

WORK AUTHORIZATION NO. 9

**PROJECT: Engineering Design Services for Roadway and Drainage Improvements in
Durham Park Subdivision Phase 2A and 2B**

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 **Alliance Transportation Group** (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 **\$198,917.50**

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 **June 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 _____, 2021.

ENGINEER:

Alliance Transportation Group

By: 
Signature

Clint Jumper
Printed Name

Senior 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

Attachment A - Services to be Provided by County

Please see next page.

Attachment A

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

Please see next pages.

Attachment B

Services to be Provided by the Engineer

Project Locations:

- 1. Durham Park Subdivision Phase 2A – Cooks Crossing**
- 2. Durham Park Subdivision Phase 2A – Mayeye Road**
- 3. Durham Park Subdivision Phase 2A – Owen Pass**
- 4. Durham Park Subdivision Phase 2A – Rowlett Road**
- 5. Durham Park Subdivision Phase 2A – Shin Oak Lane**
- 6. Durham Park Subdivision Phase 2B – Glasscock Rd**
- 7. Durham Park Subdivision Phase 2B – Huling Bend**
- 8. Durham Park Subdivision Phase 2B – Westfall Trail**

Task 1: Project Management

- 1.1 Attend Progress Review Meetings with County Road & Bridge Department at Kickoff (DSR), 50%, 90% and Final
- 1.2 Prepare monthly progress reports and invoices
- 1.3 Subconsultants - OMITTED
- 1.3 Maintain project schedule and perform QA/QC of Deliverables at Preliminary Engineering, 50%, 90% and FINAL

Task 2: Topographic and R.O.W Surveys

N/A - To be provided by the County

Task 3: Preliminary Engineering

- 3.1 Conduct Site Visit and Field Reconnaissance
- 3.2 Data Collection of available Durham Park Subdivision as-builts and GIS information to document existing conditions
- 3.3 Prepare and submit to the County for their review and approval a preliminary Design Summary Report (DSR) to establish project basic features and design criteria
- 3.4 Develop Conceptual Geometric Layout on scroll plot (1"=20' H, 1"=2' V) showing roadway horizontal and vertical geometry and proposed Typical Sections.
- 3.5 Prepare Preliminary Cross-Sections (50' interval and Driveways).
- 3.6 Develop preliminary drainage analysis including delineation of drainage areas, calculation of peak stormwater runoff rates for 5-yr, 10-yr, and 25-yr storm events.

Task 4: Geotechnical Investigations

N/A - To be provided by the County

Task 5: Environmental Studies

N/A

Task 6: Utility Coordination

N/A

Task 7: FEMA Coordination

N/A

Task 8: Final Engineering (8 Roads)

Prepare final detailed design and PS&E for proposed improvements. Calculate ditch capacity and analyze driveway pipes as well cross culverts.

8.1 Plan Sheets:

- Title Sheet
- Estimate & Quantity Sheet
- Typical Sections
- Horizontal and Vertical Alignment Data Sheets
- Project Layout
- Drainage Area Map
- Hydraulic Calculations
- Erosion Control Plan
- TCP Narrative
- TCP Layouts
- TCP Details
- Utility Conflicts
- Driveway Details
- Driveway Summary
- Roadway Plan & Profile (1"=50')
- Miscellaneous Roadway Details
- Cross Culvert Layouts
- Cross Sections (50' intervals and Driveways)
- Standards

8.2 Specifications

8.3 General Notes

8.4 Construction Cost Estimate

8.5 Construction Time Determination Schedule

Task 9: Bidding Phase Services

9.1 Prepare Bid-Tabs for processing by Purchasing Department.

Task 10: Construction Phase Services

10.1 Review shop drawings and respond to contractor RFIs

10.2 Prepare electronic as-built final drawings for the County based on construction red-lines provided by the County

Deliverables:

50% Submittal:

- 2 paper copies of 11" x 17" 50% Plan Sheets
- Draft Specifications
- Draft General Notes
- Preliminary Construction Cost Estimate
- Engineer's internal QA/QC marked up set

90% Submittal:

- 2 paper copies of 11" x 17" 90% Plan Sheets
- Draft Final Specifications
- Draft Final General Notes
- Draft Final Construction Cost Estimate
- Engineer's internal QA/QC marked up set

Final Submittal:

- 2 paper copies of 11" x 17" Final Plan Sheets
- Final Specifications
- Final General Notes
- Final Construction Cost Estimate
- Construction Time Determination Schedule
- Engineer's internal QA/QC marked up set
- Electronic copy of submittal documents in PDF format on CD
- Electronic native Microstation Design files

Attachment C - Work Schedule

Please see next page.

ID		Task Mode	Task Name	Duration	Start	Finish	Predecessors	Successors	21 Sep	Qtr 4, 2021	Qtr 1, 2022	Qtr 2, 2022	Qtr 3, 2022	Qtr 4, 2022	Qtr 1, 2023											
									Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
1			Durham Park Subdivision- Notice to Proceed	0 days	Wed 10/20/21	Wed 10/20/21		2,4																		
2			Survey (by others)	5 days	Wed 10/20/21	Tue 10/26/21	1																			
3			Task 3: Preliminary Engineering	43 days	Wed 10/20/21	Fri 12/17/21																				
4			Site visit and Field Recon	2 days	Wed 10/20/21	Thu 10/21/21	1	5																		
5			Data Collection	2 days	Fri 10/22/21	Mon 10/25/21	4	6																		
6			Design Summary Report	1 day	Tue 10/26/21	Tue 10/26/21	5	7																		
7			Conceptual Geometric Layout	10 days	Wed 10/27/21	Tue 11/9/21	6	8SS+5 days,9																		
8			Preliminary Cross-Sections	20 days	Wed 11/3/21	Tue 11/30/21	7SS+5 days																			
9			Preliminary Drainage Analysis	15 days	Wed 11/10/21	Tue 11/30/21	7	10																		
10			QC/QA	3 days	Wed 12/1/21	Fri 12/3/21	9	12,11																		
11			Submit Preliminary Engineering Deliverable	0 days	Fri 12/3/21	Fri 12/3/21	10	35																		
12			WILCO Review	10 days	Mon 12/6/21	Fri 12/17/21	10	16																		
13			Task 8: Final Engineering (8 Roads)	95 days	Mon 1/3/22	Fri 5/13/22																				
14			50% PS&E	51 days	Mon 1/3/22	Mon 3/14/22																				
15			50% Plan Sheets	33 days	Mon 1/3/22	Wed 2/16/22																				
16			Address WILCO Review Comments	2 days	Mon 1/3/22	Tue 1/4/22	12	17,24,25																		
17			Roadway Model	12 days	Wed 1/5/22	Thu 1/20/22	16	22SS+8 days,26,20,21																		
18			Drainage Area Maps	3 days	Fri 1/21/22	Tue 1/25/22	17	19																		
19			Hydraulic Calculations	4 days	Wed 1/26/22	Mon 1/31/22	18																			
20			Title Sheet	1 day	Fri 1/21/22	Fri 1/21/22	17																			
21			Project Layout	1 day	Fri 1/21/22	Fri 1/21/22	17																			
22			Typical Sections	5 days	Mon 1/17/22	Fri 1/21/22	17SS+8 days																			
23			TCP Narrative, Layouts & Details	10 days	Fri 1/21/22	Thu 2/3/22	17																			
24			Erosion Control Plan	20 days	Wed 1/5/22	Tue 2/1/22	16																			
25			Utility Conflicts	20 days	Wed 1/5/22	Tue 2/1/22	16																			
26			Roadway Plan & Profile (1"=50')	15 days	Fri 1/21/22	Thu 2/10/22	17	29,27,30																		
27			Miscellaneous Roadway Details	2 days	Fri 2/11/22	Mon 2/14/22	26	28																		
28			Driveway Details & Summary	2 days	Tue 2/15/22	Wed 2/16/22	27																			
29			Cross Culvert Layouts	4 days	Fri 2/11/22	Wed 2/16/22	26	31																		
30			Cross-Sections (50' intervals and driveways)	2 days	Fri 2/11/22	Mon 2/14/22	26																			
31			Preliminary Specs and General Notes	2 days	Thu 2/17/22	Fri 2/18/22	29	32																		
32			Preliminary Construction Cost Estimate	1 day	Mon 2/21/22	Mon 2/21/22	31	33																		
33			QC/QA	5 days	Tue 2/22/22	Mon 2/28/22	32	34																		
34			Submit 50% PS&E	0 days	Mon 2/28/22	Mon 2/28/22	33	35																		
35			WILCO Review	10 days	Tue 3/1/22	Mon 3/14/22	34,11	38																		
36			90% PS&E	36 days	Tue 3/15/22	Tue 5/3/22																				
37			90% Plan Sheets	17 days	Tue 3/15/22	Wed 4/6/22																				

Project: Durham Park Blank
Date: Tue 10/12/21

Task

Split

Milestone

Summary

Project Summary

Inactive Task

Inactive Milestone

Inactive Summary

Manual Task

Duration-only

Manual Summary Rollup

Manual Summary

Start-only

Finish-only

External Tasks

External Milestone

Deadline

Progress

Manual Progress

Page 1

Attachment D - Fee Schedule

Please see next pages.

Task Description	Project Principal	Senior Project Manager	Project Manager	Hydraulic Engineer	Senior Engineer	Project Engineer	Engineer -In- Training	Senior Engineering Technician	Engineering Technician	Project Administrator	Clerical	Total Labor Hours & Costs
Task 1: Project Management												
1.1 Progress Review Meetings (4 meetings: Kickoff, 50%, 90% & Final)			9				3					12
1.2 Invoicing and Progress Reports (6 months)			8							8	8	24
1.3 Subconsultants (OMITTED)												0
1.41 QA/QC of Kickoff DSR and Deliverables at Preliminary Engineering		16	16	4			8					44
1.42 QA/QC of Preliminary Engineering 50% Deliverables		16	8	4			16					44
1.43 QA/QC of Preliminary Engineering 90% Deliverables		8	4	2			12					26
1.44 QA/QC of Preliminary Engineering Final Deliverables		4	2	2			8					16
Labor Hours Subtotal	0	44	47	12	0	0	47	0	0	8	8	166
Contract Labor Rate Per Hour	\$ 265.00	\$ 244.00	\$ 230.00	\$ 210.00	\$ 205.00	\$ 160.00	\$ 115.00	\$ 133.00	\$ 92.00	\$ 104.00	\$ 85.00	
Labor Costs Subtotal	\$ -	\$ 10,736.00	\$ 10,810.00	\$ 2,520.00	\$ -	\$ -	\$ 5,405.00	\$ -	\$ -	\$ 832.00	\$ 680.00	\$ 30,983.00

Task Description	Project Principal	Senior Project Manager	Project Manager	Hydraulic Engineer	Senior Engineer	Project Engineer	Engineer -In- Training	Senior Engineering Technician	Engineering Technician	Project Administrator	Clerical	Total Labor Hours & Costs
Task 2: Topographic and R.O.W. Surveys												
N/A												0
Labor Hours Subtotal	0	0	0	0	0	0	0	0	0	0	0	0
Contract Labor Rate Per Hour	\$ 265.00	\$ 244.00	\$ 230.00	\$ 210.00	\$ 205.00	\$ 160.00	\$ 115.00	\$ 133.00	\$ 92.00	\$ 104.00	\$ 85.00	
Labor Costs Subtotal	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Task Description	Project Principal	Senior Project Manager	Project Manager	Hydraulic Engineer	Senior Engineer	Project Engineer	Engineer -In- Training	Senior Engineering Technician	Engineering Technician	Project Administrator	Clerical	Total Labor Hours & Costs
Task 3: Preliminary Engineering												
3.1 Site Visit & Field Recon				4		4						8
3.2 Data Collection				4			8					12
3.3 Design Summary Report (DSR)			4				4					8
3.4 Conceptual Geometric Layout and DSR												
Scroll Plot with Plan & Profile (H: 1"=20', V: 1"=2')			4			8	28					40
Typical Sections			2				4					6
3.5 Cross-Sections (50' intervals and driveways)			8			24	40					72
3.6 Preliminary Drainage Analysis												
Delineate Drainage Area				12			12					24
Calculate Peak Stormwater Runoff Rates (5 yr, 10 yr, 25 yr)				12			4					16
Labor Hours Subtotal	0	0	18	32	0	36	100	0	0	0	0	186
Contract Labor Rate Per Hour	\$ 265.00	\$ 244.00	\$ 230.00	\$ 210.00	\$ 205.00	\$ 160.00	\$ 115.00	\$ 133.00	\$ 92.00	\$ 104.00	\$ 85.00	
Labor Costs Subtotal	\$ -	\$ -	\$ 4,140.00	\$ 6,720.00	\$ -	\$ 5,760.00	\$ 11,500.00	\$ -	\$ -	\$ -	\$ -	\$ 28,120.00

Task Description	Project Principal	Senior Project Manager	Project Manager	Hydraulic Engineer	Senior Engineer	Project Engineer	Engineer -In- Training	Senior Engineering Technician	Engineering Technician	Project Administrator	Clerical	Total Labor Hours & Costs
Task 4: Geotechnical Investigation												
N/A												0
Labor Hours Subtotal	0	0	0	0	0	0	0	0	0	0	0	0
Contract Labor Rate Per Hour	\$ 265.00	\$ 244.00	\$ 230.00	\$ 210.00	\$ 205.00	\$ 160.00	\$ 115.00	\$ 133.00	\$ 92.00	\$ 104.00	\$ 85.00	
Labor Costs Subtotal	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Task Description	Project Principal	Senior Project Manager	Project Manager	Hydraulic Engineer	Senior Engineer	Project Engineer	Engineer -In- Training	Senior Engineering Technician	Engineering Technician	Project Administrator	Clerical	Total Labor Hours & Costs
Task 5: Environmental Studies												
N/A												0
Labor Hours Subtotal	0	0	0	0	0	0	0	0	0	0	0	0
Contract Labor Rate Per Hour	\$ 265.00	\$ 244.00	\$ 230.00	\$ 210.00	\$ 205.00	\$ 160.00	\$ 115.00	\$ 133.00	\$ 92.00	\$ 104.00	\$ 85.00	
Labor Costs Subtotal	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Task Description	Project Principal	Senior Project Manager	Project Manager	Hydraulic Engineer	Senior Engineer	Project Engineer	Engineer -In- Training	Senior Engineering Technician	Engineering Technician	Project Administrator	Clerical	Total Labor Hours & Costs
Task 6: Utility Coordination												
N/A												0
Labor Hours Subtotal	0	0	0	0	0	0	0	0	0	0	0	0
Contract Labor Rate Per Hour	\$ 265.00	\$ 244.00	\$ 230.00	\$ 210.00	\$ 205.00	\$ 160.00	\$ 115.00	\$ 133.00	\$ 92.00	\$ 104.00	\$ 85.00	
Labor Costs Subtotal	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Task Description	Project Principal	Senior Project Manager	Project Manager	Hydraulic Engineer	Senior Engineer	Project Engineer	Engineer -In- Training	Senior Engineering Technician	Engineering Technician	Project Administrator	Clerical	Total Labor Hours & Costs
Task 7: FEMA Coordination												
N/A												0
Labor Hours Subtotal	0	0	0	0	0	0	0	0	0	0	0	0
Contract Labor Rate Per Hour	\$ 265.00	\$ 244.00	\$ 230.00	\$ 210.00	\$ 205.00	\$ 160.00	\$ 115.00	\$ 133.00	\$ 92.00	\$ 104.00	\$ 85.00	
Labor Costs Subtotal	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Task Description	Project Principal	Senior Project Manager	Project Manager	Hydraulic Engineer	Senior Engineer	Project Engineer	Engineer -In- Training	Senior Engineering Technician	Engineering Technician	Project Administrator	Clerical	Total Labor Hours & Costs
Task 8: Final Engineering (8 Roads) (50%, 90% & Final Submittals)												
8.1 Plan Sheets												0
Title Sheet			4	0		0	5					9
Estimate & Quantity Sheet			4	0		10	18					32
Typical Sections			5	0		9	12					26
Horizontal and Vertical Alignment Data Sheets			1	0		2	8					11
Project Layout			3	0		2	12					17
Drainage Area Map			0	21		0	33					54
Hydraulic Calculations			0	22		0	34					56
Traffic Control Plan Narrative			5	0		12	10					27
Traffic Control Plan Layouts			10	0		28	60					98
Traffic Control Plan Details			3	0		2	19					24
Erosion Control Plan			5	0		20	36					61
Utility Conflicts			4	0		20	48					72
Driveway Details			0	0		8	14					22
Driveway Summary			1	0		4	10					15
Roadway Plan & Profile (1"=50')			28	0		64	104					196
Cross Culvert Layouts (Assume 2)			0	10		0	29					39
Cross-Sections (50' intervals and Driveways)			0	4		24	56					84
Standards			0	0		2	2					4
8.2 Specifications			2	0		6	8					16
8.3 General Notes			2	0		4	0					6
8.4 Construction Cost Estimate			2	0		8	10					20
8.5 Construction Time Determination Schedule			1	0		6	0					7
			0	0		0	0					
Labor Hours Subtotal	0	0	80	57	0	231	528	0	0	0	0	896
Contract Labor Rate Per Hour	\$ 265.00	\$ 244.00	\$ 230.00	\$ 210.00	\$ 205.00	\$ 160.00	\$ 115.00	\$ 133.00	\$ 92.00	\$ 104.00	\$ 85.00	
Labor Costs Subtotal	\$ -	\$ -	\$ 18,400.00	\$ 11,970.00	\$ -	\$ 36,960.00	\$ 60,720.00	\$ -	\$ -	\$ -	\$ -	\$ 128,050.00

Task Description	Project Principal	Senior Project Manager	Project Manager	Hydraulic Engineer	Senior Engineer	Project Engineer	Engineer -In- Training	Senior Engineering Technician	Engineering Technician	Project Administrator	Clerical	Total Labor Hours & Costs
Task 9: Bidding Phase Services												
9.1 Prepare Bid Tabs			8	8			16				2	34
Labor Hours Subtotal	0	0	8	8	0	0	16	0	0	0	2	34
Contract Labor Rate Per Hour	\$ 265.00	\$ 244.00	\$ 230.00	\$ 210.00	\$ 205.00	\$ 160.00	\$ 115.00	\$ 133.00	\$ 92.00	\$ 104.00	\$ 85.00	
Labor Costs Subtotal	\$ -	\$ -	\$ 1,840.00	\$ 1,680.00	\$ -	\$ -	\$ 1,840.00	\$ -	\$ -	\$ -	\$ 170.00	\$ 5,530.00

Task Description	Project Principal	Senior Project Manager	Project Manager	Hydraulic Engineer	Senior Engineer	Project Engineer	Engineer -In- Training	Senior Engineering Technician	Engineering Technician	Project Administrator	Clerical	Total Labor Hours & Costs
Task 10: Construction Phase Services												
10.1 Review Shop Drawings and RFIs (Assume 2 RFIs)			6				8				2	16
10.2 Project closeout, As-Builts and submittal of electronic files			4				16			2	2	24
Labor Hours Subtotal	0	0	10	0	0	0	24	0	0	2	4	40
Contract Labor Rate Per Hour	\$ 265.00	\$ 244.00	\$ 230.00	\$ 210.00	\$ 205.00	\$ 160.00	\$ 115.00	\$ 133.00	\$ 92.00	\$ 104.00	\$ 85.00	
Labor Costs Subtotal	\$ -	\$ -	\$ 2,300.00	\$ -	\$ -	\$ -	\$ 2,760.00	\$ -	\$ -	\$ 208.00	\$ 340.00	\$ 5,608.00

DESCRIPTION											TOTAL MH BY TASK	TOTAL COST BY TASK
Task 1: Project Management											166	\$ 30,983.00
Task 2: Topographic and R.O.W. Surveys											0	\$ -
Task 3: Preliminary Engineering											186	\$ 28,120.00
Task 4: Geotechnical Investigation											0	\$ -
Task 5: Environmental Studies											0	\$ -
Task 6: Utility Coordination											0	\$ -
Task 7: FEMA Coordination											0	\$ -
Task 8: Final Engineering (8 Roads) (50%, 90% & Final Submittals)											896	\$ 128,050.00
Task 9: Bidding Phase Services											34	\$ 5,530.00
Task 10: Construction Phase Services											40	\$ 5,608.00
SUBTOTAL LABOR COST											1322	\$ 198,291.00

DIRECT EXPENSES

Description	Unit	Cost/Unit	Quantity	Total Cost
Mileage	mile	\$ 0.535		\$ -
Standard Postage - Letter	each	\$ 0.50		\$ -
Certified Letter Return Receipt	each	\$ 6.70		\$ -
Overnight Mail - Letter Size	each	\$ 25.00		\$ -
Overnight Mail - Oversized Box	each	\$ 30.00		\$ -
Courier Services	each	\$ 50.00		\$ -
Photocopies B/W (8 1/2" x 11")	each	\$ 0.25	150	\$ 37.50
Photocopies B/W (11" x 17")	each	\$ 0.50	600	\$ 300.00
Photocopies Color (8 1/2" x 11")	each	\$ 1.00		\$ -
Photocopies Color (11" x 17")	each	\$ 2.00		\$ -
Plots (B/W on Bond)	square foot	\$ 6.00		\$ -
Plots (Color on Bond)	square foot	\$ 8.00	36	\$ 288.00
CDs	each	\$ 0.50	2	\$ 1.00
SUBTOTAL DIRECT EXPENSES				\$ 626.50

SUMMARY	
SUBTOTAL LABOR COST	\$ 198,291.00
SUBTOTAL DIRECT EXPENSE	\$ 626.50
TOTAL	\$ 198,917.50