Tee w/ Blocking	2	EACH	\$4,000.00	\$8,000.00
(5) 12" x 8" Tee w/ Blocking	9	EACH	\$3,000.00	\$27,000.00
(6) 12" Gate Valve w/ Blocking	12	EACH	\$2,600.00	\$31,200.00
(7) 12" P.R.V.	1	EACH	\$75,000.00	\$75,000.00
(8) 12" A.R.V.	1	EACH	\$10,000.00	\$10,000.00
(9) 8" Gate Valve w/ Blocking	9	EACH	\$2,200.00	\$19,800.00
(10) 12" Tie into Existing System (5th Street, Treiber, Old 95)	3	EACH	\$4,000.00	\$12,000.00
(11) Install 12" Flush Assembly/ w Valve	1	EACH	\$5,000.00	\$5,000.00
(12) Install 8" Flush Assembly/ w Valve	8	EACH	\$4,000.00	\$32,000.00
(13) Reconnect Existing Meters along 93 Spur (long water service)	13	EACH	\$4,000.00	\$52,000.00
(14) Place Erosion Control Mats, Seed & Irrigate until grass is established where disturbed by waterline installation.	1	LUMP SUM	\$40,000.00	\$40,000.00
(15) Cross Railroad along FM 93 by bore	1	LUMP SUM	\$150,000.00	\$150,000.00
(16) Cross Treiber Drive & FM 93 by bore	1	LUMP SUM	\$150,000.00	\$150,000.00
WATERLINE				\$1,506,000.00
10% CONTINGENCY				\$150,600.00
		WATERLINE IMPROVEMENTS		\$1,656,600.00

Item Description	Quantity	Units	Unit Cost	Item Cost
E. SEWER LINE				
(1) Mobilization, bonds, and Insurance	1	LS	\$125,000.00	\$125,000.00
(2) ROW Preparation	9100	L.F.	\$1.50	\$13,650.00
(3) Clean-Up and Final Grading	9100	L.F.	\$3.00	\$27,300.00
(4) Trench Safety Plan	1	LS	\$12,000.00	\$12,000.00
(5) Trench Safety Plan Implementation (Pipe)	4000	L.F.	\$30.00	\$120,000.00
(6) Trench Safety (manholes)	4500	S.F.	\$4.00	\$18,000.00
(7) 15" SDR 26 Sewer Line	9100	L.F.	\$180.00	\$1,638,000.00
(8) 4' Diameter Manhole	18	EACH	\$5,000.00	\$90,000.00
(9) Core into Existing Manhole and Raven Coat Outside	1	EACH	\$4,000.00	\$4,000.00

(10) Concrete encasement through Flood Plain	200 L.F.	\$200.00	\$40,000.00
(11) Place Erosion Control Mats, Seed & Irrigate until grass is established where disturbed by sewer line installation.	1 LUMP SUM	\$40,000.00	\$40,000.00
(12) Replace Fence & Drives to existing condition or better	1 LS	\$15,000.00	\$15,000.00
(13) Miscellaneous	1 LS	\$60,000.00	\$60,000.00
SEWER LINE			\$2,202,950.00
10% CONTINGENCY			\$220,295.00
	SEWER LINE IMPROVEMENTS		\$2,423,245.00

Item Description	Quantity	Units	Unit Cost	Item Cost
F. ELECTRICAL				
(1) Schedule 40 2" conduit	4500	L.F.	\$23.00	\$103,500.00
(2) Schedule 40 3" conduit	4500	L.F.	\$27.00	\$121,500.00
(3) Pull Box's	15	EACH	\$1,000.00	\$15,000.00
(4) Pole Bases	12	EACH	\$2,500.00	\$30,000.00
ELECTRICAL				\$270,000.00
10% CONTINGENCY				\$27,000.00
	ELECTRICAL IMPROVEMENTS			\$297,000.00

Item Description	Quantity	Units	Unit Cost	Item Cost
G. LANDSCAPING				
LANDSCAPING				\$1,000,000.00
	LANDSCAPING IMPROVEMENTS			\$1,000,000.00

SUMMARY

A. ROADWAY IMPROVEMENTS		\$3,353,460.00
B. DRAINAGE IMPROVEMENTS		\$768,900.00
C. TXDOT IMPROVEMENTS		\$1,646,150.00
D. WATERLINE IMPROVEMENTS		\$1,656,600.00
E. SEWERLINE IMPROVEMENTS		\$2,423,245.00
F. ELECTRICAL IMPROVEMENTS		\$297,000.00
G. LANDSCAPING IMPROVEMENTS		\$1,000,000.00
	SUB-TOTAL	\$11,145,355.00
ENGINEERING ROADWAY & PAVEMENT DESIGN		\$335,000.00
ENGINEERING DRAINAGE DESIGN		\$185,000.00
ENGINEERING WATER LINE DESIGN		\$125,000.00
ENGINEERING SEWER LINE DESIGN		\$125,000.00
ENGINEERING GRADING DESIGN		\$90,000.00
LAND SURVEYING		\$65,000.00
GEOTECHNICAL STUDY		\$9,500.00
TRAFFIC IMPACT ANALYSIS		\$15,000.00
SIGNAL DESIGN FOR FM 93 AT SPUR 93		\$35,000.00
SIGNAL DESIGN FOR FM 93 AT OLD HIGHWAY 95		\$32,000.00
ENVIRONMENTAL STUDY (Phase I Study & Archaeological)		\$15,000.00
LANDSCAPING DESIGN		\$90,000.00
BIDDING		\$20,000.00
CONSTRUCTION ADMINISTRATION		\$300,000.00
ON-SITE REPRESENTATIVE		\$230,000.00
	TOTAL	\$12,816,855.00

*This OPC was based on a preliminary and conceptual understanding of the proposed project options and is subject to change as more information is available and further design is completed.