

WORK AUTHORIZATION NO. 1

**PROJECT: Engineering Services for Drainage Improvements on CR 283, CR 381,
CR 496, CR 225, CR 127, CR 445, HUGH SMITH LN**

This Work Authorization is made pursuant to the terms and conditions of the Williamson County Contract for Engineering Services, being dated **June 2, 2022** and entered into by and between Williamson County, Texas, a political subdivision of the State of Texas, (the "County") and **Gray 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 **\$427,080.**

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 **September 30, 2023.** 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 _____, 20 ____.

ENGINEER:

Gray Engineering, Inc.

COUNTY:

Williamson County, Texas

By: 
Signature

David W. Gray, P.E.
Printed Name

President
Title

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

Williamson County Road & Bridge Division personnel will provide:

- Project direction, review and oversight
- Existing LIDAR contours and apparent ROW (Wilco's GIS Department)
- Existing culvert sizes and elevations
- Construction oversight, administration and management

Attachment B - Services to be Provided by Engineer

Project Locations:

- 1. CR 283 – from CR 284 to CR 282 (4,296')**
- 2. CR 345 – from CR 301 to CR 300 (8,945')**
- 3. CR 496 – from the North End to FM 1331 (2,542')**
- 4. CR 225 – from the North End to CR 224 (18,197')**
- 5. CR 127 – from CR 124 to CR 192 (14,800')**
- 6. Hugh Smith Ln – from the West End (City Limits) to CR 313 (3,254')**
- 7. CR 445 – from FM 619 to CR 448 (17,110')**

Task 1: Project Management

Attend progress review meetings with Road & Bridge Division at 50%. Prepare monthly progress reports and invoices. Maintain project schedule and perform QA/QC.

Task 2: LIDAR Contours and Apparent R.O.W.

To be provided by the County's GIS Department. GEI to review provided County survey information and request from County elevation verifications of centerline roadway and roadside channel and culvert flow lines as needed to justify LIDAR contours elevations as provided by County.

Task 3: Preliminary Engineering

Delineate drainage area boundaries and perform runoff calculations for 5-yr, 10-yr, 25-yr, and 100-yr storm events for parallel driveway pipes and non-bridge class cross culverts within the project limits, including data collection and field reconnaissance. Provide a scroll plot (1" = 200') showing drainage area boundaries, time of concentration path, drainage area I.D., 2' LIDAR contours and aerial background provided by the County. Provide table showing runoff calculation results.

Task 4: Geotechnical Investigations

To be provided by the County
(pavement design)

Task 5: Environmental Studies

N/A

Task 6: Utility Coordination

N/A

Task 7: FEMA Coordination

N/A

Task 8: Final Engineering

Calculate capacity of existing parallel driveway pipes and non-bridge class cross culverts. Identify parallel driveway pipes and non-bridge class culverts in apparent need of replacement due to either existing condition, inadequate capacity, or safety treatment. For each project location (county road) listed above, provide the following:

Plan Sheets (11" x 17"):

- Cover Sheet
- Estimate of Quantities Summary
- Survey Controls
- Construction Notes & Typical Sections
- Drainage Area Map and Calculations
- Erosion Control Plan
- Traffic Control Plan and Detour Plan (if necessary)
- TxDOT Standards
- Roadway Plan Sheets (1" = 50') (showing roadway centerline, stationing, apparent ROW, 1' LIDAR contours and aerial background)
- Culvert Plan & Profile Sheets (1" = 50') (showing roadway centerline, stationing, apparent ROW, 1' LIDAR contours and aerial background)

In addition to the above plan sheets, the Engineer will provide the following:

- Cost Estimate
- Estimate of Quantities Summary
- Bid form for proposed drainage facility improvements
- General Notes
- Technical Specifications
- Provide exhibits (8.5"x 11" plan view) for temporary construction and/or drainage easements to facilitate construction of proposed drainage improvements. Exhibits shall show roadway centerline, approximate ROW line, boundary, and dimensions of proposed easement for the use in preparing easement documents by others.

Task 9: Bidding Phase

Services N/A

Task 10: Construction Phase Services

N/A

Deliverables:

50% Submittal:

- Scroll plot of drainage areas and runoff calculations for each roadway
- 11"x 17" plan sheets, estimates and quantities for each roadway

100% Submittal:

- Scroll plot of drainage areas and runoff calculations for each roadway
- 11"x 17" plan sheets for each roadway

- General Notes and Technical Specifications for each roadway
- Estimates and quantities, bid form for each roadway
- Temporary construction and drainage easement exhibits on 8.5"x 11" (if necessary)

Final Signed and Seal Submittal:

- 11"x 17" plan sheets for each roadway
- Temporary construction and drainage easement exhibits on 8.5"x 11" (if necessary)

Attachment C - Work Schedule

Attachment C - Work Schedule **Williamson County Small Drainage Projects Schedule**

Project: Williamson County
Small Drainage Projects - WA No. 1
Prepared By: Gray Engineering, Inc.
Date: July 13, 2022
Date Revised:

CR 283 From CR 284 to CR 282 (4,296')			Complete
50% Submittal	14	Days	8/15/2022
100% Submittal	9	Days	8/24/2022
Final Signed and Sealed Set	5	Days	8/29/2022
Total	28	Days	

Start 8/1/2022
End 8/29/2022

CR 381 from CR 301 to CR 300 (8,945')			Complete
50% Submittal	17	Days	9/15/2022
100% Submittal	12	Days	9/27/2022
Final Signed and Sealed Set	2	Days	9/29/2022
Total	31	Days	

Start 8/29/2022
End 9/29/2022

CR 496 from the North End to FM 1331 (2,542')			Complete
50% Submittal	14	Days	10/13/2022
100% Submittal	12	Days	10/25/2022
Final Signed and Sealed Set	2	Days	10/27/2022
Total	28	Days	

Start 9/29/2022
End 10/27/2022

CR 225 from the North End to CR 224 (18,197')			Complete
50% Submittal	32	Days	11/28/2022
100% Submittal	21	Days	12/19/2022
Final Signed and Sealed Set	8	Days	12/27/2022
Total	61	Days	

Start 10/27/2022
End 12/27/2022

CR 127 from CR 124 to CR 192 (14,800')			Complete
50% Submittal	27	Days	1/23/2023
100% Submittal	16	Days	2/8/2023
Final Signed and Sealed Set	6	Days	2/14/2023

Total 49 Days

Start 12/27/2022
End 2/14/2023

Hugh Smith Lane from the West End to CR 313 (3,254')			Complete
50% Submittal	14	Days	2/28/2023
100% Submittal	9	Days	3/9/2023
Final Signed and Sealed Set	5	Days	3/14/2023

Total 28 Days

Start 2/14/2023
End 3/14/2023

CR 445 from FM 619 to CR 448 (17,110')			Complete
50% Submittal	23	Days	4/6/2023
100% Submittal	19	Days	4/25/2023
Final Signed and Sealed Set	6	Days	5/1/2023

Total 48 Days

Start 3/14/2023
End 5/1/2023

Total Contract Time **Start** 8/1/2022
 End 5/1/2023 **273 Days**

Contract days assumes each individual road project design sequentially in the order listed above

Attachment D - Fee Schedule

WILCO Small Drainage Projects
Work Authorization No. 1
CR 283, CR 381, CR 496, CR 225, CR 127, CR 445, HUGH SMITH LN

Task	WILCO - Small Drainage Projects - WORK SHEET				Principal			Project Manager			Project Engineer		
	Sub Task	HRS	Rate	Total	HRS	Rate	Total	HRS	Rate	Total	HRS	Rate	Total
Project Management	Coordination	36	\$325.00	\$ 11,700.00	36	\$250.00	\$9,000.00	18	\$200.00		18	\$200.00	
	Site Visits	24	\$325.00	\$ 7,800.00	24	\$250.00	\$6,000.00	24	\$200.00		24	\$200.00	
	Monthly Progress Reports & Schedules	0	\$325.00	\$ -	36	\$250.00	\$9,000.00	0	\$200.00		0	\$200.00	
	Subtotal	60		\$ 19,500.00	96		\$24,000.00	42			42		
Preliminary Engineering	Import Base Information(WilCo)	0	\$325.00	\$ -	7	\$250.00	\$1,750.00	36	\$200.00		36	\$200.00	
	Preliminary Drainage & Culvert Analysis	28	\$325.00	\$ 9,100.00	168	\$250.00	\$42,000.00	140	\$200.00		140	\$200.00	
	50% Progress Set	14	\$325.00	\$ 4,550.00	28	\$250.00	\$7,000.00	56	\$200.00		56	\$200.00	
	Scroll Plot (1"=200')	0	\$325.00	\$ -	14	\$250.00	\$3,500.00	14	\$200.00		14	\$200.00	
	Subtotal	42		\$ 13,650.00	217		\$54,250.00	246			246		
Final Engineering	Culvert Analysis & Design	0	\$325.00	\$ -	56	\$250.00	\$14,000.00	93	\$200.00		93	\$200.00	
	100% Progress Set	21	\$325.00	\$ 6,825.00	56	\$250.00	\$14,000.00	56	\$200.00		56	\$200.00	
	Final Set	7	\$325.00	\$ 2,275.00	7	\$250.00	\$1,750.00	14	\$200.00		14	\$200.00	
	Quantities & Specifications	7	\$325.00	\$ 2,275.00	7	\$250.00	\$1,750.00	56	\$200.00		56	\$200.00	
	Engineer's Opinion of Probable Construction Costs	7	\$325.00	\$ 2,275.00	7	\$250.00	\$1,750.00	28	\$200.00		28	\$200.00	
	Easement Coordination	0	\$325.00	\$ -	7	\$250.00	\$1,750.00	7	\$200.00		7	\$200.00	
	Subtotal	42		\$ 13,650.00	140		\$35,000.00	254			254		
TOTAL		144		\$ 46,800.00	453		\$113,250.00	542			542		

Note: This Attachment D - Fee Schedule includes engineering services associated with all of the drainage improvements for the following County roadw

- 1. CR 283 – from CR 284 to CR 282 (4,296’)**
- 2. CR 345 – from CR 301 to CR 300 (8,945’)**
- 3. CR 496 – from the North End to FM 1331 (2,542’)**
- 4. CR 225 – from the North End to CR 224 (18,197’)**
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