

WORK AUTHORIZATION NO. 5

PROJECT: Engineering Design Services for the Skyview Drive Bridge Project

This Work Authorization is made pursuant to the terms and conditions of the Williamson County Contract for Engineering Services, being dated May 31, 2022 and entered into by and between Williamson County, Texas, a political subdivision of the State of Texas, (the "County") and K.C. Engineering, Inc. (the "Engineer").

Part 1. The Engineer will provide the following Engineering Services set forth in Attachment "B" of this Work Authorization.

Part 2. The maximum amount payable for services under this Work Authorization without modification is \$265,450.00.

Part 3. Payment to the Engineer for the services established under this Work Authorization shall be made in accordance with the Contract.

Part 4. This Work Authorization shall become effective on the date of final acceptance and full execution of the parties hereto and shall terminate on March 31, 2025. The Engineering Services set forth in Attachment "B" of this Work Authorization shall be fully completed on or before said date unless extended by a Supplemental Work Authorization.

Part 5. This Work Authorization does not waive the parties' responsibilities and obligations provided under the Contract.

Part 6. County believes it has sufficient funds currently available and authorized for expenditure to finance the costs of this Work Authorization. Engineer understands and agrees that County's payment of amounts under this Work Authorization is contingent on the County receiving appropriations or other expenditure authority sufficient to allow the County, in the exercise of reasonable administrative discretion, to continue to make payments under this Contract. It is further understood and agreed by Engineer that County shall have the right to terminate this Contract at the end of any County fiscal year if the governing body of County does not appropriate sufficient funds as determined by County's budget for the fiscal year in question. County may effect such termination by giving written notice of termination to Engineer.

Part 7. This Work Authorization is hereby accepted and acknowledged below.

EXECUTED this ____ day of _____, 2024.

ENGINEER:

K.C. Engineering, Inc.

By: 

Signature

Greg Haley, P.E.

Printed Name

President

Title

COUNTY:

Williamson County, Texas

By: _____

Signature

Printed Name

Title

LIST OF ATTACHMENTS

Attachment A - Services to be Provided by County

Attachment B - Services to be Provided by Engineer

Attachment C - Work Schedule

Attachment D - Fee Schedule

Attachment A - Services to be Provided by County
Services to be Provided by County

Williamson County Road & Bridge Division personnel will provide:

- Project direction, review and oversight
- Topographic and R.O.W. Surveys.
- Geotechnical Investigations; data and reports.
- ROW Documents and Drainage Reports
- Conducting pre-bid meeting, responding to contractor questions during bidding, tabulating and evaluating bids after bid opening, and providing recommendation of award of contract.
- Construction oversight, administration and management.

Attachment B – Services to be Provided by Engineer

Services to be Provided by Engineer

Project Locations

1. Name of Roadway: Skyview Drive

Task 1: Project Management

Attend Progress Review Meetings with County Road and Bridge Department at 30%, 90%, and Final. Prepare monthly progress reports and invoices. Maintain project schedule and perform QC/QA.

Task 2: Topographic Surveys and R.O.W. Surveys

To be provided by the County

Task 3: Preliminary Engineering

Conduct Site Visit and Field Reconnaissance to document existing conditions. Data collection including available as-builts. Develop conceptual geometric layout (1" = 20' H, 1" = 2' V) showing roadway horizontal and vertical geometry and proposed typical section. Prepare preliminary cross sections (50' interval and driveways). Develop preliminary drainage analysis including delineation of drainage areas, calculation of peak stormwater runoff rates for 10-yr, 25-yr, 50-yr, and 100-yr. All drainage data will be as obtained from HEC-RAS models provided by the County and hydraulic modeling performed by the Engineer.

Task 4: Geotechnical Investigations

To be provided by the County

Task 5: Environmental Studies

N/A

Task 6: Utility Coordination

To be provided by the County

Task 7: FEMA Coordination

N/A

Task 8: Final Engineering

Prepare final detailed design and PS&E for proposed improvements. Calculate ditch capacity and size driveway and cross culvert pipes.

Plan Sheets:

- Title Sheet
- Index of Sheets
- Estimate of Quantities Summary

- Project Layout
- Typical Sections
- Horizontal Alignment Data
- Drainage Documentation
- H & H Summaries
- Miscellaneous Drainage Details
- Existing Conditions and Removal Plan
- Bridge Layout
- Bridge Details
- Erosion Control Plan
- Sequence of Construction
- Traffic Control Plan
- Driveway Details
- Driveway Summary
- Intersection Layout
- Roadway Plan & Profile
- Miscellaneous Roadway Details
- Signs & Pavement Markings
- Small Sign Summary
- SW3P
- Cross Sections (50' Interval and Driveways)
- Standards

Specifications

Cost Estimate

General Notes

Task 9: Bidding Phase Services

Prepare Bid Tabs for processing by Purchasing Department

Task 10: Construction Phase Services

Review shop drawings and respond to contractor RFIs. Prepare electronic as-built final drawings for the County based on construction red-lines provided by the County.

Bridge Design Assumptions:

- New bridge will be a single span, precast concrete superstructure (e.g., prestressed slab beams, decked slab beams, box beams, Tx Girders)
- New bridge will be built in two phases (single lane on one side first)
- New bridge will have zero skew, straight horizontal alignment, and no aesthetics
- Deck will have raised 6' sidewalk on one side only (curb separation for speed <45 mph with combination traffic rail)

- Abutments will have vertical retaining walls (assume TxDOT standard MSE or CIP spread footing walls), constructed in two phases
- Temporary special shoring will be required for phased construction
- Compressed design schedule: 30%, pre-100%, Final 100% (signed/sealed)
- No work for Public Involvement, Surveying, ROW Mapping or Environmental
- Effort includes minimal bidding and construction phase services

Deliverables:

50% Submittal:

- PDFs of 11" x 17" Plan Sheets
- Specifications
- Estimate of Construction Cost
- General Notes

90% Submittal

- PDFs of 11" x 17" Plan Sheets
- Specifications
- Estimate of Construction Cost
- General Notes

100% Submittal

- PDFs of 11" x 17" Plan Sheets
- Specifications
- Estimate of Construction Cost
- General Notes
- Electronic copy of submittal documents in PDF format

ATTACHMENT C
WORK SCHEDULE
WORK AUTHORIZATION NO. 5

Task No.	Task Name	Duration	Time	Start	Finish
1	WA #5 - Notice to Proceed	0	Days	8/6/2024	8/6/2024
2	Survey (by others)	15	Days	8/21/2024	9/5/2024
3	Design	60	Days	9/5/2024	11/4/2024
4	50% PS&E	5	Days	11/4/2024	11/9/2024
5	QA/QC	1	Days	11/9/2024	11/10/2024
6	Submit 50% PS&E	0	Days	11/10/2024	11/10/2024
7	County Review	5	Days	11/10/2024	11/15/2024
8	90% PS&E	15	Days	11/15/2024	11/30/2024
9	QA/QC	2	Days	11/30/2024	12/2/2024
10	Submit 90% PS&E	0	Days	12/2/2024	12/2/2024
11	County Review	5	Days	12/2/2024	12/7/2024
12	Final PS&E	5	Days	12/7/2024	12/12/2024
13	Address 90% comments	2	Days	12/12/2024	12/14/2024
14	Final Quantities	2	Days	12/14/2024	12/16/2024
15	Final Estimate	2	Days	12/16/2024	12/18/2024
16	Assemble Final PS&E	2	Days	12/18/2024	12/20/2024
17	Submit Final PS&E	0	Days	12/20/2024	12/20/2024
18	County Review	5	Days	12/20/2024	12/25/2024
19	Submit Signed and Sealed PS&E	2	Days	12/25/2024	12/27/2024
20	Bid Advertisement	35	Days	12/27/2024	1/31/2025
21	Letting	1	Days	1/31/2025	2/1/2025
22	Award and Bonds	30	Days	2/1/2025	3/3/2025
23	Construction	60	Days	3/3/2025	5/2/2025
24	Complete Project	2	Days	5/2/2025	5/4/2025

ATTACHMENT D - FEE SCHEDULE
WORK AUTHORIZATION NO. 5
SKYVIEW DRIVE

		K.C. ENGINEERING, INC.					HARDESY & HANOVER, LLC										TOTAL
TASK NO.	TASK DESCRIPTION	PRINCIPAL ENGINEER	SENIOR PROJECT ENGINEER	PROJECT ENGINEER	ENGINEER-IN-TRAINING	CLERICAL	PROJECT PRINCIPAL	SENIOR TECHNICAL ADVISOR	SENIOR PROJECT MANAGER	SENIOR STR. QA/QC MANAGER	SENIOR STRUCT. ENGINEER	STRUCT. ENGINEER	STRUCT. DESIGNER (E.I.T.)	SENIOR ENGINEER TECH	CAD TECH	ADMIN/CLERICAL	
	Labor Rates	250.00	195.00	165.00	125.00	80.00	335.00	300.00	260.00	255.00	250.00	165.00	125.00	150.00	95.00	90.00	
1	PS&E Development																
1.1	Roadway Design																
1.1.1	Establish Horizontal Alignment		2	2													\$ 720.00
1.1.2	Establish Vertical Alignment		2	4													\$ 1,050.00
1.1.3	Site Visits		2														\$ 390.00
1.1.4	Alignment & Superelevation Table			2	2												\$ 580.00
1.1.5	Roadway Cross Sections		4	8	6												\$ 2,850.00
1.1.6	Earthwork Calculations		2	2	4												\$ 1,220.00
1.1.7	Roadway Plan Profile Sheets		4	8	8												\$ 3,100.00
1.1.8	Driveway Profiles / Details / Summaries																\$ -
1.1.9	Side Road Profiles / Details / Summaries																\$ -
1.1.10	Miscellaneous Roadway Details		1	1	1												\$ 485.00
1.1.11	Alignment Data		1	1	2												\$ 610.00
1.1.12	Sequence of Construction	1	2	8	8												\$ 2,960.00
1.1.13	Intersection Layouts																\$ -
1.1.14	Project Layout	1	1	2	2												\$ 1,025.00
1.1.15	Title Sheet	1	1	1	2												\$ 860.00
1.1.16	Survey Data			6													\$ 990.00
1.1.17	Roadway Typical Sectons	1	4	4	4												\$ 2,190.00
1.1.18	Index of Sheets			1	2												\$ 415.00
1.1.19	Summary of Roadway Quantities		2	4	6												\$ 1,800.00
1.1.20	Construction Estimate	1	4	6	4												\$ 2,520.00
1.1.21	Assemble Applicable Standards																\$ -
	Task 1.1 Total	5	32	60	51	0	0	0	0	0	0	0	0	0	0	0	\$ 23,765.00
1.2	Bridge Design																
1.2.1	Project Management																
1.2.1	Monthly Progress Reports, Invoices, and Billings						1		9							9	\$ 3,485.00
1.2.2	QA/QC Plan						1		2	2							\$ 1,365.00
1.2.3	Project Coordination and Admin						2		12			12					\$ 5,770.00
1.2.4	Progress/Coordination Meetings								8			8					\$ 3,400.00
1.2.5	Project Documents/Files						1		4			4		4			\$ 2,635.00
	Task1. 1.2.1 Total	0	0	0	0	0	5	0	35	2	0	24	0	4	0	9	\$ 16,655.00
1.2.2	Route and Design Studies																
1.2.6	Data Collection & Field Reconnaissance						1		4				4				\$ 1,875.00
1.2.7	Structural Design Criteria & Design Summary Report						1		2		4						\$ 1,855.00
1.2.8	Coord with Team to Evaluate Bridge & Wall Type Alternatives, Perform Prelim Engineering						1		4		4		8				\$ 3,375.00
1.2.9	Prep Summary Memo, Prelim Costs & Conceptual Layouts for Each Bridge Alt						1		4		8		4	2	8		\$ 4,935.00
1.2.10	Summarize Option, Prelim Costs & Conceptual Layouts for Wall Alt's						1		4		8		4	2	8		\$ 4,935.00
1.2.11	Prepare Alternative Report and Exhibits, Meet w/ Wilco to Discuss & Select Structure Types						1		2	4	4		4	2	2		\$ 3,865.00
	Task1. 1.2.2 Total	0	0	0	0	0	6	0	20	4	28	0	24	6	18	0	\$ 20,840.00
1.2.3	Geotechnical Services																
1.2.12	Coordinate Boring Loc'ns and Foundation Recommendations for Bridge & Walls								2								\$ 520.00
1.2.13	Review Geotech Report & Comment; Coordinate Bridge/Wall Design Parameters w/ Geotech								4			2					\$ 1,370.00
	Task1. 1.2.3 Total	0	0	0	0	0	0	0	6	0	0	2	0	0	0	0	\$ 1,890.00
1.2.4	Bridge Design																
1.2.14	Bridge Layout (Phased)						2		8	1	4	16	16	12	16		\$ 11,965.00
1.2.15	Typical Sections & Phasing						1	1	4	1	4	8	12	4	8		\$ 7,110.00
1.2.16	Temp Sp Shoring Layout/Demo Plan & Notes						1	1	8	1	4	8	12	8	12		\$ 9,130.00
1.2.17	Estimated Quantities						1		2	1	2	4	12	2	8		\$ 4,830.00
1.2.18	Bearing Seat & Abut Elevs (Incl Geometry Calcs)								1	1	2	4	12	2	8		\$ 4,235.00
1.2.19	Foundation Layout (Incl Foundation \Design)						1		4	1	4	4	8	4	12		\$ 6,030.00

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