

WORK AUTHORIZATION NO. 3

PROJECT: Engineering Design Services for Street and Drainage Improvements to CR 278

This Work Authorization is made pursuant to the terms and conditions of the Williamson County Contract for Engineering Services, being dated **March 24, 2020** and entered into by and between Williamson County, Texas, a political subdivision of the State of Texas, (the "County") and **M&S Engineering, LLC** (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 **\$112,425.00.**

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 **December 31, 2021.** 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 5th day of May, 2020.

ENGINEER:

By: Jerod Mott
Signature

Jerod Mott
Printed Name

Municipal Dept Manager
Title

COUNTY:

Williamson County, Texas
By: Bill Gravell Jr.
Signature

Bill Gravell Jr.
Printed Name

County Judge
Title

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 the Engineer**

Project Location:

Design for the reconstruction of County Road (CR) 278 from CR 279 east approximately 3,100 feet.

Task 1: Project Management

Attend one meeting with County Road & Bridge department to review the conceptual geometric layout, finalize the proposed alignment and determine right-of-way needs. Attend Progress Review Meetings at 50%, 90% and Final. Prepare monthly progress reports and invoices. Maintain project schedule and perform QA/QC.

Task 2: Topographic 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. Review survey and geotechnical data provided by the County for completeness. Develop a conceptual geometric layout on scroll plot (1"=20' H, 1"=2' V) showing roadway horizontal and vertical geometry and proposed typical section. Develop preliminary drainage analysis including delineation of drainage areas, calculation of peak stormwater runoff rates for 10-yr, 25-yr and 100-yr.

Prepare 50% plan set including the sheets listed below.

Plan Sheets:

- Title Sheet
- Estimate & Quantity Sheet
- Typical Sections
- Traffic Control Plan
- Horizontal Alignment Data Sheet
- Roadway Plan & Profile Sheets
- Preliminary Bridge Layout
- Preliminary Retaining Wall Layouts
- Cross Sections (50' Interval and Driveways)
- Drainage Area Map
- Culvert Layouts

Specifications

Opinion of Probable Construction Cost

General Notes

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

Revise 50% plan set based on review comments provided by County staff. Prepare 90% detailed design and PS&E for proposed improvements. Calculate ditch capacity and size driveway and cross culvert pipes.

Revise Plan Sheets per comments:

- Title Sheet
- Estimate & Quantity Sheet
- Typical Sections
- Traffic Control Plan
- Horizontal Alignment Data Sheet
- Roadway Plan & Profile Sheets
- Bridge Layout
- Retaining Wall Layout
- Cross Sections (50' Interval and Driveways)
- Drainage Area Map
- Culvert Layouts

Additional Plan Sheets:

- Driveway Details
- Driveway Summary
- Miscellaneous Roadway Details
- Erosion Control Plan
- Standards

Specifications

Opinion of Probable Construction Cost

General Notes

Revise 90% plan set based on review comments provided by County staff. Submit 100% plan set with seals and signatures.

Task 9: Bidding Phase Services

Respond to Bidder's questions. 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.

Deliverables:

Conceptual Geometric Layout:

- 1 paper copy of the project as a Scroll Plot

50% Submittal:

- 2 paper copies of 11" x 17" Plan Sheets
- Specifications
- Opinion of Probable Construction Cost
- General Notes
- Engineer's internal QA/QC marked up set

90% Submittal:

- 2 paper copies of 11" x 17" Plan Sheets
- Specifications
- Opinion of Probable Construction Cost
- General Notes
- Engineer's internal QA/QC marked up set

Final Submittal:

- 2 paper copies of 11" x 17" Plan Sheets
- Specifications
- Opinion of Probable Construction Cost
- General Notes
- Engineer's internal QA/QC marked up set
- Electronic copy of submittal documents in PDF format on CD

Attachment C - Work Schedule

Expected notice to proceed from Williamson County near September 4, 2020.

Notice to Proceed		September 4, 2020
Conceptual Geometric Layout	9 weeks	November 6, 2020
50% Plans Submittal	10 weeks	January 15, 2021
50% Review Comments returned	2 weeks	January 29, 2021
90% Plans Submittal	8 weeks	March 26, 2021
90% Review Comments returned	2 weeks	April 9, 2021
100% Plans Submittal	3 weeks	April 30, 2021

Attachment D - Fee Schedule

Task 1 – Project Management	\$30,210.00
Task 3 – Preliminary Engineering	\$38,250.00
Task 8 – Final Engineering	\$25,395.00
Task 9 – Bidding Phase Services	\$3,990.00
<u>Task 10 – Construction Phase Services</u>	<u>\$14,580.00</u>
Total	\$112,425.00

**WILLIAMSON COUNTY - SMALL MAINTENANCE PROJECTS
W.A. #3 - COUNTY ROAD 278**

M&S Engineering, LLC
376 Landa Street
New Braunfels, Texas 78130
Office (830) 629-2988
FIRM F-1394



	# of sheets	Project Manager	Professional Engineer	Engineer in Training	CAD Operator	Admin	Total Hours	Total Cost
		\$ 180	\$ 150	\$ 120	\$ 90	\$ 75		
Task 1	Project Management							
	Project setup	4				2	6	\$ 870
	Kickoff meeting	8					8	\$ 1,440
	Coordination with suppliers	4					4	\$ 720
	Progress review meetings	32	32				64	\$ 10,560
	Monthly invoicing and reporting	48				20	68	\$ 10,140
	QA/QC review	16	24				40	\$ 6,480
	Task 1 Subtotal	112	56	0	0	22	190	\$ 30,210
Task 3	Preliminary Engineering							
	Site visit	8	8	8			24	\$ 3,600
	Review survey data and update to M&S format			8	8		16	\$ 1,680
	Prepare Scroll Plot	2	4	16	24		46	\$ 5,040
	Plans preparation							
	Title Sheet	1	1	2	4		8	\$ 930
	Estimate & Quantities	1	2	8	1		19	\$ 2,610
	Typical Sections & General Notes	1	1	2	4		8	\$ 930
	Traffic Control Plan	1	2	4	8		16	\$ 1,860
	Horizontal Alignment Data Sheet	1	1	1	1		4	\$ 540
	Roadway Plan & Profile	13	2	24	24		54	\$ 6,000
	Cross Sections (50' Intervals and Driveways)	10	4	20	24		56	\$ 6,480
	Drainage Area Map	1	1	8	8		19	\$ 2,160
	Culvert Layouts	4	2	16	20		42	\$ 4,680
	Specifications & General Notes	2	4	4		4	14	\$ 1,740
	Task 3 Subtotal	18	35	89	94	4	240	\$ 38,250
Task 8	Final Engineering							
	Address review comments							
	Estimate & Quantities	1	2	8	1		15	\$ 2,010
	Traffic Control Plan	1	1	1	1		3	\$ 360
	Roadway Plan & Profile	13	1	8	8		21	\$ 2,460
	Cross Sections (50' Intervals and Driveways)	10	2	12	12		34	\$ 4,080
	Culvert Layouts	4	1	8	8		19	\$ 2,160
	Plans preparation							

Erosion Control Plan	7	1	4	12	12		29	\$	3,300
Driveway Summary	1	2	4	4	8		18	\$	2,160
Driveway Details	1	1	1	1	4		7	\$	810
Miscellaneous Roadway Details	2	1	1	4	8		14	\$	1,530
Standard Detail Sheets	75	4	4	16	32		56	\$	6,120
Specifications & General Notes		1	1			1	3	\$	405
Task 8 Subtotal		16	34	74	94	1	219	\$	25,395
Task 9 Bidding Phase Services									
Respond to bidder questions		4	4	8	4	4	24	\$	2,940
Prepare Bid tabulation		2	2	2		2	8	\$	1,050
Task 9 Subtotal		6	6	10	4	6	32	\$	3,990
Task 10 Construction Phase Services									
Assemble final construction drawings		1	2	4	4		11	\$	1,320
Attend preconstruction meeting		8					8	\$	1,440
Review shop drawings		8	8	8		8	32	\$	4,200
Respond to contractor RFIs		4	8	16	8		36	\$	4,560
Prepare record drawings		2	2	8	16		28	\$	3,060
Task 10 Subtotal		23	20	36	28	8	115	\$	14,580
Project Total		175	151	209	220	41	796	\$	112,425