

**WORK AUTHORIZATION NO. 3**

**PROJECT: Engineering Services for Intersection Improvements at Limmer Loop and CR 110. Adding Dedicated Right Turn Lanes from Limmer Loop to CR 110 (Westbound to Northbound), and from North Red Bud Ln to CR 110 (Eastbound to Southbound).**

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 LAN (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 \$80,410.00.

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, 2024. 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 Feb 6, 2024, 20\_\_\_\_.

ENGINEER:

Lockwood, Andrews and Newnam, Inc.

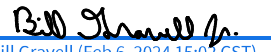
By:   
Signature

Travis Michel, P.E.  
Printed Name

Sr. Associate  
Title

COUNTY:

Williamson County, Texas

By:   
Signature

Bill Gravell  
Printed Name

County Judge  
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)
- Aerial background (photography) files
- Geotechnical investigations and pavement design
- Full topographical survey in .dgn format compatible with OpenRoads.
- Available recent bid tabs for development of the OPCC
- Right of Entry acquisition for adjacent properties if required
- The County will pay for any permit and license fees if required
- Construction oversight, administration, and management

## **Attachment B - Services to be Provided by Engineer**

### Project Locations:

- 1. Limmer Loop and CR 110. Adding Dedicated Right Turn Lanes from Limmer Loop to CR 110 (Westbound to Northbound), and from North Red Bud Ln to CR 110 (Eastbound to Southbound).**

#### Task 1: Project Management

Attend progress review meetings with Road & Bridge Division. Prepare monthly progress reports and invoices. Maintain project schedule and perform QA/QC. Coordinate with other consultants.

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

Full topographical survey to be provided by County's survey consultant.

#### Task 3: Preliminary Engineering

N/A

#### Task 4: Geotechnical Investigations and Pavement Design

To be provided by the County.

#### Task 5: Environmental Studies

N/A

#### Task 6: Utility Coordination

To be performed by County's consultant.

#### Task 7: FEMA Coordination

N/A

#### Task 8: Final Engineering

##### 8.1. Roadway Design:

8.1.1. Preliminary field work which includes identifying the boundaries of the project, assessing the slopes and conditions of ditches, and determining if there's a need to relocate roadway signs, among other tasks.

8.1.2. Roadway design and develop full PS&E for bid and construction purposes using TxDOT requirements. The plan set will encompass the following sheets:

- I. Title sheet (1 sheet),
- II. Project Layout (1 Sheet),
- III. Survey Control Sheet (To be provided by others)
- IV. Quantity Summary (1 sheet),
- V. Existing and proposed cross sections (1 sheet),
- VI. General Notes (1 Sheet),
- VII. Traffic control Plan (8 sheets)

- VIII. Removal sheets (3 sheets),
- IX. Plan and profile (3 sheets),
- X. Signing and Pavement Marking (3 sheets),
- XI. Cross Section Sheets at 50 ft intervals (2 sheets),
- XII. Relevant TxDOT standard details.

8.1.3. Develop the Opinion of Probable Construction Cost (OPCC).

## 8.2. Hydrologic & Hydraulic Analysis, and Construction Documents (Drainage Sheets)

8.2.1. Hydrologic Analysis: The contributing drainage basin to Limmer Loop and N Red Bed Lane Intersection will be delineated utilizing LiDAR, survey information, and GIS analysis. Small basins (less than 200 acre) will be analyzed using the rational method, while large basins will be analyzed using HEC-HMS.

8.2.2. Hydraulic Analysis: The proposed design includes the improvements of the existing ditch to accommodate roadway widening. The location of existing ditches will be collected through desktop analysis. Spreadsheet ditch calculations will be provided to analyze the existing parallel ditches on NE side of Limmer Loop and N Red Bed Lane Intersection. The goal of the drainage improvement is to achieve a 10-year capacity for parallel drainage ditches.

8.2.3. Design Plans: It is anticipated the following drawings will be included in Drainage sheets:

- I. Drainage Area Map (1 sheet)
- II. Hydrologic Calculations (1 sheet)
- IV. Parallel Ditches Plan Sheets (1 sheet)
- V. Ditch Calculations (1 sheet)

Task 9: Bidding Phase Services

N/A

Task 10: Construction Phase

N/A

### **Deliverables:**

50% Submittal:

- Scroll plot of drainage areas and runoff calculations
- 11"x17" plan sheets excluding the SW3P and Signing/Pavement Marking
- Estimates and quantities

90% Submittal:

- Scroll plot of drainage areas and runoff calculations
- 11"x17" plan sheets
- Technical Specifications
- Estimates and quantities

**100% (Final) Submittal:**

- Signed and sealed plan set
- Final OPCC

**Exclusions:**

The following items are excluded from LAN's scope of work but may be included as a Supplemental Service should the County request them:

1. Subconsultant services, including but not limited to: Surveying, Geotechnical Engineering, Pavement design, Environmental Consulting, Subsurface Utility Engineering (SUE), Traffic study, etc.
2. Utility coordination or relocations design.
3. Utility design to address water or wastewater conflicts with the proposed drainage improvements is not included in this scope.
4. ROW/Easement identification as all improvements shall be within the existing ROW.
5. Driveway culverts will not be analyzed in this scope. Driveway culverts will be relocated as needed to accommodate the roadway widening and will match existing condition or better.
6. Public involvement.
7. Permitting services.
8. Bid Phase services.
9. construction Phase services.
10. Develop record drawings.
11. Any other items not identified in the basic services.

### **Attachment C - Work Schedule**

Expected Notice to Proceed from Williamson County near February 12, 2024.

Milestone	Duration	Date Due
Notice to Proceed		February 12, 2024
50% Submittal	12 weeks	May 6, 2024
50% Review Comments returned	2 weeks	June 3, 2024
90% Submittal	4 weeks	July 1, 2024
90% Review Comments returned	2 weeks	August 12, 2024
100% (Final) Submittal	2 weeks	August 26, 2024

### **Attachment D - Fee Schedule**

The following tasks will be invoiced at the hourly rate for the personnel performing the tasks.  
The total amount for each task will not be exceeded without approval from the county.

Task 1 – Project Management	\$9,130.00
Task 8 – Final Engineering	\$71,280.00
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Total	\$80,410.00

### Work Authorization #3

Project: Intersection Improvements at Limmer Loop and CR 110. Adding Dedicated Right Turn Lanes from Limmer Loop to CR 100 (Westbound to Northbound) and from North Red Bud Ln to CR 100 (Eastbound to Southbound)

Project Name: Intersection Improvements at Limmer Loop and North Red Bud Ln Engineering Services	Total Task Hours	Total Task Cost	Project Principal	Project Manager	Project Engineer	Senior CAD Technician	Engineer - In - Training	Admin/ Clerical
			\$ 260.00	\$ 210.00	\$ 165.00	\$ 130.00	\$ 130.00	\$ 100.00
<b>Project Management and Setup</b>								
Project Management	24	\$ 4,160.00	0	16				8
Coordination with other Consultants	10	\$ 1,620.00		4			6	
Monthly Progress Meetings (6 meetings), Agenda & Meeting Minutes Preparation	17	\$ 3,350.00	1	10	6			
<b>Subtotal</b>	51	\$ 9,130.00	1	30	6	0	6	8
<b>Roadway Design</b>								
Field work (limits, striping, driveway, etc. identification)	10	\$ 1,600.00		2	4		4	
Prepare Plan Set (Full PS&E) (24 sheets + Survey Control Sheets + TxDOT Standards)	376	\$ 52,980.00		32	44	180	120	
Prepare Quantity Summary & OPCC	10	\$ 1,460.00		2		4	4	
Quality Control/Quality Assurance	14	\$ 3,240.00	6	8				
Mileage (\$0.655/mile) & Plan Production/Printing/Courier Services		\$ 200.00						
<b>Subtotal</b>	410	\$ 59,480.00	6	44	48	184	128	0
<b>Hydrologic &amp; Hydraulic Analysis, and Construction Documents (Drainage Sheets)</b>								
Data Collection (Hydrologic Analysis)	6	\$ 850.00			2		4	
Rational Method (Hydrologic Analysis)	6	\$ 850.00			2		4	
Parallel Ditch analysis (Hydraulic Analysis)	6	\$ 850.00			2		4	
Drainage Area Map (1 sheet)	15	\$ 2,055.00			3		12	
Hydrologic Calculation (1 sheet)	14	\$ 1,890.00			2		12	
Parallel Dith Plan sheet (1 sheet)	19	\$ 2,575.00			3		16	
Ditch Calculations (1 sheet)	14	\$ 1,890.00			2		12	
QC Review	4	\$ 840.00		4				
<b>Subtotal</b>	84	\$ 11,800.00	0	4	16	0	64	0
<b>Total Fee</b>		<b>\$ 80,410.00</b>						