

**WORK AUTHORIZATION NO. 4**

**PROJECT: Engineering Design Services for Finalizing Culvert Work on S CR 363,  
S CR 482, S CR 322 and S CR 323**

This Work Authorization is made pursuant to the terms and conditions of the Williamson County Contract for Engineering Services, being dated March 6, 2018 and entered into by and between Williamson County, Texas, a political subdivision of the State of Texas, (the "County") and **Pape-Dawson Engineers, 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 **\$10,000.00.**

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, 2020.** 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 23<sup>rd</sup> day of April, 2019.

ENGINEER:

Pape-Dawson Engineers, Inc.

By:   
Signature

Gilmer D. Gaston, P.E., PTOE  
Printed Name

Sr. Vice President  
Title

COUNTY:

Williamson County, Texas

By:   
Signature

Bill Gravell, Jr.  
Printed Name

Williamson 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

Pape-Dawson Consulting Engineers, Inc.  
Small Drainage and Roadway Design

Williamson County Road and Bridge  
1711-206  
Work Authorization 03

## **Attachment A**

### **Services to be Provided by County**

Williamson County Road & Bridge Division personnel will provide 2' LIDAR contours and aerial background, project direction, review and oversight.

## **Attachment B**

### **Services to be Provided by the Engineer**

#### Project Locations

1. **CR 363 S - From CR 360 to the County Line to FM 971**
2. **CR 482 S - From CR 481 to the County Line**
3. **CR 322 S - From CR 302 to FM 1105**
4. **CR 323 S – From CR 322 to CR 384**

#### Task 1: Project Management

Attend Progress Review Meetings with County Road & Bridge department at 50%, 100% and final, prepare monthly progress reports and invoices, maintain project schedule and perform QA/QC.

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

QA and process to use 2' LIDAR contours and aerial background provided by the County (see Attachment A) for preliminary and final engineering.

#### Task 3: Preliminary Engineering

Delineate drainage areas and perform runoff calculations for 5-yr, 10-yr, 25-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"=100') showing drainage area boundaries, time of concentration path, drainage area I.D., drainage areas (acres), with 2' LIDAR contours and aerial background provided by County. Provide table showing runoff calculation results.

#### Task 4: Geotechnical Investigation N/A

#### 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. Determine parallel driveway pipes and non-bridge class culverts in need of replacement due to condition, inadequate capacity, or safety treatment. Provide 11x17 Plan & Plan Layout sheets (1"=50') for proposed improvements to parallel driveway pipes and non-bridge class cross culverts showing roadway centerline, stationing, approximate ROW, 2' LIDAR contours provided by County and aerial background. Provide temporary construction and/or drainage easement sketches or exhibits (all easement acquisitions to be handled by the County).

Pape-Dawson Consulting Engineers, Inc.  
Small Drainage and Roadway Design

Williamson County Road and Bridge  
1711-206  
Work Authorization 03

Task 9: Bidding Phase Services N/A

Task 10: Construction Phase Services N/A

**Deliverables:**

50% Submittal:

- 2 copies of Scroll Plots of Drainage Areas and runoff calculations
- Quantity Summary and Estimate of Construction Cost
- Engineer's internal QA/QC marked up set

100% Submittal:

- 2 paper copies of 11" x 17" Plan Sheets
- Quantity Summary and Estimate of Construction Cost
- Temporary construction and/or drainage easement sketches and exhibits
- Engineer's internal QA/QC marked up set

Final Submittal:

- 2 paper copies of 11" x 17" Plan Sheets
- Quantity Summary and Estimate of Construction Cost
- Temporary construction and/or drainage easement sketches and exhibits
- Engineer's internal QA/QC marked up set

Electronic copy of submittal documents in PDF format on CD

### Attachment C - Work Schedule

Pape-Dawson shall provide a work schedule for the assigned tasks. Work shall begin immediately upon receipt of agreement between County and Pape-Dawson on the work schedule and authorization to proceed on assigned services.

Williamson County- Roadway Design 1711-206  
Work Authorization #3

FEE SUMMARY FOR PROFESSIONAL SERVICES

Project(s): Throughout WilCo (see listing below)  
 Prime Consultant: Pape-Dawson Engineers, Inc, Austin, Texas  
 Proposal Date: 4/23/2018  
 Prepared By: Howard Lyons (PM)

Scope of Work: Asphalt stabilize pavement (design by County) holding PGL, ditch & drainage  
 Location(s) of Work:  
 Project 3: CR 363S - West from CR 360 to County Line & east from County Line to CR 361/RM 971  
 Project 4: CR 482 N from CR 481 to County Line  
 Project 5: CR 322 S- from CR 302 to FM 1105  
 Project 6: CR 323 S- from CR 322 to CR 384

DESCRIPTION	TOTAL COST
TASK 1 - MANAGEMENT & COORDINATION	\$14,571.09
TASK 2 - COORDINATION OF SERVICES BY OTHERS	\$1,885.10
TASK 3 - PRELIMINARY ENGINEERING	\$65,312.51
TASK 8 - FINAL ENGINEERING	\$27,904.82
OTHER DIRECT EXPENSES	\$4,975.00
SUBTOTAL LABOR + EXPENSES	\$114,648.52

TASK DESCRIPTION	Vice President	Sr Mgr	Principal Engr	PM	Project Engr	Project Surveyor	Asst Mgr	Designer	EIT	GIS Analyst	Envs/Sci/Gof/Art	Envs/Sci/Gof/Art	Envs/Sci/Gof/Art	Envs/Sci/Gof/Art	Prof Coord	Technician	Clerical	TOTAL LABOR HRS. & COSTS
TASK 1 - MANAGEMENT & COORDINATION																		
PROJECT MANAGEMENT AND ADMINISTRATION																		
Monthly Progress Report	6		1	6	12		2	2	2									29
Maintain Project Schedules	2		1	4	2		1	1	1									11
Meetings with State (P/mt design, PS&E, AFA, etc)	2		1	2	2		1	1	1									10
Written & Electronic Correspondence				8	8													16
Meeting Minutes				16	8													16
Phone Calls/Conference Calls with Team Members	1		1	16	8		1	1	1									28
<b>HOURS SUB-TOTALS</b>	11	0	4	36	32	0	0	5	5	0	0	0	0	0	0	0	1	84
<b>CONTRACT RATE PER HOUR</b>	\$285.84	\$186.46	\$247.28	\$150.37	\$122.08	\$140.76	\$133.81	\$104.05	\$104.05	\$87.55	\$154.43	\$106.80	\$72.54	\$116.75	\$75.56	\$77.35	\$77.35	
<b>TOTAL LABOR COSTS</b>	\$3,144.24	\$0.00	\$989.12	\$5,413.32	\$3,906.56	\$0.00	\$0.00	\$520.25	\$520.25	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$77.35	\$14,571.09
<b>SUBTOTAL</b>																		\$14,571.09

SUMMARY	TOTAL COSTS FOR PRIME ONLY	GRAND TOTAL
	\$14,571.09	\$14,571.09

TASK DESCRIPTION	Vice President	Sr. Mgr	Principal Engr	PM	Project Engr	Project Surveyor	Asst Mgr	Designer	EIT	CIS Analyst	Env/Sal/Co/It	Env/Sal/Co/It	Env/Sal/Co/It	Prof Coord	Technician	Clinical	TOTAL LABOR HRS. & COSTS
<b>TASK 2 - COORDINATION OF SERVICES BY OTHERS</b>																	
Coord with County				1													1
Coord with Surveyor				1													1
Verification and QA			1	1	1												3
ROW verification QA			1	1	1												3
Design Survey				1	1												2
Locate utilities				1	1												2
<b>HOURS SUB-TOTALS</b>	0	0	2	6	4	0	0	0	0	0	0	0	0	0	0	0	12
<b>CONTRACT RATE PER HOUR</b>	\$285.84	\$186.46	\$247.28	\$190.37	\$122.08	\$140.76	\$133.81	\$104.05	\$104.05	\$87.55	\$72.54	\$72.54	\$72.54	\$716.75	\$75.56	\$77.35	
<b>TOTAL LABOR COSTS</b>	\$0.00	\$0.00	\$494.95	\$802.72	\$488.32	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,885.10
<b>SUB-TOTAL</b>																	
<b>SUMMARY</b>																	
<b>TOTAL COSTS FOR PRIME ONLY</b>																	\$1,885.10
<b>GRAND TOTAL</b>																	\$1,885.10

TASK DESCRIPTION	Vice President	Sr Mgr	Principal Engr	PM	Project Engr	Project Surveyor	Asst Mgr	Designer	BT	GIS Analyst	Env/Saf/Gd/Alt	Env/Saf/Gd/Alt	Env/Saf/Gd/Alt	Env/Saf/Gd/Alt	Prof Coord	Technician	Chemical	TOTAL LABOR HRS. & COSTS	
<b>TASK 3 - PRELIMINARY ENGINEERING</b>																			
<b>ROADWAY</b>																			
Front End Documents (Title, Index, E&Q, General Notes, etc.)																		0	
Typical Sections - Existing and Proposed																		0	
Horizontal Roadway Alignments				1	2			2	2									7	
Roadway Profiles																		0	
Street Cross Sections																		0	
Plan Sheets				4	20			20	20									64	
Driveway Summary Sheet																		0	
Metal Beam Guard Fence Evaluation																		0	
Preliminary cost estimates																		0	
Construction Phasing Typical Sections																		0	
Construction Phasing and Sequence of Work																		0	
Conceptual Construction Phasing Layouts																		0	
Intersection Layouts (Grading and Turning Movements)																		0	
Pavement Marking and Signing Plan																		0	
Selection of standards																		0	
Notes																		0	
<b>HOURS SUB-TOTALS</b>	0	0	0	5	22	0	0	22	22	0	0	0	0	0	0	0	0	71	
<b>CONTRACT RATE PER HOUR</b>	\$285.84	\$186.46	\$247.28	\$150.37	\$122.08	\$140.76	\$133.81	\$104.05	\$104.05	\$87.55	\$154.43	\$109.80	\$72.54	\$116.75	\$75.56	\$77.35	\$0.00	\$8,015.81	
<b>TOTAL LABOR COSTS</b>	\$0.00	\$0.00	\$0.00	\$751.85	\$2,695.76	\$0.00	\$0.00	\$2,289.10	\$2,289.10	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$8,015.81
<b>SUBTOTAL</b>																		\$8,015.81	
<b>COORDINATING WORK BY OTHERS</b>																			
Coordinate geotech, SUE, survey																		0	
Pavement Design																		0	
Utility coordination & layouts																		0	
CM/CC																		0	
<b>HOURS SUB-TOTALS</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>CONTRACT RATE PER HOUR</b>	\$285.84	\$186.46	\$247.28	\$150.37	\$122.08	\$140.76	\$133.81	\$104.05	\$104.05	\$87.55	\$154.43	\$109.80	\$72.54	\$116.75	\$75.56	\$77.35	\$0.00	\$0.00	
<b>TOTAL LABOR COSTS</b>	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
<b>SUBTOTAL</b>																		\$0.00	
<b>CULVERTS &amp; BRIDGES</b>																			
HAH																		0	
Site visits		24	24	24	24													96	
Watershed area		40	8					90	90									228	
Culvert analysis																		0	
Culvert Design		1		1	8			1	1									12	
<b>HOURS SUB-TOTALS</b>	0	55	32	25	32	0	0	91	91	0	0	0	0	0	0	0	0	325	
<b>CONTRACT RATE PER HOUR</b>	\$285.84	\$186.46	\$247.28	\$150.37	\$122.08	\$140.76	\$133.81	\$104.05	\$104.05	\$87.55	\$154.43	\$109.80	\$72.54	\$116.75	\$75.56	\$77.35	\$0.00	\$77.35	
<b>TOTAL LABOR COSTS</b>	\$0.00	\$12,119.90	\$7,972.96	\$3,759.25	\$3,906.56	\$0.00	\$0.00	\$9,468.55	\$9,468.55	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$46,635.77	
<b>SUBTOTAL</b>																		\$46,635.77	

TASK DESCRIPTION	Mgr. President	St. Mgr.	Principal Engr.	PM	Project Engr.	Project Survey	Asst. Mgr.	Designer	ERT	GIS Analyst	Engineer/Asst. Engineer	Estimator	Field	Truck/Trailer	Client	TOTAL LABOR HRS. & COSTS
<b>TASK 3 - PRELIMINARY ENGINEERING</b>																
<b>MISCELLANEOUS (ROADWAY):</b>																
Traffic Control Plan, Detours, Sequence of Construction Narrative																0
TCP																0
Stormwater Pollution Prevention Plans (SWPP)				1	2			1	1							5
EPIC Sheet																0
SWPP Narrative																0
SWPP Layout Sheet																0
Compute and Tabulate Quantities			1	6	6			4	4							25
Estimate																0
Contract time determination			1	6	6											0
Specifications and General Notes		4	4	4	4											17
Constructability Review																12
Internal QA/QC		4	4	4	2											10
<b>HOURS SUB-TOTALS</b>	6	8	10	23	18	6	0	5	5	0	0	0	0	0	0	89
<b>CONTRACT RATE PER HOUR</b>	\$285.84	\$188.46	\$247.88	\$150.97	\$72.08	\$146.76	\$133.81	\$104.03	\$104.03	\$87.35	\$72.64	\$72.64	\$72.64	\$72.64	\$72.64	\$10,560.93
<b>TOTAL LABOR COSTS</b>	\$1,711.70	\$1,491.88	\$2,478.88	\$3,472.51	\$1,297.44	\$868.66	\$0.00	\$526.23	\$520.15	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$10,560.93
<b>SUBTOTAL</b>																

<b>SUMMARY</b>	
TOTAL COSTS FOR PRIME ONLY	\$65,312.51
GRAND TOTAL	\$65,312.51

TASK DESCRIPTION	Vice President	Sr Mgr	Principal Engr	PM	Project Engr	Project Surveyor	Asst Mgr	Designer	BT	GIS Analyst	Envs&Soil/Air	Envs&Soil/W	Envs&Soil/Gol	Prof Coord	Technician	Clerical	TOTAL LABOR HRS. & COSTS
<b>TASK 9 - FINAL ENGINEERING ROADWAY</b>																	
Front End Documents (Title, Index, E&Q, General Notes, etc.)																	0
Typical Sections - Existing and Proposed					1												0
Horizontal Roadway Alignments																	1
Roadway Profiles																	0
Street Cross Sections																	0
Plan Sheets				1	10			10	10								31
Driveway Summary Sheet																	0
Metal Beam Guard Fence Evaluation																	0
Final Quantities			4	2	2			2	2								12
Construction Phasing Typical Sections																	0
Construction Phasing and Sequence of Work																	0
Intersection Layouts (Grading and Turning Movements)																	0
Pavement Marking and Signing Plan																	0
Selection of standards																	0
<b>HOURS SUB-TOTALS</b>	0	0	4	3	13	0	0	12	12	0	0	0	0	0	0	0	44
<b>CONTRACT RATE PER HOUR</b>	\$285.84	\$186.46	\$247.28	\$150.37	\$122.08	\$140.76	\$133.81	\$104.05	\$104.05	\$87.55	\$109.80	\$72.54	\$116.75	\$75.56	\$77.35	\$0.00	\$5,524.47
<b>TOTAL LABOR COSTS</b>	\$0.00	\$0.00	\$599.12	\$451.11	\$1,597.04	\$0.00	\$0.00	\$1,248.60	\$1,248.60	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$5,524.47
<b>SUBTOTAL</b>																	\$5,524.47
<b>COORDINATING WORK BY OTHERS</b>																	
Coordinate geotech, SUE, survey																	0
Pavement Design																	0
Utility coordination & layouts																	0
QA/QC																	0
<b>HOURS SUB-TOTALS</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>CONTRACT RATE PER HOUR</b>	\$285.84	\$186.46	\$247.28	\$150.37	\$122.08	\$140.76	\$133.81	\$104.05	\$104.05	\$87.55	\$109.80	\$72.54	\$116.75	\$75.56	\$77.35	\$0.00	\$0.00
<b>TOTAL LABOR COSTS</b>	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>SUBTOTAL</b>																	\$0.00
<b>CULVERTS &amp; BRIDGES</b>																	
H&H																	0
Site visits			8	8	8												24
Watershed area																	0
culvert analysis		10	2	4				20	20								56
Culvert Design																	0
		2	2	2	20			8	8								42
<b>HOURS SUB-TOTALS</b>	0	12	12	14	28	0	0	28	28	0	0	0	0	0	0	0	122
<b>CONTRACT RATE PER HOUR</b>	\$285.84	\$186.46	\$247.28	\$150.37	\$122.08	\$140.76	\$133.81	\$104.05	\$104.05	\$87.55	\$109.80	\$72.54	\$116.75	\$75.56	\$77.35	\$0.00	\$16,655.10
<b>TOTAL LABOR COSTS</b>	\$0.00	\$2,237.52	\$2,967.36	\$2,105.16	\$3,416.24	\$0.00	\$0.00	\$2,913.40	\$2,913.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$16,655.10
<b>SUBTOTAL</b>																	\$16,655.10

Attachment D

Prime Provider: Pope-Dawson Engineers, Inc.

TASK DESCRIPTION	Vice President	Sr. Mgr.	Principal Engr.	PM	Project Engr.	Proj. Surveyor	Asst. Mgr.	Designer	BT	GIS Analyst	Envs/Sci/Gol/Alt	Envs/Sci/Gol/Env/Sci/Gol	Proj. Coord	Technician	Clerical	TOTAL LABOR HRS. & COSTS
<b>TASK 8 - FINAL ENGINEERING</b>																
MISCELLANEOUS (ROADWAY)																0
Traffic Control Plan, Detours, Sequence of Construction Narrative																0
Temp Const Easements / Drainage Easements- Provide exhibits / schetchs									3					6		14
EPIC Sheet																0
SW3P Narrative																0
SW3P Layout Sheet																0
Compute and Tabulate Quantities			1	2	8			4	4							19
Estimate																0
Contract time determination																0
Specifications and General Notes																0
Constructability Review																0
Internal QA/QC		4	4	2												10
<b>HOURS SUB-TOTALS</b>	0	4	5	6	11	0	0	4	7	0	0	0	0	6	0	43
CONTRACT RATE PER HOUR	\$285.84	\$186.46	\$247.28	\$150.37	\$122.08	\$140.76	\$133.81	\$104.05	\$104.05	\$87.55	\$154.43	\$72.54	\$116.75	\$75.56	\$77.35	\$77.35
TOTAL LABOR COSTS	\$0.00	\$745.84	\$1,296.40	\$902.22	\$1,342.88	\$0.00	\$0.00	\$416.20	\$726.35	\$0.00	\$0.00	\$0.00	\$0.00	\$453.36	\$0.00	\$5,395.56
<b>SUBTOTAL</b>																\$5,395.56

<b>SUMMARY</b>	
TOTAL COSTS FOR PRIME ONLY	\$27,804.82
GRAND TOTAL	\$37,819.88

Prime Provider: Pape-Dawson Engineers, Inc.

**Attachment D**

Contract No. 1711-206

Work Authorization No. 3

OTHER DIRECT EXPENSES	UNIT	RATE	Quantity	Total
MILEAGE	MI	0.540	5000	\$ 2,700.00
CORRESPONDENCE	PAGE	\$1.00	25	\$ 25.00
COPIES	PAGE	\$0.50	4500	\$ 2,250.00
<b>TOTAL OTHER DIRECT EXPENSES</b>				<b>\$ 4,975.00</b>