



**SUPPLEMENTAL WORK AUTHORIZATION NO. 1  
TO  
WORK AUTHORIZATION NO. 2**

**WILLIAMSON COUNTY ROAD BOND PROJECT:**

TH 35 Frontage Road Conversions  
(Bud Stockert Loop to FM 972)

This Supplemental Work Authorization No. 1 to Work Authorization No. 2 is made pursuant to the terms and conditions of the Williamson County Contract for Engineering Services, being dated October 10, 2014 ("Contract") and entered into by and between Williamson County, Texas, a political subdivision of the State of Texas, (the "County") and Binkley & Barfield, Inc. (the "Engineer").

WHEREAS, the County and the Engineer executed Work Authorization No. 2 dated effective December 8, 2015 (the "Work Authorization");

WHEREAS, pursuant to Article 14 of the Contract, amendments, changes and modifications to a fully executed Work Authorization shall be made in the form of a Supplemental Work Authorization; and

WHEREAS, it has become necessary to amend, change and modify the Work Authorization.

**AGREEMENT**

NOW, THEREFORE, premises considered, the County and the Engineer agree that the Work Authorization shall be amended, changed and modified as follows:

- II. The Services to be Provided by the Engineer that were set out in the original Attachment "B" of the Work Authorization are hereby amended, changed and modified as shown in the attached revised Attachment "B" (must be attached).
  
- III. The Work Authorization shall terminate on December 31, 2019. The Services to be Provided by the Engineer shall be fully completed on or before said date unless extended by an additional Supplemental Work Authorization. The revised Work Schedule is attached hereto as Attachment "C" (must be attached).
  
- IV. The maximum amount payable for this Work Authorization is increased from \$1,400,478 to \$1,739,752.

Except as otherwise amended by prior or future Supplemental Work Authorizations, all other terms of the Work Authorization are unchanged and will remain in full force and effect.

This Supplemental Work Authorization does not waive the parties' responsibilities and obligations provided under the Contract.

**IN WITNESS WHEREOF**, the County and the Engineer have executed this Supplemental Work Authorization, in duplicate, to be effective as of the date of the last party's execution below.

**ENGINEER:**

By:   
Signature

Brian Rice  
Printed Name

Vice President  
Title

9/11/17  
Date

**COUNTY:**

By: \_\_\_\_\_  
Signature

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

*OK  
my 9/12/2017*

**LIST OF ATTACHMENTS**

Attachment B - Services to be Provided by Engineer

Attachment C - Work Schedule

Attachment D - Fee Schedule

## Attachment B - Services to be provided by Engineer

The general tasks below, not in the original scope of work, are proposed to be added to this WA:

- **Prior Modifications:**

- Additional ramps preliminary design: We were asked to design two additional ramps south of Bud Stockton (SB entrance ramp and NB exit ramp) that were not part of the original schematic during the preliminary design phases. TxDOT requested later for the ramps to be removed from the Schematic and PS&E (*added Jan 2016 / removed May 2016*).
- Ramp spacing modifications to address FHWA's comments: The initial scope was developed per the 2005 conceptual schematic provided by TxDOT. The initial ramp spacing was based on the 2005 schematic and design development followed the minimum RDM requirements for 3-lanes on IH-35. After the initial layout TxDOT requested the new ramps to be laid out based on Ultimate Gore locations; a 60 MPH design speed for the ramps; no auxiliary lanes between ramp connections; 2,000 ft. spacing between ramps; a future 5-lane interstate section with an additional outside auxiliary lane; and a planned widening for future C-D roads was also evaluated and accommodated for in the current design (*March 2016*).
- Ramp RSX1 relocation: The RSX1 ramp was designed in accordance with the 2005 schematic location. It was later relocated further north (400 ft.) to accommodate a TxDOT request in response to public comments and two additional driveways were added to the schematic and PS&E after the March 2016 submittal (*Aug 2016*).

### 1. Assessment & Evaluation for Design Exceptions / Waivers / Variances

- **New Tasks:**

- Alternative analyses at Bud Stockton and at CR 143 to provide auxiliary lanes between entrance and exit ramps at Bud Stockton and at CR 143. TxDOT requested that several alternatives be developed at these two locations including cost estimates and safety analyses in response to TxDOT's request to decide whether an auxiliary lane could be added between ramps.
- NB and SB Frontage Road profiles: A best-fit analysis will be conducted to review the existing vertical curve profiles based on a 40 MPH design speed and to ascertain whether they meet current TxDOT design standards.
- Mainlane best-fit or as-built existing profile analysis against the existing TxDOT RDM criteria for the full length of the project and adjacent to ramp connections and new auxiliary lanes. TxDOT has requested the existing profiles to be added to the schematic in areas outside the limits of the ramp tie-ins.

- NB and SB Frontage Road Cross-Slope Analysis: The analysis will review the existing and proposed frontage road cross-slopes outside the limits of the ramp tie-in locations.

## 2. Design Exception and Waivers Development

- The Engineer shall prepare a Request for each Design Exception and Waiver identified.
  - Auxiliary lanes at the CR 143 Bridge: The addition of a NB and SB auxiliary lane at the bridge, accomplished by widening I-35 pavement and restriping to narrow the existing inside shoulder. This work will include construction of a vehicle deflection wall at the outside pier columns of the bridge. A TxDOT standard to will be used for the design of the deflection wall. Per TxDOT, the following section will be used: 4' inside shoulders (2' at bridge), 12' lanes & 10' outside shoulder.
  - NB and SB Frontage Road shoulders: The analysis will review the existing and present design standard shoulder widths on the frontage roads outside the limits of the ramp tie-ins. Submit design exceptions and waivers for areas along the NBFR and SBFR that do not meet 3R criteria for shoulders. No design changes will be made to the existing conditions per TxDOT.
  - NB and SB Frontage Rd. superelevations: The analysis will review the existing superelevations against the existing design standard on the frontage roads outside the limits of the ramp tie-ins. Submit design exceptions and waivers for areas along the NBFR and SBFR that do not meet 3R criteria for superelevations. No design changes will be made to the existing conditions per TxDOT.
  - Bridge Center Column at Bud Stockton: The Engineer shall prepare a Design Exception Request for the reduced inside shoulder at the existing Bud Stockton Bridge. The mainline inside shoulder will be less than required for a short distance due to the existing bridge center columns. Per TxDOT, the design will keep existing 8' inside shoulder as is.

## 3. Design Development (Schematic and Final PS&E)

- Addition of auxiliary lanes and retaining walls at Bud Stockton Loop: The design of auxiliary lanes between ramp connections including additional retaining walls, drainage improvements, roadway plans, and cross sections. The Engineer will evaluate design alternatives for retaining wall locations and drainage improvements to add the auxiliary lanes. The additional lane will be added by removing a portion of the existing rip rap and embankment by placing low retaining walls, not at the

ultimate location, to provide space sufficient for the 12' auxiliary lanes only while keeping the existing bridge in place.

- Addition of auxiliary lanes and deflection walls at CR 143: The design of auxiliary lanes between ramp connections, including new deflection walls, drainage improvements, roadway plans, and cross sections. The additional lane will be added by widening I-35 and restriping it for the reduced inside shoulder while keeping the existing bridge in place.

#### 4. Additional Tasks

- Update schematic to include new auxiliary lanes at Bud Stockton and CR 143. Includes responding to comments once from TxDOT/GEC Schematic Review and responding to comments once from TxDOT/GEC PS&E Review.
- New TxDOT schematic checklist. The latest 12-page schematic design checklist from TxDOT was received in May 2017, compared to the previous checklist, submitted in May 2016, with only 4 pages. BBI needs additional time to review, respond to, and incorporate some additional items in written text on checklist or on schematic as necessary.
- Repackage 100% submittal. The 100% submittal, submitted in April 2017, will need to be resubmitted due to the additional changes due to FHWA and TxDOT requirements required by this SWA.
- Pre-Letting Plan for delayed construction start (March 2019 letting schedule). BBI will develop a pre-letting plan, including incorporation into the PS&E documents and construction schedule. This will require update to general notes, standards, bid items, etc.

#### 5. Additional Topographic Survey:

- Perform and review additional survey north of Bud Stockton to facilitate additional auxiliary lanes per TxDOT/FHWA requirements.

#### 6. IAJR and Traffic Operation:

- Updates to IAJR to facilitate additional auxiliary lanes at Bud Stockton and CR 143 per TxDOT/FHWA requirements.
- ISATe analysis for inclusion with design exception requests.

#### 7. Drainage Design:

- Design and review of ramp design, aux lane at Bud Stockton and CR 143 to facilitate additional auxiliary lanes per TxDOT/FHWA requirements.

#### 8. Geotechnical Investigations:

- Geotechnical investigations and report to facilitate retaining walls and pavement additions at CR 143 and Bud Stockton to facilitate additional auxiliary lanes.

9. Environmental Reevaluation:

- Environmental Document Reevaluation to address geometry changes on the schematic and adding auxiliary lanes at Bud Stockton Loop.

WA 2 Exclusions:

- Scope of work does not include construction phase services for previous proposal scope of work items.
- Scope does not include any modifications to the existing bridge designs at Bud Stockton and CR 143.
- Additional design work required due to rejection of design exceptions and waivers.

**Total Fee to be added:**

Project Management:	\$ 26,246
QA/QC:	\$ 14,795
Schematic & PS&E:	\$165,600
Survey:	\$ 12,500
IAJR & Traffic Operation:	\$ 60,083
Drainage:	\$ 27,739
Geotechnical:	\$ 21,160
Environmental:	\$ 9,459
<u>Reimbursable:</u>	<u>\$ 1,693</u>
<b>Total:</b>	<b>\$339,274</b>

Attachment C – Work Schedule

<u>Milestone</u>	<u>Task Description</u>	<u>Begin Date</u>	<u>End Date</u>
Task 1	Project Management	9/27/17	3/31/19
Task 2	Data Collection	9/27/17	11/1/17
Task 3	Schematic and Environmental Revisions	10/19/17	5/1/18
Task 4	PS&E Design Phase Services	1/12/18	6/16/18
Task 5	Letting Phase	On TxDOT Letting Schedule for March 2019	

ATTACHMENT D - WA #2

PRIME PROVIDER NAME: BinMey & Barfield, Inc.  
 PROJECT NAME: IH-35 Frontage Road Conversion - Bud Stockton Loop to FM 972  
 Work Authorization #2 - IH-35 Frontage Road Conversions  
 9/07/2017

TASK NO./DESCRIPTION	GRAND TOTAL							TASK TOTAL
	BBI	LJA	Alliance	CozMcLain	Inland	Raba-Kisner	CDAP	
<b>I. PROJECT MANAGEMENT</b>								
SUBTOTAL	\$ 20,838	\$ 2,013	\$ 3,585					\$ 26,246
<b>II. QA / QC AND PROJECT SPECIFIC QA/QC PLA:</b>								
SUBTOTAL	\$ 9,400	\$ 8,335						\$ 14,765
<b>III. PRG SCHEM / PRELIM AND RD/RY DESIGN (60.00 &amp; 160.0):</b>								
SUBTOTAL	\$ 140,845	\$ 24,755						\$ 165,600
<b>IV. TOPOGRAPHIC AND ROW SURVEYS</b>								
SUBTOTAL	\$ 1,201				\$ 11,299			\$ 12,500
<b>V. I&amp;R &amp; TRAFFIC OPERATIONS</b>								
SUBTOTAL	\$ 9,056		\$ 52,023					\$ 60,083
<b>VI. DRAINAGE</b>								
SUBTOTAL	\$ 3,884	\$ 23,855						\$ 27,739
<b>VII. PUBLIC INVOLVEMENT</b>								
SUBTOTAL	\$ -							\$ -
<b>VIII. GEOTECHNICAL</b>								
SUBTOTAL	\$ 955					\$ 20,205		\$ 21,160
<b>IX. ENVIRONMENTAL</b>								
SUBTOTAL	\$ 1,544			\$ 7,915				\$ 9,459
<b>X. BID PHASE SERVICES</b>								
SUBTOTAL	\$ -							\$ -
<b>TOTAL LABOR FOR DESIGN SERVICES</b>								
	\$ 165,585	\$ 56,958	\$ 55,620	\$ 7,915	\$ 11,299	\$ 20,205	\$ -	\$ 337,541
<b>PROJECT EXPENSE ESTIMATE</b>								
	\$ 853		\$ -	\$ 840				\$ 1,693
<b>TOTAL PROJECT COST</b>								
	\$ 186,438	\$ 56,958	\$ 55,620	\$ 8,755	\$ 11,299	\$ 20,205	\$ -	\$ 339,274



Attachment D - WA #2  
**RATE SCHEDULE**  
 Binkley & Barfield - Prime  
 Schematic Development, Preliminary Design, Final Design and Construction Documents  
 PRIME PROVIDER NAME: Binkley & Barfield, Inc.  
 PROJECT NAME: IH-35 Frontage Road Conversion - Bud Stockett Loop to FM 972  
 Work Authorization #2 - IH-35 Frontage Road Conversions  
 9/07/2017

TASK DESCRIPTION	PRINCIPAL	% PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	DESIGN ENGINEER	ETT	PRODUCTION MANAGER	% CAD MANAGER	CAD OPERATOR	CLERICAL	TOTAL LABOR HRS & COSTS
<b>VI. ADDITIONAL WORK/CHANGES AND NEW SUBVENTS REVIEW</b>											
ALSO SEE ALLIANCES TRADE COSTS ESTIMATE FOR JAR											
1. Review Survey Data		8.5%		2				2			4.5
2. Review Survey Data		8.5%		2				2			4.5
3. Review Survey Data		8.5%		2				2			4.5
4. Review Survey Data		8.5%		2				2			4.5
5. Review Survey Data		8.5%		2				2			4.5
6. Review Survey Data		8.5%		2				2			4.5
7. Review Survey Data		8.5%		2				2			4.5
8. Review Survey Data		8.5%		2				2			4.5
9. Review Survey Data		8.5%		2				2			4.5
10. Review Survey Data		8.5%		2				2			4.5
11. Review Survey Data		8.5%		2				2			4.5
12. Review Survey Data		8.5%		2				2			4.5
13. Review Survey Data		8.5%		2				2			4.5
14. Review Survey Data		8.5%		2				2			4.5
15. Review Survey Data		8.5%		2				2			4.5
16. Review Survey Data		8.5%		2				2			4.5
17. Review Survey Data		8.5%		2				2			4.5
18. Review Survey Data		8.5%		2				2			4.5
19. Review Survey Data		8.5%		2				2			4.5
20. Review Survey Data		8.5%		2				2			4.5
21. Review Survey Data		8.5%		2				2			4.5
22. Review Survey Data		8.5%		2				2			4.5
23. Review Survey Data		8.5%		2				2			4.5
24. Review Survey Data		8.5%		2				2			4.5
25. Review Survey Data		8.5%		2				2			4.5
26. Review Survey Data		8.5%		2				2			4.5
27. Review Survey Data		8.5%		2				2			4.5
28. Review Survey Data		8.5%		2				2			4.5
29. Review Survey Data		8.5%		2				2			4.5
30. Review Survey Data		8.5%		2				2			4.5
31. Review Survey Data		8.5%		2				2			4.5
32. Review Survey Data		8.5%		2				2			4.5
33. Review Survey Data		8.5%		2				2			4.5
34. Review Survey Data		8.5%		2				2			4.5
35. Review Survey Data		8.5%		2				2			4.5
36. Review Survey Data		8.5%		2				2			4.5
37. Review Survey Data		8.5%		2				2			4.5
38. Review Survey Data		8.5%		2				2			4.5
39. Review Survey Data		8.5%		2				2			4.5
40. Review Survey Data		8.5%		2				2			4.5
41. Review Survey Data		8.5%		2				2			4.5
42. Review Survey Data		8.5%		2				2			4.5
43. Review Survey Data		8.5%		2				2			4.5
44. Review Survey Data		8.5%		2				2			4.5
45. Review Survey Data		8.5%		2				2			4.5
46. Review Survey Data		8.5%		2				2			4.5
47. Review Survey Data		8.5%		2				2			4.5
48. Review Survey Data		8.5%		2				2			4.5
49. Review Survey Data		8.5%		2				2			4.5
50. Review Survey Data		8.5%		2				2			4.5
51. Review Survey Data		8.5%		2				2			4.5
52. Review Survey Data		8.5%		2				2			4.5
53. Review Survey Data		8.5%		2				2			4.5
54. Review Survey Data		8.5%		2				2			4.5
55. Review Survey Data		8.5%		2				2			4.5
56. Review Survey Data		8.5%		2				2			4.5
57. Review Survey Data		8.5%		2				2			4.5
58. Review Survey Data		8.5%		2				2			4.5
59. Review Survey Data		8.5%		2				2			4.5
60. Review Survey Data		8.5%		2				2			4.5
61. Review Survey Data		8.5%		2				2			4.5
62. Review Survey Data		8.5%		2				2			4.5
63. Review Survey Data		8.5%		2				2			4.5
64. Review Survey Data		8.5%		2				2			4.5
65. Review Survey Data		8.5%		2				2			4.5
66. Review Survey Data		8.5%		2				2			4.5
67. Review Survey Data		8.5%		2				2			4.5
68. Review Survey Data		8.5%		2				2			4.5
69. Review Survey Data		8.5%		2				2			4.5
70. Review Survey Data		8.5%		2				2			4.5
71. Review Survey Data		8.5%		2				2			4.5
72. Review Survey Data		8.5%		2				2			4.5
73. Review Survey Data		8.5%		2				2			4.5
74. Review Survey Data		8.5%		2				2			4.5
75. Review Survey Data		8.5%		2				2			4.5
76. Review Survey Data		8.5%		2				2			4.5
77. Review Survey Data		8.5%		2				2			4.5
78. Review Survey Data		8.5%		2				2			4.5
79. Review Survey Data		8.5%		2				2			4.5
80. Review Survey Data		8.5%		2				2			4.5
81. Review Survey Data		8.5%		2				2			4.5
82. Review Survey Data		8.5%		2				2			4.5
83. Review Survey Data		8.5%		2				2			4.5
84. Review Survey Data		8.5%		2				2			4.5
85. Review Survey Data		8.5%		2				2			4.5
86. Review Survey Data		8.5%		2				2			4.5
87. Review Survey Data		8.5%		2				2			4.5
88. Review Survey Data		8.5%		2				2			4.5
89. Review Survey Data		8.5%		2				2			4.5
90. Review Survey Data		8.5%		2				2			4.5
91. Review Survey Data		8.5%		2				2			4.5
92. Review Survey Data		8.5%		2				2			4.5
93. Review Survey Data		8.5%		2				2			4.5
94. Review Survey Data		8.5%		2				2			4.5
95. Review Survey Data		8.5%		2				2			4.5
96. Review Survey Data		8.5%		2				2			4.5
97. Review Survey Data		8.5%		2				2			4.5
98. Review Survey Data		8.5%		2				2			4.5
99. Review Survey Data		8.5%		2				2			4.5
100. Review Survey Data		8.5%		2				2			4.5
101. Review Survey Data		8.5%		2				2			4.5
102. Review Survey Data		8.5%		2				2			4.5
103. Review Survey Data		8.5%		2				2			4.5
104. Review Survey Data		8.5%		2				2			4.5
105. Review Survey Data		8.5%		2				2			4.5
106. Review Survey Data		8.5%		2				2			4.5
107. Review Survey Data		8.5%		2				2			4.5
108. Review Survey Data		8.5%		2				2			4.5
109. Review Survey Data		8.5%		2				2			4.5
110. Review Survey Data		8.5%		2				2			4.5
111. Review Survey Data		8.5%		2				2			4.5
112. Review Survey Data		8.5%		2				2			4.5
113. Review Survey Data		8.5%		2				2			4.5
114. Review Survey Data		8.5%		2				2			4.5
115. Review Survey Data		8.5%		2				2			4.5
116. Review Survey Data		8.5%		2				2			4.5
117. Review Survey Data		8.5%		2				2			4.5
118. Review Survey Data		8.5%		2				2			4.5
119. Review Survey Data		8.5%		2				2			4.5
120. Review Survey Data		8.5%		2				2			4.5
121. Review Survey Data		8.5%		2				2			4.5
122. Review Survey Data		8.5%		2				2			4.5
123. Review Survey Data		8.5%		2				2			4.5
124. Review Survey Data		8.5%		2				2			4.5
125. Review Survey Data		8.5%		2				2			4.5
126. Review Survey Data		8.5%		2				2			4.5
127. Review Survey Data		8.5%		2				2			4.5
128. Review Survey Data		8.5%		2				2			4.5
129. Review Survey Data		8.5%		2				2			4.5
130. Review Survey Data		8.5%		2				2			4.5
131. Review Survey Data		8.5%		2				2			4.5
132. Review Survey Data		8.5%		2				2			4.5
133. Review Survey Data		8.5%		2				2			4.5
134. Review Survey Data		8.5%		2				2			4.5
135. Review Survey Data		8.5%		2				2			4.5
136. Review Survey Data		8.5%		2				2			4.5
137. Review Survey Data		8.5%		2				2			4.5
138. Review Survey Data		8.5%		2				2			







FEE SCHEDULE WA#4 (ALLIANCE TRANSPORTATION GROUP)

PRIME PROVIDER NAME: Binkley & Barfield, Inc.  
 PROJECT NAME: IH-35 Frontage Road Conversion - Bud Stockton Loop to FM 972  
 Work Authorization #2 - IH-35 Frontage Road Conversions  
 9/07/2017

TASK DESCRIPTION	SENIOR PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	EIT	CONTROLLER	CLERICAL	TOTAL LABOR HRS. & COSTS	NO OF DWGS	LABOR HRS PER SHEET
<b>I. PROJECT MANAGEMENT</b>									
2.1 Progress Reports (up to 12 months)		6			6	6	18		
2.2 Invoices (up to 12 months)		6			6	6	18		
<b>II. I.A.R. TRAFFIC OPERATIONS / Pavement Markings</b>									
<b>1.a. Analysis</b>									
1.a.1 Traffic Forecasting (includes TDM turns)	22	24	24	32			102		
1.a.2 HCS Analysis Auxiliary Lanes	1	4	8	16			29		
1.a.3 Consign Analysis Auxiliary Lanes	1	4	8	24			37		
1.a.4 Safety Assessment									
1.a.4.a Crash Mitigations Factor (CMF) Development	1	2	4	6			15		
1.a.4.b ISAT Safety Analysis (up to 4 locations)	4	10	20	48			80		
1.c.1 Final Technical Memorandum	6	8	8	24		4	50		
1.d.1 Update I.A.R. based on new FHWA policy	4	8	8	24			44		
1.d.2 I.A.R. Review (up to 2 turns)	4	12	16	48			80		
1.d.3 Final I.A.R.	2	4	4	8		4	22		
<b>III. SUB-TOTALS</b>	45	88	100	250	12	20	495	0	
<b>CONTRACT RATE PER HOUR</b>	226.44	162.83	112.05	77.81	90.27	48.89			
<b>TOTAL LABOR COSTS</b>	\$10,169.80	\$14,311.44	\$11,205.00	\$17,898.30	\$1,081.24	\$933.60	\$55,619.58		
<b>% DISTRIBUTION OF STAFFING</b>	9.08%	17.78%	20.20%	48.46%	2.42%	4.04%			
<b>SUBTOTAL (V. TRAFFIC OPERATIONS)</b>							\$55,619.58		
<b>OTHER DIRECT EXPENSES (V. TRAFFIC OPERATIONS)</b>									
Mileage (# of miles) (current state rate)	\$0.565						\$0.00		
Photocopies BW (8.5 X 11)	\$0.10						\$0.00		
Photocopies BW (11 X 17)	\$0.25						\$0.00		
Photocopies Color (8.5 X 11)	\$1.50						\$0.00		
Photocopies Color (11 X 17)	\$2.00						\$0.00		
<b>SUBTOTAL DIRECT EXPENSES</b>							\$0.00		
<b>SUMMARY - ALLIANCE T.G.</b>									
<b>TOTAL LABOR COSTS FOR ALLIANCE ONLY</b>							\$55,619.58		
<b>NON-SALARY (OTHER DIRECT EXPENSES) FOR ALLIANCE ONLY</b>							\$0.00		
<b>ALLIANCE GRAND TOTAL</b>							\$55,619.58		





