

DANNENBAUM ENGINEERING CORPORATION

LAREDO OFFICE:

8610 MCPHERSON, SUITE 130 LAREDO, TEXAS 78040 (956)712-9817 OFFICE (956)712-9857 FAX

December 06, 2016

Webb County
1620 Santa Ursula, 2nd Floor
Laredo, Texas 78040

Attn: Luis Perez Garcia, P.E.
Webb County Engineer

Ref: Supplemental Agreement No. 6 to Main Contract - (TxDOT CSJ 0086-14-058) is Adding Engineering Services/Fee

Subj: Supplemental Agreement No. 6 to Main Contract

Dear Mr. Perez Garcia,

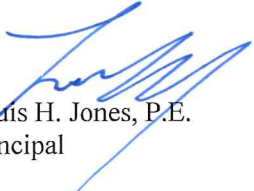
Please find attached herewith: three (3) partially executed copies of Supplemental Agreement No. 6 to Main Contract for Engineering Services for the above referenced project, each bearing an original signature. This Supplemental No. 6 is adding Supplemental No. 2 and Supplemental No. 3 to Work Authorization No. 2 (recently approved 11/14/2016) for additional Advanced Planning Services for TxDOT CSJ: 0086-14-058. This Supplemental Agreement No. 6 to the Main Contract includes an increase for Supplemental Agreement No. 2 and 3 to Work Authorization No. 2 of \$157,121.03 approved on November 14, 2016 increasing the total Main contract to \$2,743,625.05.

Please execute each of the three (3) copies of Supplemental Agreement No. 6 to Main Contract using blue ink. Thereafter, please retain one (1) original for your files, transmit one (1) original to TxDOT, and return one (1) original to our office for our records.

Provided below in Attachment E-2A, and E-2B in this Supplemental No. 6 to Main Contract are the justifications for the man-hours for the disciplines of the work required to provide services for the development of Supplemental No. 2 and No. 3 to Work Authorization No. 2.

Should you have any questions or require further information regarding this matter, please contact me at your earliest convenience by telephone at (956) 682-3677 or by email at louis.jones@dannenbaum.com or Anthony Garza (956) 639-2404 or by email at Anthony.garza@dannenbaum.com.

Sincerely,


Louis H. Jones, P.E.
Principal

cc: File No. 4688-01
Richard D. Seitz, P.E.
Nathaniel Olivarez, P.E.

Dannenbaum Engineering Corporation
Dannenbaum Engineering Corporation
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Cynthia M. Luera

Dannenbaum Engineering Corporation

Letter Inclusions: 1. Three (3) partially executed copies of Supplemental Agreement No. 6 to the Main Contract for Engineering Services for the above referenced project, each bearing an original signature.

**CONTRACT FOR ENGINEERING SERVICES
SUPPLEMENTAL AGREEMENT NO. 6 to the MAIN CONTRACT**

THIS SUPPLEMENTAL AGREEMENT to The Main Contract for Engineering Services is made by and between the County of Webb, a subdivision of the State of Texas, hereinafter called "County" and Dannenbaum Engineering Corporation, having its principal business address at 8610 McPherson Road, Laredo, Texas 78045 hereinafter called "Engineer," for the purpose of contracting for engineering services.

BACKGROUND

The County and the Engineer executed a Contract on August 2013 for engineering services generally described as preliminary engineering, including the preparation of schematics, environmental documents and right of way parcel maps, to support a possible future design/build project, and if design/build is not chosen as the preferred method of project delivery, then the County may amend the Contract to include the development of PS&E. This Supplemental No. 6 to the Main Contract will add Supplemental Work Authorization No. 2 and No. 3 to Work Authorization No. 2 approved November 14, 2016

The Contract was amended by Supplemental Agreements 1, 2, 3, 4, and 5 to reflect revisions to the Scope of Services to be provided by the Engineer. (Last revision was on 08/23/2016) for the Phase I-Advanced Project Development Services (FC110).

AGREEMENT

The County and the Engineer agree that the Contract is amended as follows:

ARTICLE 1. SCOPE OF SERVICES.

The original scope of services in the Main Contract is amended by this Supplemental Agreement No. 6 to include:

ARTICLE 2. CONTRACT PERIOD.

This Supplemental Agreement No. 6 to the Main Contract becomes effective when fully executed by all parties hereto and it shall terminate at the close of business on **August 1, 2020** unless the contract period is: (1) modified by written supplemental agreement prior to the date of termination as set forth in Attachment A, General Provisions, Article 6, Supplemental Agreements; (2) extended due to a work suspension as provided for in Attachment A, Article 3, Paragraph C; or (3) otherwise terminated in accordance with Attachment A, General Provisions, Article 15, Termination. Any work performed or cost incurred before or after the contract period shall be ineligible for reimbursement.

ARTICLE 3. COMPENSATION.

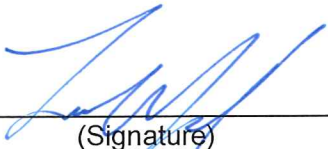
Maximum Amount Payable. The current Maximum Amount Payable under the Main Contract including Supplemental 1 thru 5 of Main Contract is **\$2,586,504.02** is hereby modified by this Supplemental Agreement No. 6 to Main Contract to **\$2,743,625.05** an increase of **\$157,121.03** for Supplemental No. 2 and 3 to Work Authorization No. 2 outlined in Attachment E-2A and E-2B. These attachments are made a part of this Supplemental No. 6 to the Main Contract.

All other provisions of the Main Contract are unchanged and remain in full force and effect.

IN WITNESS WHEREOF, this Supplemental Agreement is executed in duplicate counterparts and hereby accepted and acknowledged below.

THE ENGINEER

THE COUNTY



(Signature)

(Signature)

Louis H. Jones Jr.

(Printed Name)

(Printed Name)

Principal

(Title)

(Title)

12/5/16

(Date)

(Date)

LIST OF ATTACHMENTS:

- Attachment B Services To Be Provided By the County (Rev 11-01-2016) (Added by CSJ: 0086-14-910)
- Attachment C-1 Services To Be Provided By the Engineer (Rev 11-01-2016) For Supplemental Work Authorization No. 2 and No. 3 to Work Authorization No. 2 (CSJ: 0086-14-058)
- Attachment C-2 Services To Be Provided By the Engineer (Rev 11-01-2016) For Work Authorization No. 3; (CSJ: 0086-14-910)
- Attachment E-2A Supplemental and Detailed Fee Schedule for Supplemental Work Authorization No. 2 to Work Authorization No. 2 (CSJ: 0086-14-058)
- Attachment E-2B Supplemental and Detailed Fee Schedule for Supplemental Work Authorization No. 3 to Work Authorization No. 2 (CSJ: 0086-14-058)
- Attachment F Work Schedule (Revised 11/01/2016) (Added by CSJ: 0086-14-058)

ATTACHMENT B

SERVICES TO BE PROVIDED BY THE COUNTY

1. The County shall provide prompt review of all submittals; process monthly invoices and review monthly progress reports within ten (10) days of receiving such documents.
2. The County shall contact TxDOT Laredo with three (3) business days of receiving request from Engineer on any required information or documents from TxDOT.
3. The County Engineer will provide the Engineer with all available existing information on the Projects from TxDOT or other available sources.
4. The County, through TxDOT, will be responsible for preparing, holding and documenting the Value Engineering Study with Engineer's Staff only. Based on One Day attendance by Project Manager; Deputy Project Manager and Senior Engineer.

DESIGN SCHEMATICS

Provide hard copy of the approved schematic developed by Kellogg Brown & Root (KBR) – 1 Large format roll.

Provide hard copy of 90% schematic developed by Parson Brinkerhoff of Americas (PB America) – 1 Large format roll.

VALUE ENGINEERING REPORT – hard copy dated November 2007, Electronic in pdf format contained in CD along with construction plans (as built).

ENVIRONMENTAL DOCUMENT – None available.

HYDRAULIC STUDIES

PAVEMENT DESIGN REPORT – Provided by TxDOT

PRELIMINARY CONSTRUCTION ESTIMATE- Provided for information only.

DSR PRELIMINARY – Provided for information only.

TRAFFIC STUDY – Provided by TxDOT and/or TTI

TRAFFIC DATA – Provided by TxDOT and/or TTI

CROSS SECTION FILES

UTILITY DATA – The State does not up-date schematic utility data.

CONSTRUCTION PLANS (All Microstation working files for original plans and As-Built contained on CD)

- Existing Loop 20 from Sta. 257+85.56 to just North of Loop 20/US 59 Overpass Sta. 115+85.40
- Existing plans on any modification to Loop 20 or crossing roadways from Sta. 115+85.40 to just North of Loop 20/US 59 Overpass (Sta. 115+85.40)

SURVEYING DATA:

ALL EXISTING TOPOGRAPHIC SURVEY

Geopak DTM files
Geopak TIN files
Geopak DAT files
Microstation 2d CADD files
Microstation 3d CADD files
Existing ROW in 2d Microstation CADD files
XYZ text files of survey data
Existing Survey Control Monumentation in PDF Format
2007 Webb CADD Aerial Mosaic in ECW format @ 1 ft. pixel resolution

Note:

The survey data began provided by the State, DOES NOT reflect current site conditions. Topographic survey will required to be updated prior to final schematic development. See section IV. FIELD SURVEYING AND PHOTOGRAMMETRY for other information needed.

ALL SURVEY CONTROL

The survey control for this project was set back in 2003
Please check control points before use
Note that some of these points may have been disturbed and/or destroyed, therefore the coordinates and elevations shown might not be valid

ALL HYDRAULIC DATA

County will provide (obtained from TxDOT) all working files of drainage area maps and Windstorm runs for all existing storm sewer lines within project right-of-way in a condition and format that the Engineer can readily verify and for adequacy and accuracy of existing storm sewer systems

ALL HIGH MAST LIGHTING

County will provide (obtained from TxDOT) all microstation working files associated with the existing high mast lighting within project limits

ALL GEOTECHNICAL

County will provide (obtained from TxDOT) all existing geotechnical reports associated information within the project limits

SCOPE AND FEE SCHEDULE ASSUMPTIONS

1. Public meeting/public hearing court reporter to be provided by the County
2. The TxDOT Laredo District has a VRS network
3. The project surveyors can utilize VRS in a two rover configuration
4. Highway Capacity Analysis and preparation of design report will be done by TTI
5. Preparation of Interstate Access Justification Report will be done by TTI
6. TxDOT/County will provide all design working files in Microstation format for all plans of existing roadways.
TxDOT/County will provide all electronic files of computer runs (actual working data) of Winstorm for existing drainage

ATTACHMENT C-1
(Revised 11-01-2016)

Additional Services to be Provided by the Engineer

CSJ: 0086-14-058
Highway: SL 20
County: Webb County
Project No.:
Limits: Advanced Planning Loop 20 from Sta. 554+00 to Just North of Loop 20 / US 59
Overpass (CSJ: 0086-14-058)
Limits: (R.O.W. Utilities and PS&E Including Offsite Detention Ponds) Loop 20
Project Length: 7.0 Miles (CSJ: 0086-14-058)
Area Office: Laredo Area Office

Proposed Improvements-Advanced Planning (CSJ: 0086-14-058)

The proposed Loop 20 from Sta. 554+00 to Just North of Loop 20 / US 59 Overpass will consist of eight (8) lane main lanes and no frontage roads from US 59 Hwy to Airport Drive and six (6) lane main lanes and three (3) lane frontage roads from Airport Drive to International Road for the advanced project planning Phase I and Phase II (Schematic / Environmental / Right of Way), and the Phase III – PS&E phase, may be performed at a later date, with Amendment to the Contract, which will consist of eight (8) lane main lanes and no frontage roads from US 59 Hwy to Airport Drive and six (6) lane main lanes and three (3) lane frontage roads from Airport Drive to International Road with overpasses over Shiloh Road; Del Mar Road; University Drive; Jacaman Road and Laredo International Airport Road, including corresponding underground storm sewers; cross culverts; signage and traffic signals at frontage roads.

Sidewalks on both sides of the proposed Loop 20 Freeway from the Loop 20 / US 59 overpass to the Loop 20/ International Boulevard overpass.

Hike and Bike Trail along one side of the proposed Loop 20 Freeway from the Loop 20 / US 59 overpass to the Loop 20/ International Boulevard overpass.

PHASE I- ADVANCED PROJECT DEVELOPMENT SERVICES FOR SUPPLEMENTAL WORK AUTHORIZATIONS NO. 2 AND 3 TO WORK AUTHORIZATION NO. 2

I. FEASIBILITY STUDIES

II. ROUTE AND DESIGN STUDIES

Task: Roadway Design Criteria (FC: 110)

The Engineer shall revise the roadway design criteria to include sidewalks on both sides of Loop 20.

The Engineer shall revise the roadway design criteria to include small signs. The signs are to be designed in accordance with TxDOT "Sign Crew Field Book" and AASHTO "Guide for the Development of Bicycle Facilities (2012)

The Engineer shall revise the roadway design criteria to include a hike and bike trail on one side of Loop 20. Hike and bike trails is to be designed in accordance with AASHTO "Guide for the Development of Bicycle Facilities (2012). Details are to be added illustrating sidewalk and hike and bike crossings of driveways.

Task: Design Schematic (FC: 110)

- b. Prepare a schematic plan and profile drawing (1"=50'H, 1" = 10'V) on a continuous color plot paper roll. The Schematic will include hike and bike trail, small signs, the ultimate edge of pavement, proposed hike and bike trail profile, existing utility crossings, proposed culvert crossings, proposed bridges, proposed R.O.W., existing cross streets, proposed driveways, proposed outfall channels, proposed channelized intersections, ultimate interchange configurations, signing, and pavement markings.

Task: Value Engineering Studies (FC 110)

- a. TxDOT will be responsible for preparing; holding and documenting Value Engineering Study with Engineer's Staff attending one(1) day.

Task: Soil Core Hole Drilling (FC: 110)

- (1) For: a.) Pavement, b.) Retaining Walls, c.) Miscellaneous Structures, or d.)Bridges, (1) No core drilling is to be accomplished until the state has given the engineer written approval.

Provide Soil Core Hole Drilling.

The Engineer shall perform the following items under this task:

- Perform the geotechnical drilling and engineering services for the bridge structures located at intersections shown below:

Shiloh Drive
Del Mar Blvd
University Blvd
Jacaman Rd
Laredo International Airport Entrance

- Establish in consultation with Webb County and the State, the locations of the test holes utilizing tape and right angle measurements from existing benchmarks (does not include surveying of boring locations).
- Drill two bridge borings utilizing auger drilling techniques to a maximum depth of 70 ft below existing grades or until five consecutive TCP test results of 100 blows for less than 4 in. are recorded, whichever is shallower; perform Texas Cone Penetrometer (TCP) tests at 2.5 ft. intervals for the first 10 ft. and at 5 ft. intervals.
- Collect one grab sample in the stream bank/bottom for scour analysis gradation testing.
- Visually classify the soil samples during drilling operations.
- Perform gradation testing on the scour sample.
- Provide a written engineering report to include the results of our classification and TCP testing in WinCore format boring logs, as well as pier capacity curve and the results of the gradation tests.
- Provide field sampling and laboratory analysis, according to the State's Standards, to produce Pier Capacity Charts to be used in the bridge foundation design. Provide boring logs to be shown on bridge layouts and in conformance with the State's criteria.
- Provide field sampling and laboratory analysis to produce recommendations on retaining wall design. Provide global stability analysis for the retaining walls.
- Provide slope stability analysis at fill locations

The Engineer shall provide all traffic control, labor and equipment for the Traffic Control Plan (TCP) while performing services under this work authorization. The Engineer shall comply with the regulations of the most recent edition of the "Texas Manual on Uniform Traffic Control Devices". The Engineer must submit the TCP to the respective Area Office to obtain approval from the Traffic Control Safety Review Committee concerning the proposed method of handling traffic prior to the commencement of geotechnical work.

Supplemental Work Authorization No. 2 to Work Authorization No. 2

- Modify the bridge length to accommodate revised lane configuration – 4 intersections will be modified to include two turn lane and 2 through lanes. Frontage roads to include turnaround 2 turn lanes and 2 through lanes.
- Modify the retaining walls out 12 feet to allow for future widening – plan view location of retaining walls will be updated. Ramps will be evaluated to determine minimal construction in the future. Typical sections will be revised to reflect updated configuration. Cross section will be modified to reflect new typical sections.
- Reconfigure entrance and exit ramp south of Airport – ramps will be redesigned to reflect an exit ramp and entrance ramp south of Airport.
- Increase the Radius of the Mainlane and Frontage Road alignments – Mainlane alignment and South Bound Frontage Road alignment will be modified to include a larger radius
- Change loop 20 to US 59 – All text will be updated to reflect US59.
- Evaluate if exiting braided ramp can be switched to an entrance ramp – The Braided ramp configuration will be analyzed to improve weaving distance. Entrance ramp will braid over the exiting ramp.
- Perform Level of Service Analysis for Loop 20 Corridor – Traffic analysis will be performed for the Loop 20 corridor to determine the Level of Service Analysis for the roadway configurations.

III. SOCIAL, ECONOMICAL, AND PUBLIC INVOLVEMENT

Task: Environmental - (Section 6(f) Coordination) (FC: 120) Supplemental Work Authorization No. 2 to Work Authorization No. 2

- Completion of the environmental documentation proposing the conversion of Section 6(f) property to non 6(f) use.
- Identification of the proposed replacement property and the needed environmental documentation to propose a conversion request to TPWS and the NPS via the LWCF State Liaison Officer.
- Prepare a separate NEPA document for the proposed Section 6(f) conversion property.
- Coordinate with local officials and TxDOT to complete the 6(f) process.
- The Engineer shall obtain ownership data for all impacted property owners and County shall obtain right of entry from all property owners prior to commencing any work for 6(f) related environmental services.

Task: Detention Pond Analysis (FC: 161)

Supplemental Work Authorization No. 2 to Work Authorization No. 2

- Will not be included, it is to be included in a future work authorization if required

Supplemental Work Authorization No. 3 to Work Authorization No. 2

- Perform an additional eight (8) additional geotechnical soil borings as part of the geotechnical soil exploration along the project.
 - Two (2) Bridge
 - Two (2) Retaining Wall
 - Four (4) Bridge
- The engineer has established, in consultation with Webb County and the State, the locations of the test holes utilizing tape and right angle measurements from existing benchmarks as per the layout submitted by the engineer. Written approval via email was provided by the County and State on September 14, 2016.
- This increases the total number of borings from sixty-three (64) to seventy-one (72).

DELIVERABLES

D. DELIVERABLES

1. Geotechnical report that includes data from the additional eight (8) borings approved by the county and the state.
2. Electronic files shall be furnished to the State on a CD or DVD Recordable media

SCOPE AND FEE SCHEDULE ASSUMPTIONS

F. ASSUMPTIONS:

1. Assumes Right of Entry to be handled by the Client.

ATTACHMENT C-2
(Revised 11-01-2016)
Additional Services to be Provided by the Engineer

CSJ: 0086-14-058
Highway: SL 20
County: Webb County
Project No.:
Limits: Advanced Planning Loop 20 from Sta. 554+00 to Just North of Loop 20 / US 59
Overpass (CSJ: 0086-14-058)
Project Length: 7.0 miles
Area Office: Laredo Area Office

Proposed Improvements-Advanced Planning (CSJ: 0086-14-058)

The proposed Loop 20 from Sta. 554+00 to Just North of Loop 20 / US 59 Overpass will consist of eight (8) lane main lanes and no frontage roads from US 59 Hwy to Airport Drive and six (6) lane main lanes and three (3) lane frontage roads from Airport Drive to International Road for the advanced project planning Phase I and Phase II (Schematic / Environmental / Right of Way), and the Phase III – PS&E phase, may be performed at a later date, with Amendment to the Contract, which will consist of eight (8) lane main lanes and no frontage roads from US 59 Hwy to Airport Drive and six (6) lane main lanes and three (3) lane frontage roads from Airport Drive to International Road with overpasses over Shiloh Road; Del Mar Road; University Drive; Jacaman Road and Laredo International Airport Road, including corresponding underground storm sewers; cross culverts; signage and traffic signals at frontage roads.

Sidewalks on both sides of the proposed Loop 20 Freeway from the Loop 20 / US 59 overpass to the Loop 20/ International Boulevard overpass.

Hike and Bike Trail along one side of the proposed Loop 20 Freeway from the Loop 20 / US 59 overpass to the Loop 20/ International Boulevard overpass.

The monthly billing statements must be mailed to:

Luis Perez Garcia, P.E., Webb County Engineer
Webb County, Texas
1620 Santa Ursula, 2nd Floor
Laredo, Texas 78040

**ADVANCED PLANNING
DELIVERABLES
SUPPLEMENTS NO. 2 AND NO. 3
TO WORK AUTHORIZATION NO. 2 (CSJ:0086-14-058)**

1. Geotechnical Report that includes data from the additional eight (8) borings approved by the County and State
2. Electronic files shall be furnished to the State on a CD or DVD Recordable media.

ATTACHMENT E-2A
(Revised 11/1/2016)

**Summary of Fee Schedule For Phase I (Advanced Project Development Services)
Supporting Lump Sum Calculations For
Supplemental Work Authorization No. 2 to Work Authorization No. 2
for CSJ: 0086-14-058**

ATTACHMENT E-2A
SUMMARY OF FEE SCHEDULE FOR PHASE I (ADVANCED PROJECT DEVELOPMENT SERVICES) SUPPORTING LUMP SUM CALCULATIONS

DETAILED FEE SCHEDULE FOR SUPPLEMENTAL WORK AUTHORIZATION NO. 2 TO WORK AUTHORIZATION NO. 2

LOOP 20 STIMULUS PROJECT (CSJ: 0086-14-099)

ADVANCED PROJECT DEVELOPMENT SERVICES

Respond to TxDOT comments / design changes and develop 6(f) Environmental Documents
 for

Extension of Loop 20 from Approximately STA 554+00 to just North of the Loop 20 / US 59 Overpass.

SUPPLEMENTAL WA NO. 2 TO WA NO 2

PHASE I SUMMARY

Function Codes	PRIME		DBE		DBE		DBE		DBE		DBE		NON-DBE		NON-DBE		NON-DBE			
	Hrs	Fee	Hrs	Fee	Hrs	Fee	Hrs	Fee	Hrs	Fee	Hrs	Fee	Hrs	Fee	Hrs	Fee	Hrs	Fee		
Dannenbaum Engineering Corporation	389	\$ 44,504.07																		
FC 110 Route and Design Studies	585	\$ 79,120.93																		
FC 120 Social, Economic and Environmental Studies and Public Involvement		\$ 4,178.64																		
Direct Expenses	974	\$ 127,803.64	0	\$ -	0	\$ -	0	\$ -	0	\$ -	0	\$ -	0	\$ -	0	\$ -	0	\$ -	0	
Total																				
Percent Participation	100.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	

% PARTICIPATION =	
NON-DBE \$	127,803.64 100.00%
DBE \$	- 0.00%
TOTAL \$	127,803.64 100.00%

ATTACHMENT E-2A
(Revised 11/1/2016)

Detailed Fee Schedule For
Supplemental Work Authorization No. 2 to Work Authorization No. 2
(DANNENBAUM ENGINEERING CORPORATION)

ATTACHMENT E-2A

DETAILED FEE SCHEDULE FOR SUPPLEMENTAL WORK AUTHORIZATION NO. 2 TO WORK AUTHORIZATION NO. 2											
LOOP 20 STIMULUS PROJECT (CSJ: 0088-14-058)											
ADVANCED PROJECT DEVELOPMENT SERVICES											
Respond to TxDOT comments / design changes and develop 60 Environmental Documents											
Extension of Loop 20 from Approximately STA 654+00 to Just North of the Loop 20 / US 59 Overpass.											
DANNENBAUM ENGINEERING CORPORATION											
TASK DESCRIPTION	Principal or Project Manager	Deputy Project Manager	Senior Engineer (Civil)	Senior Engineer (Bridge)	Engineer	Senior Designer	CAD Operator CAD Tech, I	Critical	Total Hours	Task Cost	
BASIC SERVICES											
BASIC SERVICES (DANNENBAUM)											
FC-110 - ROUTE AND DESIGN STUDIES	1	0	2	0	8	16	16	0	43	\$ 4,876.98	
MODIFY THE BRIDGE LENGTH TO ACCOMMODATE REVISED LANE CONFIGURATION	1	0	1	0	8	20	40	0	70	\$ 7,080.56	
MODIFY THE RETAINING WALLS OUT BE 12 FT TO ALLOW FOR FUTURE WIDENING	1	0	1	0	4	8	16	0	30	\$ 3,268.96	
RECONFIGURE ENTRANCE & EXIT RAMP SOUTH OF AIRPORT	1	0	1	0	12	20	24	0	58	\$ 6,274.07	
INCREASE THE RADIUS OF THE MAINLANE AND FRONTAGE ROAD ALIGNMENTS	1	0	0	0	0	0	8	0	9	\$ 966.45	
CHANGE LOOP 20 TO US 59	1	0	1	0	8	8	0	0	18	\$ 2,483.27	
EVALUATE IF EXISTING BRAIDED RAMP CAN BE SWITCH TO AN ENTRANCE RAMP	3	6	16	0	32	40	48	16	161	\$ 19,544.08	
LEVEL OF SERVICE ANALYSIS FOR LOOP 20 CORRIDOR FROM US 59 TO INTERNATIONAL	9	6	22	0	72	112	152	16	389	\$ 44,504.07	
SUB-TOTAL - FC-110 - ROUTE AND DESIGN STUDIES											
TOTAL BASIC SERVICES MANHOURS (DANNENBAUM)	9	6	22	0	72	112	152	16	389	\$ 44,504.07	
HOURS SUB-TOTALS											
HOURS SUB-TOTALS	9	6	22	0	72	112	152	16	389		
LABOR RATE PER HOUR	\$ 327.93	\$ 236.07	\$ 225.50	\$ 225.50	\$ 132.09	\$ 106.64	\$ 83.44	\$ 64.89			
DIRECT LABOR COSTS	\$2,951.37	\$1,416.42	\$4,961.00	\$0.00	\$9,510.48	\$11,943.88	\$12,682.88	\$ 1,038.24	CHECK		
TOTAL BASIC SERVICES FEE (DANNENBAUM)	2,951.37	1,416.42	4,961.00	0.00	9,510.48	11,943.88	12,682.88	1,038.24	44,504.07		
PERCENT LABOR UTILIZATION FOR TOTAL PROJECT (BASED ON FEE)	6.63%	3.18%	11.15%	0.00%	21.37%	26.84%	26.50%	2.33%	100.00%		
PERCENT LABOR UTILIZATION FOR TOTAL PROJECT (BASED ON MANHOURS)	2.51%	1.54%	5.68%	0.00%	18.51%	28.79%	38.07%	4.11%	100.00%		
DIRECT EXPENSES:											
Mileage (2 RT)	Rate	Unit	Amount								
	\$	0.52 miles	748							\$ 388.96	
Hotel	\$	82.00 each	2							\$ 164.00	
Per Diem	\$	51.00 day	2							\$ 102.00	
TOTAL DIRECT EXPENSES										\$ 654.96	
TOTAL BASIC SERVICES (ROADWAY AND DRAINAGE + DANNENBAUM DIRECT EXPENSES)										\$ 45,159.03	

ATTACHMENT E-2A

DETAILED FEE SCHEDULE FOR SUPPLEMENTAL WORK AUTHORIZATION NO. 2 TO WORK AUTHORIZATION NO. 2
 LOOP 20 STIMULUS PROJECT (CS: 0086-14-058)
 ADVANCED PROJECT DEVELOPMENT SERVICES
 Respond to TxDOT comments / design changes and develop 6(f) Environmental Documents
 for
 Extension of Loop 20 from Approximately STA 554+00 to Just North of the Loop 20 / US 59 Overpass.
Dannenbaum Engineering Corporation

TASK DESCRIPTION	Project Engineer (IV)	Project Engineer (IV)	Civil Engineer	Env. Scientist	Scientist (Haz. Material Review)	Eng. Tech / GIS (CADD Technician)	Administration/ Clerical	Total LABOR HOURS	Task Cost
III. SOCIAL, ECONOMIC AND ENVIRONMENTAL STUDIES AND PUBLIC INVOLVEMENT									
FC 120 - SOCIAL, ECONOMIC AND ENVIRONMENTAL STUDIES AND PUBLIC INVOLVEMENT									
Project Coordination - 6(f)									
Prepare constraints map and project scope			2	4		16	2	0	\$ 2,905.56
Consult with TPWD to determine the Official with Jurisdiction	1			8				0	\$ 711.85
Coordinate with Webb County to Identify Replacement Property	2		2	8				5	\$ 1,977.28
Develop Location Map for Subject Property and Replacement Property	2		2	4				14	\$ 1,977.28
Develop a Site Plan, Location, and Boundary Map				8				12	\$ 1,985.24
Prepare a Cover Letter addressing the Conversion			2	8				24	\$ 4,162.30
Develop the 6(f) Environmental Assessment (Includes TxDOT Coordination for Each Task)	2	1	2	8				33	\$ 1,834.91
Socio-Economics				6				6	\$ 854.22
Natural Characteristics				10				12	\$ 1,629.64
Geological / Soils				8				10	\$ 1,344.90
Air Quality				2				2	\$ 284.72
Water Quality				12				14	\$ 1,914.38
Land Use				8				10	\$ 1,344.90
Transportation				8				10	\$ 1,344.90
Biology / T&E / Unique Wildlife				40				42	\$ 5,900.74
Other Env. Resources (haz. act)				20				30	\$ 4,192.30
Document Mitigation for Unavoidable Adverse Impacts				24				26	\$ 3,622.82
Develop a Public Notice for 6(f)				8				10	\$ 1,344.90
Coordinate THC Review in conjunction with TPWV				16				20	\$ 2,618.84
Coordinate a signed Amendment to the 6(f) Agreement and report to TPWV				16				18	\$ 2,412.90
Coordinate a Certificate of Land Dedication and report to TPWV				16				8	\$ 1,138.96
Coordinate a Recorded Deed and report to TPWV				8				18	\$ 2,412.90
Coordinate the placement of Signage at the Replacement Property and report to TPWV				8				10	\$ 1,273.94
Prepare 6(f) Documentation for the Public Hearing				8				10	\$ 1,273.94
Attend the 6(f) Public Hearing - (by Webb County)				12				10	\$ 1,273.94
Project management				4				6	\$ 777.92
Attend Coordination Meeting with Webb County (2x * travel)				24				43	\$ 6,047.03
Attend Coordination Meeting with Webb County & TxDOT (2x + travel)				24				43	\$ 6,047.03
Attend Coordination Meeting with Webb County, TxDOT, & TPWD (2x + travel)				24				43	\$ 6,047.03
Review and respond to TxDOT Comments (2x)				16				33	\$ 4,465.73
Review and respond to TPWD Comments (2x)				16				33	\$ 4,465.73
Subtotal	33	63	8	386	8	68	1900	585.00	\$ -
LABOR RATE PER HOUR									\$ 79,120.93
DIRECT LABOR COSTS	\$ 142.37	\$ 142.37	\$ 134.42	\$ 142.37	\$ 142.37	\$ 102.37	\$ 67.49	585.00	\$ -
TOTAL	\$ 4,699.21	\$ 8,959.31	\$ 1,075.36	\$ 54,954.82	\$ 1,138.96	\$ 7,001.96	\$ 1,282.31	79,120.93	\$ 79,120.93
PERCENT LABOR UTILIZATION FOR TOTAL PROJECT (BASED ON FEE)	5.94%	11.34%	1.36%	69.46%	1.44%	8.85%	1.62%	100.00%	\$ -
PERCENT LABOR UTILIZATION FOR TOTAL PROJECT (BASED ON MANHOURS)	-3.64%	-10.77%	-1.37%	-65.98%	-4.37%	-11.62%	-3.25%	-100.00%	\$ 79,120.93
									CHECK
									\$ 79,120.93

ATTACHMENT E-2A

DETAILED FEE SCHEDULE FOR SUPPLEMENTAL WORK AUTHORIZATION NO. 2 TO WORK AUTHORIZATION NO. 2
LOOP 20 STIMULUS PROJECT (CSJ: 0086-14-058)
ADVANCED PROJECT DEVELOPMENT SERVICES
Respond to TxDOT comments / design changes and develop 6(f) Environmental Documents
for
Extension of Loop 20 from Approximately STA 554+00 to Just North of the Loop 20 / US 59 Overpass.
Dannenbaum Engineering Corporation

SPECIAL SERVICES (FC 120) ENVIRONMENTAL SERVICES TASK DESCRIPTION	Project Engineer (IV) Rate	Project Engineer (IV) Unit	Project Engineer (IV) Amount	Env. Scientist	Scientist (Haz. Material Review)	Eng. Tech / GIS / CADD Technician	Administration/ Clerical	Total LABOR HOURS	Task Cost
DIRECT EXPENSES:									
Mileage (6 RT)	\$	0.52 miles							\$ 1,447.68
Air Travel	\$	600.00 each	2,784						\$
Hotel	\$	57.00 each	8						\$ 656.00
Per Diem	\$	65.00 day							\$
Rental Car	\$	3.75 dollars							\$
Fuel for Rental Car	\$	22.00 each	10						\$ 220.00
Overnight Carrier Cost (Letter Size)	\$	1,200.00 each	1						\$ 1,200.00
Hazardous Materials Report	\$								\$ 3,533.68
TOTAL DIRECT EXPENSES									\$ 82,844.61
ASSUMPTIONS:	<p>Environmental Services to Be Performed as summarized in the summary of hours.</p> <p>Services not provided include NONE or NOT INCLUDED. Dannenbaum will develop tasks as described in the summary of hours and in this section</p> <p>Obtain right of entry to perform environmental services Webb County</p> <p>Develop letters or other materials for seeking right of entry Webb County</p> <p>Compile and maintain mailing list Webb County</p> <p>Develop public involvement plan Webb County with DEC Assistance</p> <p>Public Involvement activities: Webb County</p> <p>Prepare an appraisal of the subject property and proposed replacement property</p> <p>Prepare a 4(f) evaluation (by TxDOT)</p> <p>Webb County will conduct the 6(f) Public Hearing with assistance from Dannenbaum</p> <p>Prepare Location Map</p> <p>Prepare Boundary Map</p> <p>Cover letter shall include - Acre to be converted/replaced, Description of the public outdoor recreation uses existing or proposed for the site, Surrounding land uses N, S, E, W (residential, commercial, agricultural, light industrial, etc.), dominant plants, vegetation, Topography, Natural water features on site, Soils, Wildlife habitat, Existing site development (type of impervious cover, structures, etc.), Utilities available on site, Overhead utility lines on site, Any history of contamination, Air rights, property ownership, easements, Located in a flood plain or wetland, Map delineating the floodplain/wetland area, Current property ownership, or identification of valuable or vulnerable natural resources, ecological processes, or rare, threatened, or endangered species of vegetation or wildlife. This documentation will be prepared for both the converted and replacement properties.</p> <p>Webb County shall prepare the Copy of the Reconnect Deed(s)</p> <p>TxDOT will provide the completed Loop 20 Environmental Assessment</p> <p>TxDOT will provide the completed historical and Archeological surveys for use in the 6(f) coordination - for converted property a</p> <p>TxDOT will complete the 4(f) coordination</p> <p>Public contact</p> <p>Identify and evaluate the potential for impacts to disabled and elderly individuals and populations</p> <p>Perform indirect and cumulative impact studies</p> <p>Perform Environmental Justice analysis</p> <p>Identify considerations impacting pedestrians and bicycle</p> <p>Perform air quality analysis to include a qualitative WSAF analysis</p>								
Special Provisions:	<p>Management and Coordination</p> <p>Environmental Document development project duration schedule assumed to be no longer than 6 months. Draft and Pre-Final or Final Environmental Document will be submitted within 6 months. Additional time will require supplemental to further develop or finalize environmental document.</p> <p>Literature Review and Secondary Data Collector</p> <p>Data collection to consist of one site visit for 3 days to collect data (includes meetings with TxDOT obtain copies of Feasibility Study, EA, CE, DCIS, review TxDOT project file.). It is assumed that the prime consultant will provide a list of adjacent property owners, obtain and provide ROE for all</p> <p>Natural Resources</p> <p>Investigate management strategy for the environmental resources property owner's responsibility only. This scope of work does not include USACE 404 permitting. It is assumed that permitting under the Nationwide Permit 14 will be completed by TxDOT. This scope of work does not include presence absence surveys for threatened and endangered species at the request of resource agency consultations. This scope of work does not include a hydrologic model or letter of map revision (LOMR) from the Federal Emergency Management Agency. This scope of work does not include a pre-nesting bird survey prior to construction. This scope of work does not include the development of a Storm Water Pollution Prevention Plan (SWPPP)</p> <p>Cultural Resources</p> <p>It is assumed the completed Cultural Resources documents will be completed by TxDOT</p> <p>Public Involvement:</p> <p>The consultant will prepare PI material for Webb County.</p> <p>Air Quality:</p>								

ATTACHMENT E-2A

DETAILED FEE SCHEDULE FOR SUPPLEMENTAL WORK AUTHORIZATION NO. 2 TO WORK AUTHORIZATION NO. 2 LOOP 20 STIMULUS PROJECT (CSJ: 0086-14-058) ADVANCED PROJECT DEVELOPMENT SERVICES Respond to TxDOT comments / design changes and develop 6(f) Environmental Documents for Extension of Loop 20 from Approximately STA 554+00 to Just North of the Loop 20 / US 59 Overpass. Dannenbaum Engineering Corporation							Task	Cost	
SPECIAL SERVICES (FC-120)	Project Engineer (IV)	Project Engineer (IV)	Civil Engineer	Env. Scientist	Scientist (Haz. Material Review)	Eng. Tech / GIS /CADD Technician	Administration/ Clerical	Total LABOR HOURS	Task Cost
Take field measurements of existing noise level (NOT INCLUDED) Perform hazardous materials studies for converted property on Reconnaissance Survey (NOT INCLUDED) Intensive Survey (NOT INCLUDED) Perform visual impact studies (NOT INCLUDED) Perform construction impact studies (NOT INCLUDED) Perform Section 4(f) evaluations Perform wetland delineations (NONE) Socioeconomics Only windshield surveys will be conducted. No door-to-door, mailer, or phone surveys will be conducted to obtain information from residence or business owners.									
Air Quality Analysis includes a qualitative Mobile Source Air Toxics (MSAT) analysis. VSA quantitative analysis is not included in this scope and will be sourced from the TxDOT report. Notes: It is assumed data for the noise analysis shall be sourced from the TxDOT EA Environmental Decision Document. The Sub consultant shall prepare a draft environmental decision document for review by TPWD and a final environmental decision document for approval by TPWD for 6(f) Coordination. The decision document will succinctly summarize the prime aspects of the project that influence the environmental decision. Deliverables: The Sub consultant shall conduct an internal quality assurance and quality control review on each deliverable before it is submitted to the County/State for review. After the draft deliverables are reviewed by TxDOT, Webb County, and TPWD, the Sub consultant shall revise and resubmit the deliverables to address all comments received. Environmental Decision Document: The Sub consultant shall prepare a draft environmental decision document for review by TPWD and a final environmental decision document for approval by TPWD for 6(f) Coordination. The decision document will succinctly summarize the prime aspects of the project that influence the environmental decision. Deliverables: The Sub consultant shall conduct an internal quality assurance and quality control review on each deliverable before it is submitted to the County/State for review. After the draft deliverables are submitted and reviewed by TxDOT, Webb County, and TPWD, the Sub consultant shall revise and resubmit the deliverables to address all comments received.									

ATTACHMENT E-2B
(Revised 11/1/2016)

**Detailed Fee Schedule For
Supplemental Work Authorization No. 3 to Work Authorization No. 2
for CSJ: 0086-014-058**

ATTACHMENT E-2B
SUMMARY OF FEE SCHEDULE FOR PHASE I (ADVANCED PROJECT DEVELOPMENT SERVICES) SUPPORTING LUMP SUM CALCULATIONS

DETAILED FEE SCHEDULE FOR SUPPLEMENTAL WORK AUTHORIZATION NO. 3 TO WORK AUTHORIZATION NO. 2

LOOP 20 STIMULUS PROJECT (CSJ: 0086-14-088)
ADVANCED PROJECT DEVELOPMENT SERVICES
Additional Borings

for
Extension of Loop 20 from Approximately STA 554+00 to Just North of the Loop 20 / US 59 Overpass.

SUPPLEMENTAL WA NO. 3 TO WA NO 2

PHASE I SUMMARY

ADVANCED PROJECT DEVELOPMENT SERVICES SUMMARY BY FUNCTION CODES		Total Phase I Services = \$29,317.39																
Function Codes	PRIME		DBE		DBE		DBE		DBE		DBE		NON-DBE		NON-DBE			
	Hrs	Fee	Hrs	Fee	Hrs	Fee	Hrs	Fee	Hrs	Fee	Hrs	Fee	Hrs	Fee	Hrs	Fee		
Dannenbaum Engineering Corporation	6	\$ 844.96																
FC 110 Route and Design Studies																		
Direct Expenses																		
Total	6	\$ 844.96	0	\$ -	77	\$ 28,472.43	0	\$ -	0	\$ -	0	\$ -	0	\$ -	0	\$ -	\$ -	
Percent Participation	2.88%		0.00%		97.12%		0.00%		0.00%		0.00%		0.00%		0.00%		0.00%	

% PARTICIPATION =	
NON-DBE \$	844.96 2.88%
DBE \$	28,472.43 97.12%
TOTAL \$	29,317.39 100.00%

ATTACHMENT E-2B
(Revised 11/1/2016)

Detailed Fee Schedule For
Supplemental Work Authorization No. 3 to Work Authorization No. 2
(DANNENBAUM ENGINEERING CORPORATION)

ATTACHMENT E-2B

DETAILED FEE SCHEDULE FOR SUPPLEMENTAL WORK AUTHORIZATION NO. 3 TO WORK AUTHORIZATION NO. 2 LOOP 20 STIMULUS PROJECT (CSJ: 0086-14-088) ADVANCED PROJECT DEVELOPMENT SERVICES

Additional Borings

Extension of Loop 20 from Approximately STA 554+00 to Just North of the Loop 20 / US 59 Overpass.

DANNENBAUM ENGINEERING CORPORATION

TASK DESCRIPTION	Principal or Project Manager	Deputy Project Manager	Senior Engineer (Civil)	Senior Engineer (Bridge)	Engineer	Senior Designer	CAD Operator or CADD Tech. I	Clerical	Total Labor Hours	Task Cost
BASIC SERVICES										
BASIC SERVICES (DANNENBAUM)										
FC 110 - ROUTE AND DESIGN STUDIES										
MANAGEMENT FOR ADDITIONAL BORINGS				2	2			2	6	\$ 844.96
SUB-TOTAL - FC 110 - ROUTE AND DESIGN STUDIES	0	0	0	2	2	0	0	2	6	\$ 844.96
TOTAL BASIC SERVICES MANHOURS (DANNENBAUM)	0	0	0	2	2	0	0	2	6	\$ 844.96
HOURS SUB-TOTALS										
LABOR RATE PER HOUR	\$ 327.83	\$ 236.07	\$ 225.50	\$ 225.50	\$ 132.09	\$ 106.64	\$ 83.44	\$ 64.89	6	
DIRECT LABOR COSTS	\$0.00	\$0.00	\$0.00	\$451.00	\$264.18	\$0.00	\$0.00	\$ 128.78	CHECK	
TOTAL BASIC SERVICES FEE (DANNENBAUM)	0.00	0.00	0.00	451.00	264.18	0.00	0.00	128.78	844.96	
PERCENT LABOR UTILIZATION FOR TOTAL PROJECT (BASED ON FEE)	0.00%	0.00%	0.00%	53.80%	31.27%	0.00%	0.00%	15.36%	100.00%	
PERCENT LABOR UTILIZATION FOR TOTAL PROJECT (BASED ON MANHOURS)	0.00%	0.00%	0.00%	33.33%	33.33%	0.00%	0.00%	33.33%	100.00%	
DIRECT EXPENSES:										
Mileage (2 RT)	\$	0.52 miles								\$
Hotel	\$	82.00 each								\$
Per Diem	\$	51.00 day								\$
TOTAL DIRECT EXPENSES										
TOTAL BASIC SERVICES (ROADWAY AND DRAINAGE + DANNENBAUM DIRECT EXPENSES)										
										\$ 844.96

LOOP 20 STIMULUS PROJECT (CSJ: 0086-14289)

PHASE I - ADVANCED PROJECT DEVELOPMENT SERVICES - SUPPLEMENTAL BORINGS FOR FRONTAGE ROAD NEAR US 89 & ADDITIONAL PAVEMENT BORINGS
 Provide Advanced Project Development Services, Develop Separate Schematic, Environmental Assessment, Drainage Studies, and Surveying Special Services for Extension of Loop 20
 from Approximately STA 554+00 to just North of the Loop 20 US 89 Overpass.

SUB: ARIAS & ASSOCIATES, INC
SPECIAL SERVICES: GEOTECHNICAL SERVICES

NO. OF DINGS SHEET	DESCRIPTION	Principal	PM	Senior Engineer	Geotechnical Engineer/Senior Eng Geologist	Senior Designer/Senior Eng Tech	Lab Specialist/Eng Tech	Clerical	Total Labor Hrs.	Remarks	Task Cost
	FC 110 - ROUTE AND DESIGN STUDIES										
	CONDUCT GEOTECHNICAL EXPLORATION TO INCLUDE:										
	• PAVE/VEH										
	• RETAINING WALLS										
	• MISCELLANEOUS STRUCTURES										
	• SOUP/STABILITY DESIGN FOUNDATION STUDIES										
	PROJECT SET UP	0	0	1	0	0	0	0	1		\$ 184.63
	Utility Coordination	0	0	0	0	0	0	0	0		\$ 134.81
	Site Recon	0	0	0	0	0	0	0	0		\$ 2,023.65
	Bring Logs	0	0	3	0	0	16	0	9		\$ 823.71
	Perform Global Stability Analysis on fill areas	0	2	8	2	0	0	0	12		\$ 1,874.82
	Reformat Design - By TxDOT	0	0	0	0	0	0	0	0		\$ 1,874.82
	Reformat Design - By AASHTO	0	0	0	0	0	0	0	0		\$ 1,874.82
	Reformat Design - By AASHTO	0	0	0	0	0	0	0	0		\$ 1,874.82
	Final Review/Sign	0	0	1	0	0	0	0	1		\$ 1,874.82
	Deliverables	0	0	0	0	0	0	0	0		\$ 184.63
	SUB-TOTAL - FC 110 - ROUTE AND DESIGN STUDIES	0	5	25	2	0	16	0	45		\$ 7,536.43
	TOTAL SHEETS								77		
	HOURS SUB-TOTALS	0	5	25	2	0	16	0	45		\$ 44,937
	DIRECT LABOR COSTS	\$ 230,460	\$ 686,225	\$ 4,815,725	\$ 231,728	\$ 2,053,625	\$ -	\$ -	\$ 7,536.43		\$ -
	TOTAL	\$ -	\$ 686,225	\$ 4,815,725	\$ 231,728	\$ -	\$ 2,053,625	\$ -	\$ 7,536.43		\$ -
	DIRECT EXPENSES										
	MOBILIZATION FOR PERSONNEL & EQUIPMENT (LRY AT 300D MI)	1	TRIPS	\$ 1,000.00	\$ 1,000.00						\$ 1,000.00
	DRILLING (LRY AT 300D MI)	160	FT	\$ 13.00	\$ 2,080.00						\$ 2,080.00
	DRILLING (LRY AT 300D MI)	160	FT	\$ 13.00	\$ 2,080.00						\$ 2,080.00
	DRILLING (LRY AT 300D MI)	230	FT	\$ 6.00	\$ 1,380.00						\$ 1,380.00
	TxDOT Test Method TEX 132-E, Texas Cone Penetrometer Test	46	EA	\$ 30.00	\$ 1,380.00						\$ 1,380.00
	Determination of Moisture Content in Soil Materials (TEX-103-E)	46	TEST	\$ 16.00	\$ 736.00						\$ 736.00
	Determination of Liquid Limit in Soil Materials (TEX-103-E)	46	TEST	\$ 16.00	\$ 736.00						\$ 736.00
	Determination of Plasticity Index in Soil Materials (TEX-103-E)	46	TEST	\$ 16.00	\$ 736.00						\$ 736.00
	Determination of Amount of Material in Soil (TEX-111-E)	16	TEST	\$ 45.00	\$ 720.00						\$ 720.00
	CU Triaxial Shear Test - ASTM D 4767 (for Stability Analysis)	6	TEST	\$ 40.00	\$ 240.00						\$ 240.00
	FIELD CONE TESTS - ASTM D 1586	1	TEST	\$ 1,100.00	\$ 1,100.00						\$ 1,100.00
	FIELD CONE TESTS - ASTM D 1586	4	TEST	\$ 1,500.00	\$ 6,000.00						\$ 6,000.00
	FIELD CONE TESTS - ASTM D 1586	1	TRIPS	\$ 150.00	\$ 150.00						\$ 150.00
	MILEAGE - 1 TRIP X 300MI PER TRIP X 0.50MI (TRIP FOR LOADING & UTILITIES)	1	TRIPS	\$ 150.00	\$ 150.00						\$ 150.00
	TOTAL DIRECT EXPENSES										\$ 20,936.00
	TOTAL SPECIAL SERVICES										\$ 20,936.00

LABOR, GAD & DIRECT EXPENSES	
LABOR	\$ 28,472.43
GAD	\$ -
DIRECT EXPENSES	\$ 20,936.00
TOTAL	\$ 49,408.43

Assumptions:	No.	Depth	Units	Rate	Total
Borings	2	30			
Pavement	4	30			
Retaining Wall	2	20			

SPECIAL SERVICES	
1. GEOTECHNICAL SERVICES	\$ -

DELIVERABLES	
1. GEOTECHNICAL SERVICES	\$ -

- 1. SUBSURFACE UTILITY INVESTIGATION ASSUMED NOT TO BE NEEDED.
- 2. TRAFFIC CONTROL REQUIRED DURING GEOTECHNICAL FIELD WORK
- 3. STRUCTURES, TREES, WALKWAYS, MONUMENTS - SURVEY ONLY WITHIN EXISTING LOOP 20 ROW.
- 4. ASSUMES EXISTING EMBANKMENT AT AIRPORT DRIVE LOCATED ON ALIGNMENT # IS ENGINEERED FILL
- 5. NO WETLAND MITIGATION
- 6. ASSUMES PAVEMENT CORES NOT REQUIRED
- 7. ASSUMES PAVEMENT CORES SUBMITTED IN 2 SEPARATE REPORTS WITH SUPPLEMENTAL INFORMATION CONTAINED IN THESE REPORTS AND NOT 2 ADDITIONAL SEPARATE REPORTS.

ATTACHMENT F
(Revised 11/1/2016)

Work Schedule
For Supplemental No. 6 to Main Contract
for
CSJ: 0086-014-058

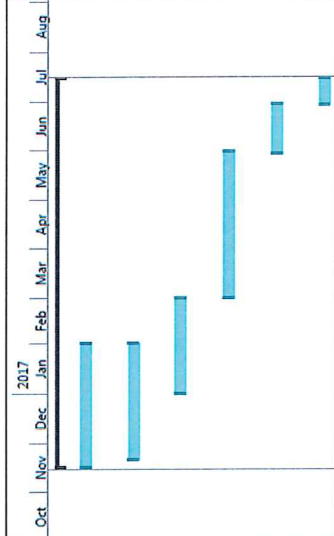
ATTACHMENT F
 Work Schedule
 (Revised 11/1/2016)

Supplemental No. 6 to Main Contract
 for

CSI: 0086-014-058
 SWA #2 to WA#2
 LOOP 20 STIMULUS PROJECT
 PHASES I & II

DANNENBAUM

ID	Task Name	Duration	Start	Finish
1	LOOP 20 EXTENSION	242 days	Wed 11/16/16	Sat 7/15/17
2	REVISE SCHEMATIC AS PER TXDOT COMMENTS	77 days	Wed 11/16/16	Tue 1/31/17
3	INITIATE 6(F) COORDINATION	72 days	Mon 11/21/16	Tue 1/31/17
4	IDENTIFY AND EVALUATE REPLACEMENT PROPERTY	59 days	Sun 1/1/17	Tue 2/28/17
5	SUBMIT TO AGENCIES FOR REVIEW	91 days	Wed 3/1/17	Tue 5/30/17
6	ADDRESS FINAL COMMENTS	31 days	Tue 5/30/17	Thu 6/29/17
7	SUBMIT FINAL DOCUMENT	17 days	Thu 6/29/17	Sat 7/15/17



ATTACHMENT F
 Work Schedule
 (Revised 11/1/2016)

Supplemental No. 6 to Main Contract
 for
 CSJ: 0086-14-058
 SWA #3 to WA#2
 LOOP 20 STIMULUS PROJECT
 PHASES I & II

DANNENBAUM

ID	Task Name	Duration	Start	Finish	2017
1	LOOP 20 EXTENSION	105 days	Wed 11/16/16	Tue 2/28/17	Nov, Dec, Jan, Feb, Mar
2	COORDINATE 8 ADDITIONAL BORINGS	30 days	Wed 11/16/16	Thu 12/15/16	Nov, Dec
3	COMPLETE 8 ADDITIONAL BORINGS	48 days	Thu 12/15/16	Tue 1/31/17	Dec, Jan, Feb
4	SUBMIT DATA	29 days	Tue 1/31/17	Tue 2/28/17	Jan, Feb