

**SUPPLEMENTAL WORK AUTHORIZATION NO. 5
TO
WORK AUTHORIZATION NO. 2**

**WILLIAMSON COUNTY ROAD BOND PROJECT:
Ronald Reagan Boulevard Widening ("Project")**

This Supplemental Work Authorization No. 5 to Work Authorization No. 2 is made pursuant to the terms and conditions of the Williamson County Contract for Engineering Services, being dated August 13, 2019 ("Contract") and entered into by and between Williamson County, Texas, a political subdivision of the State of Texas, (the "County") and **CP&Y, Inc.** (the "Engineer").

WHEREAS, the County and the Engineer executed Work Authorization No. 2 dated effective August 29, 2020. (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:

- I. 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".
- II. The maximum amount payable for services under the Work Authorization is hereby increased from \$2,462,289.91 to \$3,089,688.64. The revised Fee Schedule is attached hereto as Attachment "D".

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

Robin Handel
Printed Name

Senior Vice President
Title

10/11/2023
Date

COUNTY:

By: _____
Signature

Bill Gravell Jr.
Printed Name

County Judge
Title

Date

LIST OF ATTACHMENTS

Attachment B – Services to be Provided by Engineer

Attachment D – Fee Schedule

ATTACHMENT B SERVICES TO BE PROVIDED BY THE ENGINEER FOR RONALD REAGAN BLVD

PROJECT DESCRIPTION

Project Limits

The project limits are from SH 29 to north of FM 3405 for approximately 5 miles.

Existing Facility

The existing road is a 2-lane roadway with asphalt pavement and with varying widths of existing ROW (200ft to 450ft).

Proposed Facility

Construct a new 2 lane roadway with shoulders, turn lanes and intersection improvements to serve as a future southbound frontage road connecting the divided highway near SH 29 and tying into existing Ronald Reagan Blvd. north of FM 3405. This facility will also include turn lanes on FM 3405 & SH 29 for the project limits mentioned above

Design Criteria

The proposed design criteria for the project will be developed from the Williamson County and TxDOT design criteria. It is anticipated that in most cases the most stringent of the design criteria will be used.

1. PROJECT MANAGEMENT

a. Communication:

- Designate one Licensed Professional Engineer (Texas) to be responsible for the project management, and all communications with the County and its representatives.

b. Monthly Progress Report, Invoices, and Billings (18 months assumed):

- Submit monthly progress status reports to the GEC. Progress reports will include deliverable table, tasks completed, tasks/objectives that are planned for the upcoming periods, lists or descriptions of items or decisions needed from the County and its representatives. Subconsultant progress will be incorporated into the monthly progress report. A copy of the monthly progress report will be uploaded to ProjectWise.
- Prepare correspondence, invoices, and progress reports on a monthly basis in accordance with current County requirements.

c. Project Coordination & Administration:

- Prepare and maintain routine project record keeping including records of meetings and minutes.
- Correspondence and coordination will be handled through & with the concurrence of the GEC.
- Manage project activities (including documenting emails, phone and conference calls, maintain project files for the length of the project, meeting agendas, meeting minutes, and schedule meetings), direct Engineer's team/staff, coordinate and review sub-consultant work, correspond with the County and its representatives, and assist the County and its representatives in preparing responses to project-related inquiries.

d. Progress/Coordination Meetings (**18** external meetings assumed):

- Attend coordination/progress meeting with the County and its representatives and stakeholders, as necessary to communicate development of the project and design issues.
- Prepare agenda and sign-in sheets for external coordination/progress meetings.
- Prepare meeting minutes for review via email within three (3) business days of the external coordination/progress meeting.
- Conduct internal coordination meetings as required to advance the development of the project.

e. Stakeholder Coordination (8 meetings assumed):

- Coordinate with affected local agencies and County's consultants, including City of Georgetown Waterline designers
- Review stakeholder developed designs for implementation into design and provide guidance
- Attend meeting with stakeholders.
- Prepare agendas, sign in sheets, discussion topics, presentations, overall exhibits, and maps of the project limits for stakeholder coordination.
- Prepare meeting minutes for review via email within three (3) business days of the external coordination/progress meeting.

f. Utility Coordination Meetings (**6** meetings assumed):

- Coordinate with County's consultants and utility owners for conflict resolution and assist the County and its representatives in preparing responses to project-related inquiries.
- Attend meetings with GEC, Utility Coordinator, and utility representatives

Deliverables:

- Monthly Invoices and Progress Reports including Deliverable Table
- Meeting Minutes, Sign-In Sheets, and Agendas
- Project Files

2. ROUTE AND DESIGN STUDIES

- Updates to Ultimate Schematic design model based on revisions from previously scoped revisions. Develop updated 100-foot cross sections with labels.
- Analyze and develop exhibits for revised design per additional developments along the corridor and revisions due to property owner agreements.
- Design review and impact analysis of stakeholder developments to ultimate schematic design (assume up to 4 reviews)

a. **Deliverables:**

- Ultimate Schematic cross-sections at 100-foot intervals
- Draft and Final Localized Schematic Exhibits at revised design locations (4)
- Stakeholder Exhibits (4)

3. PUBLIC INVOLVEMENT

As this is a Road Bond Project, public involvement activities will be conducted through the County's existing public involvement contract with Rifeline. The Consultant shall coordinate and provide support on the public involvement with the County's GEC and public involvement consultant.

a. Public Involvement Plan

- Develop parcel exhibit maps as needed for meetings with affected property owners. Four (4) maps assumed.

b. Expert Witness Testimony

- Develop exhibit package for one (1) condemnation parcel. Assume one (1) package.
- Prepare and attend meetings with County's GEC and consultants.

Deliverables:

- Prepare individual property exhibits with ROW impacts for impacted property owner meetings
- Draft and Final Exhibit package
- Prepare for and attend one virtual meeting in preparation for the expert witness testimony. Prepare, travel, and attend one two-hour in-person meeting.

7. GEOTECHNICAL SERVICES

c. Soil Borings:

- Perform **four (4)** pavement borings, at a depth of fifteen (15) feet; **one (1)** retaining wall boring up to twenty (20) feet, and **one (1)** bridge boring up to sixty (60) feet.
- Develop soil boring layout for approval from the County prior to mobilization.

d. Geotech Report:

- Provide a Geotechnical Investigation Report for the project evaluated by a professional geotechnical engineer Licensed in the State of Texas. The following items will be included in the geotechnical report: soil boring locations, boring logs (TxDOT Wincore output graphs/format), and plan of borings, subsurface exploration procedures, encountered subsurface conditions, field and laboratory test results, description of surface and subsurface conditions, groundwater conditions, analysis and recommendations for settlement and slope stability of the earthen embankments; and culvert bedding, analysis and recommendations for wingwalls and headwalls, general earthwork recommendations, Swell potential evaluations, Pavement thickness design alternatives with subgrade stabilization, PVR calculations.
- Provide Soil Core Hole Drilling required for pavement borings. Follow the procedures in the Williamson County Design Criteria Manual and contact the appropriate utility location services to have underground utilities located prior to drilling in an area.
- Perform appropriate laboratory tests on soil samples recovered from the borings. Laboratory testing will include but not limited to moisture content, liquid limit, plastic limit, unconfined compression, Texas Triaxial, resilient modulus, and free swell, sulfate testing, and particle size analysis tests, visual classification, dry density, California Bearing Ratio (CBR) tests, sulfate content tests, lime series analyses.
- Create a Preliminary Pavement Report and Final Pavement Report based on field testing, subsequent laboratory testing, following the format noted in the Williamson County Design Criteria Manual.
- Prepare and analyze three (3) pavement design options. The options will consist of a (1) full-depth hot mix design to be used in small areas or for temporary pavement, (2) asphalt overlaying flexible base and lime stabilized subgrade, and (3) asphalt overlaying flexible base with cement stabilized base. Provide a temporary pavement section for traffic control design with asphalt overlaying flexible base, if needed. All pavement design analyses should be performed with TxDOT software FPS-21, unless otherwise approved by the County.
- Update hydraulic models for adding rock rip rap under low-profile bridges for stabilization.

Deliverables:

- Revised Preliminary Pavement Report.
- Revised Draft Geotech Investigation Report

8. PLAN PREPARATION (PS&E) SERVICES

Revise plans per additional developments along the corridor and revisions due to property owner agreements.

a. Roadway/General:

- Index of Sheets
 - Revise index sheet(s) that shows each sheets location in the plan set.
- Typical Sections

- Revise typical section(s) for proposed roadways and cross streets.
- Summary Sheets
 - Revise summary sheet(s) that tabulate, combine, and summarize quantities of the various construction items.
- Removal Plans
 - Revise removal sheet(s) that clearly identify any items to be removed.
- Roadway Plan & Profiles
 - Revise roadway plan and profile sheets that depict the proposed construction.
- i. Side Street/Intersection Plans
 - Side Street/Intersections layouts sheets will be prepared for:
 - Fire station
- Cross Sections
 - Update cross sections at 50-foot stations and other locations as necessary for the determination of cut and fill quantities. These sections will also be used to further refine the design vertical geometry.
- Create rock riprap layout sheets under low-profile bridges
- b. Traffic Control – update preparation of TCP due to geometric revisions:
 - Traffic Control Plans (TCP)
 - Prepare traffic control typical section(s) for each stage of the construction sequence to clearly delineate the position of the existing traffic with respect to the proposed construction.
 - Prepare a detailed narrative for the sequence of construction and traffic control general notes utilizing the sequence approved during the schematic phase. Any changes to the sequence of construction will be approved by the County prior to developing detailed TCP layouts.
 - Prepare detailed TCP layouts for each phase.
 - Develop traffic control detail(s) for items not covered by County or TxDOT standard details.
 - Consider the construction sequence and plan for temporary functioning of drainage systems.
- c. Signing and Pavement Markings Layouts – update preparation of Signing and Striping due to geometric revisions:
 - Prepare signing and pavement marking layouts at a scale of 1"=100. Road signs and markings will be shown all on the same plan sheet. These layouts will depict striping and delineator type and location, as well as MBGF location, lengths, and end treatments. Each sign will have a corresponding number for cross-reference to the sign summaries

- Prepare pavement marking details for non-standard conditions.
 - Prepare detail sheets for small signs for non-standard signs. This sheet is intended to show the overall dimensions of the signs by determining letter size and spacing. Details will not be to scale
- d. Traffic Signal Design – update preparation of Traffic Signal Design due to geometric revisions:
- Traffic signal designs for five intersections (Kauffman Loop, Santa Rita Blvd, Elizabeth Park Blvd, Tower Rd, FM 3405) will be provided, including the following tasks for each:
- Perform field work and analysis necessary to design traffic signal plans for designated locations and sections of roadways.
 - Perform field work that may include but not be limited to taking measurements, locating utilities, locating ROW, locating existing signal equipment, identifying existing signal phasing, identifying existing conditions, identifying railroad crossings, identifying utility easements (if present), and taking digital photos of the locations.
 - Prepare layouts for traffic signal, pavement revision, pedestrian element, vehicle detection, communication, pavement marking, and Americans with Disabilities Act (ADA) element design according to current State or County specifications, preferred County format, and approved County preferences. Accommodate County preferred lane assignments at signalized intersections. Design traffic signals to account for future development traffic operations.
 - Prepare PS&E Package in accordance with the applicable requirements of the State's Specifications and Manuals (latest revision) as available on the State's website.
 - Provide copies of the traffic signal design layouts.
 - Contact the local utility company to confirm electrical power for signal equipment and identify conflicts with overhead and underground utility lines. Obtain meter address from City. Identify utility company, contact person, and phone number on plans.
 - Perform revisions to the plans due to any comments received from the State and County.
 - Verify that proposed traffic signal work meets the requirements of the National Electrical Code and Texas MUTCD.
- e. Bridge Design:
- Update final bridge layouts with revised typical sections for up to seven (7) bridges.
 - Tributary #1 Bridge
 - Sowes Branch Bridge
 - Tributary #2 Bridge
 - North Fork San Gabriel River Relief Bridge
 - North Fork San Gabriel River Bridge
 - Crossing #2

- Tributary to Middle Fork San Gabriel River
 - Perform optimization at the abutments for reduce/eliminate drilled shafts where possible.
 - Any necessary coordination and revisions to Tributary #1 Bridge from unidentified environmental constraint(s)
 - Structural details for detention ponds
- f. Drainage:
- Hydraulic analysis (13 crossings)
 - Analyze 13 non-bridge class culverts using HY-8.
 - Culvert Layout Sheets
 - Develop culvert layout sheets including plan, profile, riprap or grading details at all the non-driveway parallel culverts, up to **thirteen (13)** locations.
 - Drainage ditch design revised per additional developments along the corridor and revisions due to property owner agreements.
 - Provide hydraulic design for interior and exterior drainage ditches
 - Prepare a tabular ditch layout schedule that depicts pertinent information about the roadside ditch geometry and design. This table will include station, offset, flow line elevation, velocity, ditch lining material, as well as ditch bottom width.
 - Drainage Computation Sheets
 - Document criteria, input and computations used to calculate run-off and hydraulics for each pipe, culvert, ditch, pond or point of interest in accordance with Williamson County Design Criteria Manual.
 - Detention Layout Plans Revisions due to property owner agreements.
 - Plan sheets showing the detention layout, cross sections and grading for Tributary #2 to Soves Branch basin.
 - Design Criteria & Design maximum water surface elevations.
 - Detail sheets showing structural information.
 - Geotechnical Recommendations.
 - DRAINAGE STUDY
 - Hydraulic Study & Modeling (Parallel drainage and Tributary #2 to Soves Branch):
 - Prepare design of the right of way drainage system, including parallel drainage structures & updates to roadsides channels using appropriate software (HEC-RAS, HY-8, Bentley or other approved hydraulic modeling software).
 - Determine the need for ROW or easements for Tributary #2 to Soves Branch. Coordinate with the County's GEC as needed to ensure that ROW, easements and the space required for the appropriate maintenance equipment, activities and personnel is provided.

- Provide electronic files for all data collected and any developed Hydrologic & Hydraulic models. Provide CAD and/or GIS files used in the study.
- Impact and Mitigation Analysis (Tributary #2 to Soves Branch):
 - Provide documentation of all adverse impacts resulting from the proposed facility in proposed condition. Provide a comparison of existing vs proposed at each outfall from the project area.
 - Coordinate with the County's GEC as needed to ensure that proposed mitigation and/or detention facilities are in an acceptable location and have acceptable maintenance access and safety features. Provide landscaping setbacks, if requested. Criteria for this determination shall be based, in part, on drainage information provided by the Engineer and on the existing and proposed design for the project area.
 - Revise design stormwater control structures, detention basin layouts and details and provide a detailed maintenance plan for Tributary #2 to Soves Branch detention.
 - Revise plan sheets showing the detention layout, cross sections and grading for Tributary #2 to Soves Branch
 - Design Criteria & Design maximum water surface elevations.
 - Detail sheets showing structural information, if any.
 - Geotechnical Recommendations, if any.
- **Deliverables:**
 - Provide electronic files for all data collected and any developed Hydrologic & Hydraulic models. Provide CAD and/or GIS files used in the study.
- b. Stormwater Pollution Prevention Plan (SW3P):
 - i. Revisions Temporary Erosion Control Layouts.
- c. Water Quality:
 - i. Revise water quality, temporary and permanent, Best Management Practices (BMPs) layout sheets for the WPAP to comply with TCEQ regulations.
 - ii. Geologic assessment report to be prepared by others.
- d. City of Georgetown Waterline Plans:
 - i. City of Georgetown waterline design and plans to be prepared by others.
 - ii. Include waterline plan sheets into overall PS&E. Revise Index of Sheets and Project Cost Estimate
- e. **Deliverables:**
 - i. Structural design calculation package included post-Final PS&E Submittal

EXCLUSIONS:

a. The following items are not included in this work authorization:

- SCHEMATIC DEVELOPMENT.
- CLOMR OR LOMR.
- NATIONWIDE PERMIT (NWP 14 WITH A PRE-CONSTRUCTION NOTIFICATION (PCN)).
- CONSTRUCTION PHASE SERVICES.
- UTILITY COORDINATION OR RELOCATION ESTIMATES.
- AGENT AUTHORIZATION FORMS FOR WPAP
- Complex modeling including 2-D or unsteady-state HEC-RAS or SWMM

Attachment D - CP&Y, INC.

Ronald Reagan Widening FM 3405 to SH 29 Williamson County		
Task Description	Total Cost	
<u>TOTAL LABOR COSTS</u>		
1. PROJECT MANAGEMENT		
Project Management	CP&Y	\$ 126,364.00
	Corsair	\$ 421.56
1. PROJECT MANAGEMENT Subtotal		\$ 126,785.56
2. ROUTE AND DESIGN STUDIES		
Schematic Revisions	CP&Y	\$ 23,235.00
2. ROUTE AND DESIGN STUDIES Subtotal		\$ 23,235.00
3. Public Involvement		
Public Involvement Plan	CP&Y	\$ 18,426.00
3. Public Involvement Subtotal		\$ 18,426.00
7. GEOTECHNICAL SERVICES		
Geotechnical Borings and Engineering	Corsair	\$ 20,487.73
7. GEOTECHNICAL SERVICES Subtotal		\$ 20,487.73
8. PLAN PREPARATION (PS&E) SERVICES		
Roadway/General	CP&Y	\$ 96,452.00
Traffic Control	Alliance Transportation Group	\$ 67,406.61
Signing, Markings and Signalization	Alliance Transportation Group	\$ 86,807.83
Bridge Design	CP&Y	\$ 94,138.00
Drainage Design	CP&Y	\$ 41,145.00
SW3P	CP&Y	\$ 4,288.00
Water Quality	CP&Y	\$ 17,236.00
City of Georgetown Waterline	CP&Y	\$ 5,205.00
8. PLAN PREPARATION (PS&E) SERVICES Subtotal		\$ 412,678.44
SUBTOTAL LABOR EXPENSES		\$ 601,612.73
<u>DIRECT EXPENSES</u>		
EXPENSES - CP&Y	CP&Y	\$ -
EXPENSES - ATG	Alliance Transportation Group	
EXPENSES - SAM	SAM	
EXPENSES - SWCA	SWCA	
EXPENSES - Corsair	Corsair	\$ 25,786.00
SUBTOTAL DIRECT EXPENSES		\$ 25,786.00
TOTAL	\$	627,398.73
<u>SUMMARY of Cost breakdown by Firm</u>		
	CP&Y	\$ 426,489.00
	Alliance Transportation Group	\$ 154,214.44
	SAM	\$ -
	SWCA	\$ -
	Corsair	\$ 46,695.29

Attachment D - CP&Y, INC.

Ronald Reagan Widening FM 3405 to SH 29 Williamson County									
Fee Schedule/Budget for CP&Y, Inc.									
	Task Description	Senior Project Manager	Senior Engineer	Design Engineer	Engineer-In-Training	Admin/Clerical	Environmental Manager	Total Labor Hours	Total Direct Labor Costs
		\$265.00	\$224.00	\$158.00	\$121.00	\$121.00	\$251.00		
1. PROJECT MANAGEMENT									
1	Project Management								
	b Monthly Progress Reports, Invoices and Billings								\$ -
	1. Prepare and submit monthly progress reports	16	6					22	\$ 5,584.00
	2. Prepare monthly invoices	10	-			18		28	\$ 4,828.00
	c Project Coordination								\$ -
	1. Prepare and maintain project record keeping	6		6				12	\$ 2,538.00
	2. Maintain continuous coordination with the GEC								\$ -
	3. Manage project activities.	40	100	100	40			280	\$ 53,640.00
	d Progress/Coordination Meetings								\$ -
	3. Prepare agenda and attend external meetings (6 assumed)								\$ -
	4. Prepare meeting minutes	4		8			4	16	\$ 3,328.00
	5. Hold bi-weekly internal progress meetings	12	50	50				112	\$ 22,280.00
	6. Coordinate and review subconsultant work	9	5					14	\$ 3,505.00
	e Stakeholder Coordination								\$ -
	Coordinate with local agencies	4		4				8	\$ 1,692.00
	Prepare agenda and attend meetings (8 assumed)	12		12				24	\$ 5,076.00
	Prepare meeting minutes	3		6				9	\$ 1,743.00
	f Utility Coordination								\$ -
	Coordinate with County consultant and utility owners	4	40	4				48	\$ 10,652.00
	Attend meetings (6 assumed)	6	40	6				52	\$ 11,498.00
								625	\$ 126,364.00
	1. PROJECT MANAGEMENT - SUBTOTAL								
	HOURS SUB-TOTALS	126	241	196	40	18	4	625	\$ 126,364.00
	SUBTOTAL	\$ 33,390.00	\$ 53,984.00	\$ 30,968.00	\$ 4,840.00	\$ 2,178.00	\$ 1,004.00		\$ 126,364.00

Attachment D - CP&Y, INC.

Ronald Reagan Widening FM 3405 to SH 29 Williamson County									
Fee Schedule/Budget for CP&Y, Inc.									
Task Description	Senior Project Manager	Senior Engineer	Design Engineer	Engineer-In-Training	Senior Engineer Tech	Environmental Manager	Senior GIS Operator	Total Labor Hours	Total Direct Labor Costs
	\$265.00	\$224.00	\$158.00	\$121.00	\$154.00	\$251.00	\$111.00		
2. ROUTE AND DESIGN STUDIES									
a Schematic Revisions									
Updates to 100-foot Cross Sections			12	20				32	\$ 4,316.00
Revised Design Exhibits (assume 4+1 review)	1		8	24				33	\$ 4,433.00
Stakeholder Design Impact Review (assume 4)	8	40		24		2		74	\$ 14,486.00
								139	\$ 23,235.00
2. ROUTE AND DESIGN STUDIES- SUBTOTAL									
HOURS SUB-TOTALS	9	40	20	68	0	2	0	139	\$ 23,235.00
SUBTOTAL	\$ 2,385.00	\$ 8,960.00	\$ 3,160.00	\$ 8,228.00	\$ -	\$ 502.00	\$ -		\$23,235.00

Attachment D - CP&Y, INC.

Ronald Reagan Widening FM 3405 to SH 29 Williamson County									
Fee Schedule/Budget for CP&Y, Inc.									
Task Description	Senior Project Manager	Senior Engineer	Design Engineer	Engineer-In-Training	Senior Engineer Tech	Engineer Tech	Senior GIS Operator	Total Labor Hours	Total Direct Labor Costs
	\$265.00	\$224.00	\$158.00	\$121.00	\$154.00	\$111.00	\$111.00		
3. Public Involvement									
a Public Involvement Plan									
Right of Way Mapping									\$ -
Develop exhibit of ROW needs for the County	1	20	2	20	4		8	55	\$ 8,985.00
Condemnation Exhibits (Draft and Final)	2	10	4	20	4		8	48	\$ 7,326.00
Expert Witness Testimony (one virtual meeting and one external meeting)	5		5					10	\$ 2,115.00
								113	\$ 18,426.00
3. Public Involvement- SUBTOTAL									
HOURS SUB-TOTALS	8	30	11	40	8	0	16	113	\$ 18,426.00
SUBTOTAL	\$ 2,120.00	\$ 6,720.00	\$ 1,738.00	\$ 4,840.00	\$ 1,232.00	\$ -	\$ 1,776.00		\$18,426.00

Attachment D - CP&Y, INC.

**Ronald Reagan Widening
FM 3405 to SH 29
Williamson County**

Fee Schedule/Budget for CP&Y, Inc.

Task Description	Senior Project Manager	Senior Engineer	Design Engineer	Engineer-In-Training	Senior Engineer Tech	Engineer Tech	Senior GIS Operator	Total Labor Hours	Total Direct Labor Costs
	\$265.00	\$224.00	\$158.00	\$121.00	\$154.00	\$111.00	\$111.00		
8. PLAN PREPARATION (PS&E) SERVICES									
a Roadway/General									
Index of Sheets									\$ -
Proposed Typical Sections	2	2	4	20	24	6		58	\$ 8,392.00
Quantities									
Earthwork	1		1	2				4	\$ 665.00
Roadway Removal	1	1	1	2		1		6	\$ 1,000.00
Culverts		1	1	4		4		10	\$ 1,310.00
Erosion Control and SW3P	1	1	1	2		1		6	\$ 1,000.00
Ronald Reagan Plan & Profile Sheets 1"=100' H and 1"=10' V	2	60	40	80	6	12		200	\$ 32,226.00
Bridge Rock Riprap layouts	1		12	12	12			37	\$ 5,461.00
Cross Street Plan & Profile Sheets 1"=100' H and 1"=10' V	1	2	20	40	4	8		75	\$ 10,217.00
Removal Sheets 1"=100'		1	2	40		40		83	\$ 9,820.00
Supplemental Grading Sheets 1"=40' (1 location)	1	10	40	40	4			95	\$ 14,281.00
Intersection layouts 1"=40' (1 location)	1	2	3	6	2	4		18	\$ 2,665.00
50-ft cross sections	1	10	20	24				55	\$ 8,569.00
								653	\$ 96,452.00
e Bridge Design									
Bridge Design and Details									
<i>Tributary #1 to Soves Branch SB Lanes Bridge</i>									\$ -
a Bridge Layout and Typical Section	1	2	2	4	4	12		25	\$ 3,461.00
b Bridge Quantities and Bearing Seat Elevations	1	2	4	12		8		27	\$ 3,685.00
c Interior Bents	1	2	8	12	4	8		35	\$ 4,933.00
d Girder Layouts	1	2	4	6		4		17	\$ 2,515.00
e Superstructure	1	2	4	16	4	8		35	\$ 4,785.00
<i>Soves Branch SB Lanes Bridge</i>									\$ -
a Bridge Layout and Typical Section	1	2	1	2		4		10	\$ 1,557.00
b Bridge Quantities and Bearing Seat Elevations	1	2	2	4		4		13	\$ 1,957.00
c Interior Bents	1	2	4	8	4	8		27	\$ 3,817.00
d Superstructure	1	2	4	8	4	8		27	\$ 3,817.00
<i>Tributary #2 to Soves Branch Bridge Widening</i>									\$ -
a Bridge Layout and Typical Section	1	2	1	2		4		10	\$ 1,557.00
b Bridge Quantities and Bearing Seat Elevations	1	2	2	4		4		13	\$ 1,957.00
c Interior Bents	1	2	4	8	4	8		27	\$ 3,817.00
d Superstructure	1	2	4	8	4	8		27	\$ 3,817.00
<i>North Fork of the San Gabriel River Relief SB Lanes Bridge</i>									\$ -
a Bridge Layout and Typical Section	1	2	1	2		4		10	\$ 1,557.00
b Bridge Quantities and Bearing Seat Elevations	1	2	2	4		4		13	\$ 1,957.00
c Interior Bents	1	2	4	8	4	8		27	\$ 3,817.00
d Superstructure	1	2	4	8	4	8		27	\$ 3,817.00
<i>North Fork of the San Gabriel River SB Lanes Bridge</i>									\$ -
a Bridge Layout and Typical Section	1	2	1	2		4		10	\$ 1,557.00
b Bridge Quantities and Bearing Seat Elevations	1	2	2	4		4		13	\$ 1,957.00
c Interior Bents	1	2	4	8	4	8		27	\$ 3,817.00
d Superstructure	1	2	4	8	4	8		27	\$ 3,817.00
<i>Middle Fork San Gabriel River SB Lanes Bridge</i>									\$ -
a Bridge Layout and Typical Section	1	2	1	2		4		10	\$ 1,557.00
b Bridge Quantities and Bearing Seat Elevations	1	2	2	4		4		13	\$ 1,957.00
c Interior Bents	1	2	4	8	4	8		27	\$ 3,817.00
d Superstructure	1	2	4	8	4	8		27	\$ 3,817.00
<i>Middle Fork to San Gabriel River SB Lanes Bridge</i>									\$ -
a Bridge Layout and Typical Section	1	2	1	2		4		10	\$ 1,557.00
b Bridge Quantities and Bearing Seat Elevations	1	2	2	4		4		13	\$ 1,957.00
c Interior Bents	1	2	4	8	4	8		27	\$ 3,817.00
d Superstructure	1	2	4	8	4	8		27	\$ 3,817.00
<i>Middle Fork to San Gabriel River SB Lanes Bridge</i>									\$ -
a Bridge Layout and Typical Section	1	2	1	2		4		10	\$ 1,557.00
b Bridge Quantities and Bearing Seat Elevations	1	2	2	4		4		13	\$ 1,957.00

2023-10-19_WA2-SA5-Draft Fee_RR Widening.xlsx

Attachment D - CP&Y, INC.

Ronald Reagan Widening FM 3405 to SH 29 Williamson County									
Fee Schedule/Budget for CP&Y, Inc.									
Task Description	Senior Project Manager	Senior Engineer	Design Engineer	Engineer-In-Training	Senior Engineer Tech	Engineer Tech	Senior GIS Operator	Total Labor Hours	Total Direct Labor Costs
	\$265.00	\$224.00	\$158.00	\$121.00	\$154.00	\$111.00	\$111.00		
c Interior Bents	1	2	4	8	4	8		27	\$ 3,817.00
d Superstructure	1	2	4	8	4	8		27	\$ 3,817.00
Bridge Standards									\$ -
a IGND Sheet		1	2	2		8		13	\$ 1,670.00
Bridge Quantity Summary									\$ -
a Summary Sheet	1	2	6	4		4		17	\$ 2,589.00
Bridge Design Calculations									\$ -
a Bridge Design Calculation Archive to Client		4	8	12				24	\$ 3,612.00
Water Qaulity Structural Details			8	24	8			40	\$ 5,400.00
								655	\$ 94,138.00
e Drainage Design									
Culvert Layout Sheets (13 culverts)									\$ -
c Internal Ditch Calcs									\$ -
d Tabular Ditch Layout Schedule			2	4		6		12	\$ 1,466.00
Drainage Computation sheets		1	6	4	4			15	\$ 2,272.00
Detention Analysis (Revisions to Trib #2 Pond)									\$ -
Detention layouts (1 crossing)		4	8	10	8			30	\$ 4,602.00
Detention Analysis / Pond updates for Sub Division Regs and Utilities	8	40	40	80				168	\$ 27,080.00
Update hydraulic models for rock riprap in shadow line	2	2	10	10				24	\$ 3,768.00
Drainage Report	1	2	2	4			4	13	\$ 1,957.00
								262	\$ 41,145.00
f SW3P									
Prepare Erosion Control Plans		1	2	24		4		31	\$ 3,888.00
Prepare SW3P			1	2				3	\$ 400.00
								34	\$ 4,288.00
g Water Quality									
WQ Sand Filter BMP design		40	12	40	10			102	\$ 17,236.00
								102	\$ 17,236.00
h City of Georgetown Waterline									
Review and insert plans by others to overall set	1	10	4	12	4			31	\$ 5,205.00
								31	\$ 5,205.00
8. PLAN PREPARATION (PS&E) SERVICES- SUBTOTAL									
HOURS SUB-TOTALS	54	256	345	688	146	284	4	1,777	\$ 263,864.00
SUBTOTAL	\$ 14,310.00	\$ 57,344.00	\$ 54,510.00	\$ 83,248.00	\$ 22,484.00	\$ 31,524.00	\$ 444.00		\$ 263,864.00

Exhibit D (SWA03) - ATG

Ronald Reagan Widening Ronald Reagan Williamson County											
Fee Schedule/Budget for Elizabeth Park											
Task Description	Project Principal	Senior Project Engineer	Senior Engineer	Project Engineer	Engineer-in-Training (EIT)	Senior Engineering Technician	Engineering Technician	Project Administrator	Clerical	Total Labor Hours	Total Direct Labor Costs
	\$263.74	\$257.41	\$203.61	\$151.92	\$106.55	\$140.31	\$94.95	\$109.72	\$68.57		
VIII. PLANS, SPECIFICATIONS AND ESTIMATE											
A Signing, Markings											
A1 Geometric Revisions (Turn lane changes)	4	6	12	36	48	0	0	8	8	122	\$ 17,052.68
A2 Prepare submittal for and attend pre 100% Project Page Turn Related Effort	4	4	8	16	24					56	\$ 8,701.46
SUBTOTAL	8	10	20	52	72	0	0	8	8	178	\$ 25,754.14
B Signalization											
B1 Signal Design Revisions (Turn lane changes)	4	6	12	48	48			4		122	\$ 17,888.21
B2 Signal Design Additions	4	6	12	48	48					118	\$ 17,449.33
B3 Prepare submittal for and attend pre 100% Project Page Turn Related Effort	4	4	8	12	24					52	\$ 8,093.79
SUBTOTAL	12	16	32	108	120	0	0	4	0	292	\$ 43,431.34
C TCP											
C1 Geometric Revisions											\$ -
SUBTOTAL	0	0	0	0	0	0	0	0	0	0	\$ -
D Miscellaneous Roadway											
D1 Traffic Control Plan											
a TCP Typical											\$ -
b TCP Overview											\$ -
c TCP Advanced Warning Layouts 1"=400'											\$ -
d TCP Narrative for Sequence of Construction	4	6	8	12	16					46	\$ 7,756.18
e TCP Plans Sheets 1"=100'	4	6	8	12	16					46	\$ 7,756.18
f TCP Details - Non Standard											\$ -
g TxDOT Coordination											\$ -
h TCP Construction Schedule Developed	4	6	8	8						26	\$ 5,443.65
QCQA	4	6	8	12	16					46	\$ 7,756.18
D2 Quantities		6	8	8	12					34	\$ 5,667.33
D3 Summary Sheets	2	2	4	4	6					18	\$ 3,103.74
D4 Standards, Specifications and Estimate			8	8	8					24	\$ 3,696.64
D5 Prepare contract bid documents and proposals	8	8	24	24	24					88	\$ 15,259.17
D6 Prepare submittal for and attend pre 100% Project Page Turn Related Effort	8	8	8	20	20					64	\$ 10,967.52
SUBTOTAL	34	48	84	108	118	0	0	0	0	392	\$ 67,406.61
E Construction Phase Services											
E1 Elizabeth Park Blvd (Contractor Submittals, RFIs, Change Orders)	4	12	16	24	24		40	2		122	\$ 17,622.35
SUBTOTAL	4	12	16	24	24	0	40	2	0	122	\$ 17,622.35
VIII. PLANS, SPECIFICATIONS AND ESTIMATE- SUBTOTAL											
HOURS SUB-TOTALS	58	86	152	292	334	0	40	14	8	984	
SUBTOTAL	\$ 15,297.12	\$ 22,137.39	\$ 30,948.75	\$ 44,359.51	\$ 35,589.06	\$ -	\$ 3,797.95	\$ 1,536.08	\$ 548.58		\$ 154,214.44

TASK	SHEETS	PRINCIPAL	SENIOR PROJECT MANAGER	PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	DESIGN ENGINEER	EIT	SENIOR ENGINEER TECH	ENGINEER TECH	ADMIN / CLERICAL	SUB TOTALS
RAW LABOR RATE PER HOUR		\$ 86.54	\$ 86.54	\$ 76.92	\$ 57.69	\$ 52.88	\$ 45.67	\$ 33.65	\$ 26.44	\$ 15.00	\$ 24.04	
OVERHEAD RATE	184.68%	184.68%	184.68%	184.68%	184.68%	184.68%	184.68%	184.68%	184.68%	184.68%	184.68%	
PROFIT	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	
CONTRACT LABOR RATE PER HOUR		\$ 271.00	\$ 271.00	\$ 240.87	\$ 180.66	\$ 165.59	\$ 143.01	\$ 105.37	\$ 82.80	\$ 46.97	\$ 75.28	
1.0 PROJECT MANAGEMENT AND ADMINISTRATION												
1.6 - INVOICING												
1.6.1 Prepare and Submit Invoices - Prefinal Design Phase												
1.6.2 Prepare and Submit Invoices -Final Design Phase			1								2	3
SUB-TOTAL NUMBER OF SHEETS:			1								2	Column Total = 3
SUB-TOTAL HOURS:												Row Total = 3
SUB-TOTAL LABOR COST:		\$ -	\$ 271.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 150.56	\$ 421.56
1.0 PROJECT MANAGEMENT AND ADMINISTRATION SUMMARY												
1.0 - TOTAL NUMBER OF SHEETS:												Column Total = 3
1.0 - TOTAL HOURS:			1								2	Row Total = 3
1.0 - % HOURS BY CLASS:			33.3%								66.7%	100.0%
1.0 - % LABOR COST BY CLASS:			64.3%								35.7%	100.0%
1.0 - TOTAL LABOR COST:		\$ -	\$ 271.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 150.56	\$ 421.56

TASK	SHEETS	PRINCIPAL	SENIOR PROJECT MANAGER	PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	DESIGN ENGINEER	EIT	SENIOR ENGINEER TECH	ENGINEER TECH	ADMIN / CLERICAL	SUB TOTALS
RAW LABOR RATE PER HOUR		\$ 86.54	\$ 86.54	\$ 76.92	\$ 57.69	\$ 52.88	\$ 45.67	\$ 33.65	\$ 26.44	\$ 15.00	\$ 24.04	
OVERHEAD RATE	184.68%	184.68%	184.68%	184.68%	184.68%	184.68%	184.68%	184.68%	184.68%	184.68%	184.68%	
PROFIT	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	
CONTRACT LABOR RATE PER HOUR		\$ 271.00	\$ 271.00	\$ 240.87	\$ 180.66	\$ 165.59	\$ 143.01	\$ 105.37	\$ 82.80	\$ 46.97	\$ 75.28	
2.0 DATA COLLECTION / PREFINAL DESIGN												
2.4 - GEOTECHNICAL INVESTIGATION												
2.4.1 General Testing and Investigation												
2.4.1.1 Geotechnical Field Work								24				24
2.4.1.2 Boring Layout Plan				1		2						3
2.4.1.3 Texas811 or Similar Locator Service								3				3
2.4.3 Draft Geotechnical Report, Bridges, Walls and Pavement Design												
2.4.4 Final Geotechnical Report, Bridges, Walls and Pavement Design				4	8	20	32	60				124
2.4.5 Prepare Boring Log Sheets and Stamp				1				2				3
SUB-TOTAL NUMBER OF SHEETS:				6	8	22	32	89				Column Total = 157
SUB-TOTAL HOURS:												Row Total = 157
SUB-TOTAL LABOR COST:		\$ -	\$ -	\$ 1,445.22	\$ 1,445.28	\$ 3,642.98	\$ 4,576.32	\$ 9,377.93	\$ -	\$ -	\$ -	\$ 20,487.73
2.0 DATA COLLECTION / PREFINAL DESIGN SUMMARY												
2.0 - TOTAL NUMBER OF SHEETS:				6	8	22	32	89				Column Total = 157
2.0 - TOTAL HOURS:												Row Total = 157
2.0 - % HOURS BY CLASS:				3.8%	5.1%	14.0%	20.4%	56.7%				100.0%
2.0 - % LABOR COST BY CLASS:				7.1%	7.1%	17.8%	22.3%	45.8%				100.0%
2.0 - TOTAL LABOR COST:		\$ -	\$ -	\$ 1,445.22	\$ 1,445.28	\$ 3,642.98	\$ 4,576.32	\$ 9,377.93	\$ -	\$ -	\$ -	\$ 20,487.73

TASK	SHEETS	PRINCIPAL	SENIOR PROJECT MANAGER	PROJECT MANAGER	SENIOR ENGINEER	PROJECT ENGINEER	DESIGN ENGINEER	EIT	SENIOR ENGINEER TECH	ENGINEER TECH	ADMIN / CLERICAL	SUB TOTALS
RAW LABOR RATE PER HOUR		\$ 86.54	\$ 86.54	\$ 76.92	\$ 57.69	\$ 52.88	\$ 45.67	\$ 33.65	\$ 26.44	\$ 15.00	\$ 24.04	
OVERHEAD RATE	184.68%	184.68%	184.68%	184.68%	184.68%	184.68%	184.68%	184.68%	184.68%	184.68%	184.68%	
PROFIT	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	
CONTRACT LABOR RATE PER HOUR		\$ 271.00	\$ 271.00	\$ 240.87	\$ 180.66	\$ 165.59	\$ 143.01	\$ 105.37	\$ 82.80	\$ 46.97	\$ 75.28	

DIRECT EXPENSES											
DIRECT EXPENSES:		UNIT	QUANTITY	UNIT COST							
MOBILIZATION / DEMOBILIZATION		LS	1	\$ 500.00							\$500.00
SUPPORT VEHICLE		PER DAY		\$ 250.00							
SOIL DRILLING & SAMPLING (COHESIVE SOILS): CONTINUOUS IN THE UPPER 10 FT AND AT 5 FT INTERVALS THEREAFTER. SPT SAMPLES IN GRANULAR SOILS.		PER FOOT	90	\$ 28.00							\$2,520.00
ROCK CORING		PER FOOT	60	\$ 42.00							\$2,520.00
TCP TESTS (AT 5 FT. INTERVALS).		EACH	20	\$ 15.00							\$300.00
BACKFILL WITH SOIL CUTTINGS / GROUTING WITH BENTONITE CHIPS.		PER FOOT	150	\$ 8.00							\$1,200.00
PER DIEM (EACH 2-PERSON DRILLING CREW).		PER DAY	3	\$ 300.00							\$900.00
MOISTURE CONTENT (ASTM D2216)		EACH	53	\$ 10.00							\$530.00
ATTERBERG LIMITS (ASTM 4318)		EACH	33	\$ 80.00							\$2,640.00
PERCENT PASSING NO. 200 SIEVE (ASTM D1140)		EACH	33	\$ 42.00							\$1,386.00
SIEVE ANALYSIS (ASTM D422)		EACH	33	\$ 95.00							\$3,135.00
UNCONFINED COMPRESSIVE - SOIL (ASTM D2166)		EACH	4	\$ 70.00							\$280.00
UNCONFINED COMPRESSIVE - ROCK (ASTM D7012)		EACH	5	\$ 75.00							\$375.00
CONSOLIDATED-UNDRAINED COMPRESSION TEST WITH PORE PRESSURE, MULTI- SAMPLE, 3 PER FAILURE ENVELOPE (INCLUDES DUW & STRESS-STRAIN CURVES) ASTM D4767		EACH	2	\$ 1,400.00							\$2,800.00
CONSOLIDATION, INCREMENTAL LOADING (ASTM 2435)		EACH		\$ 500.00							
CORROSION SUITE (SULFATES, CHLORIDES, AND PH)		EACH	12	\$ 175.00							\$2,100.00
RESILIENT MODULUS (RM), MINIMUM OF 4 TESTS		EACH		\$ 650.00							
STANDARD PROCTOR (ASTM 698)		EACH		\$ 250.00							
UTILITY LOCATES (PER BORING)		EACH		\$ 25.00							
TRAFFIC CONTROL (PER BORING)		EACH	2	\$ 2,300.00							\$4,600.00
SAMPLE STORAGE (PER MONTH)		MONTH		\$ 500.00							
TOTAL DIRECT EXPENSES:											\$25,786.00

DESIGN FEE SUMMARY		
1.0 PROJECT MANAGEMENT AND ADMINISTRATION	\$	421.56
2.0 DATA COLLECTION / PREFINAL DESIGN / FINAL DESIGN	\$	20,487.73
DIRECT EXPENSES	\$	25,786.00
Attachment D - Corsair Consulting LLC - TOTAL	\$	46,695.29