

HIDALGO COUNTY
Professional Engineering Services
Contract # C-08-226-09-30
Work Authorization Form

WORK AUTHORIZATION NO. 2

THIS WORK AUTHORIZATION is made pursuant to the terms and conditions of Section I.A. of the Agreement made by and between HIDALGO COUNTY, action herein by and through the Commissioner's Court, hereinafter called the "Owner," and, TEDSI Infrastructure Group, Inc., professional engineers of Mission, Texas, hereinafter called "Engineer".

PART 1. SCOPE OF WORK

The purpose of this Work Authorization is for the Engineer to provide services for Mile 2W from US-83 to 0.44 miles north of US-83.

The scope of services to be provided by the Owner is identified in *EXHIBIT "A" - Scope of Services to be Provided by the Owner* attached hereto.

The scope of services to be provided by the Engineer is identified in *EXHIBIT "B" - Scope of Services to be Provided by the Engineer* attached hereto.

PART 2. ESTIMATED COST

The estimated cost for services under this Work Authorization is \$148,818.45. This amount is based upon the costs outlined in the Estimated Cost Proposal attached hereto as EXHIBIT "D".

PART 3. PAYMENT

Compensation and payment to the Engineer for the services established under this Work Authorization shall be made in accordance with Article/Part/Section 5, 6 and 7 of the Agreement.

PART 4. FUNDING

This Work Authorization No. 1 shall be funded through funding source:

Account No. 2-1315-431-00-121-040-0-731

Requisition Number 227697 (MUST BE INCLUDED AFTER CC APPROVAL)

PART 5. PERIOD OF SERVICE

This Work Authorization shall become effective on the date of final acceptance of the parties hereto, and terminate on July 31, 2013 as indicated in the "Exhibit C-Preliminary Work Schedule".

PART 6. RESPONSIBILITIES AND OBLIGATIONS

This Authorization does not waive the parties' responsibilities and obligations provided under the Agreement.

PART 7. ACKNOWLEDGEMENT AND CONFIRMATION

Acknowledgement and confirmation by Hidalgo County Precinct #1, Commissioner _____ as to content and detail of this Work Authorization No. 2.

HIDALGO COUNTY

COMMISSIONER PRECINCT NO.1:

BY: _____

PART 8. ACCEPTANCE AND APPROVAL

This Work Authorization is hereby accepted, approved by Hidalgo County Commissioners' Court on _____ as indicated below and effective as of ____ day of _____, 2012.

THE ENGINEER:
TEDSI Infrastructure Group, Inc.

THE OWNER:
HIDALGO COUNTY

By: Jesse Salinas

By: Ramon Garcia, County Judge

ATTEST:

By: Arturo Guajardo, Jr., County Clerk

LIST OF ATTACHMENTS

- EXHIBIT "A" - Service to be Provided by the Owner
- EXHIBIT "B" - Services to be Provided by the Engineer
- EXHIBIT "C" - Work Schedule
- EXHIBIT "D" - Cost Proposal

WORK AUTHORIZATION NO. 2
MILE 2 WEST ROAD – PHASE II
US-83 to 0.44 miles north of US-83

EXHIBIT “A”
Services to be Provided by the Owner

The following provides an outline of the services to be provided by the **Owner** in the development of the **Work Authorizations**.

The **Owner** and/or the **State** will provide to the **Engineer** the following:

- 1) Prepare and execute a Purchase Order with Hidalgo County Purchasing Department
- 2) Authorization to the Engineer to begin work.
- 3) Payment for work performed by the engineer.
- 4) Provide the Engineer, as necessary, to obtain required data and information from other local, regional, and state agencies.
- 5) Prepare and secure required Environmental permits from regulatory agencies.
- 6) Obtain any required right of entry.
- 7) Provide any available relevant data that may on file concerning the Project.
- 8) Provide timely review and decisions in response to the Engineers request for information and/or submittals and deliverables.
- 9) Attend and participate in progress meetings as required and as coordinated and conducted by the Engineer.
- 10) Advertise and award, as assisted and recommended by the Engineer, construction contracts for the PS&E developed by the Engineer.
- 11) Attend pre-bid and pre-construction conferences coordinated and conducted by the Engineer.
- 12) Review and approve monthly and final estimates, developed by the Engineer, for payment to the Contractor. Compensate and pay the Contractor for work performed as identified in the approved monthly and final estimates.
- 13) Provide assistance to Engineer where necessary and possible with Owner information/resources to ensure project is completed within timely/efficient basis.
- 14) TxDOT to provide the Owner flexible pavement design for proposed pavement.

WORK AUTHORIZATION NO. 2
MILE 2 WEST ROAD – PHASE II
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EXHIBIT "B"

Scope of Services to be Provided by the Engineer

CSJ: TBD
Highway: Mile 2 West Road
County: Hidalgo
Limits: From US-83 to 0.44 miles north of US-83
Project Length: 0.44 miles
Area Office: Pharr Area Office

Project Description

Reconstruct and Widen Roadway

Existing Conditions

The existing 20-foot paved two-lane roadway

Proposed Improvements

Construct 40-foot paved rural roadway consisting of two 12-foot travel lanes and two 8-foot shoulders and turn lanes

GENERAL MANAGEMENT/COORDINATION

- 1) The Engineer shall design, develop and prepare all documents in English units.
- 2) The Engineer shall develop/submit a work schedule with milestone activities and/or deliverables identified.
- 3) The Engineer shall utilize Microstation computer graphics system. Roadway design will be developed in GEOPAK.
- 4) The Engineer will hold meetings with the following groups
 - a) City, County, School and State to coordinate design
 - b) Utility owners to coordinate utilities.
- 5) The Engineer shall be required to prepare the minutes for any meeting as required for documentation purpose.
- 6) The Engineer shall perform quality control and assurance (QC/QA) on all deliverables associated with this project.
- 7) Plans will be develop for inclusion into CSJ: 0921-02-170 plans
- 8) Work will also include the revision to the plan and profile sheets 49, 50 & 51 of 51 for CSJ 0921-02-170.
- 9) Work will also include the revision to Culvert No. 6. No additional modifications to drainage sheets for CSJ 0921-02-170 will be provided.

FIELD SURVEYING

- 1) Work shall assure compliance and adherence to all rules, regulations and policies as set forth by the Texas Board of Professional Land Surveyors.
- 2) 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's Surveyor shall comply with the regulations of the most recent edition of the "Texas Manual on Uniform Traffic Control Devices".
- 3) Establish Horizontal and Vertical Control Benchmarks by setting three permanent benchmarks with an Aluminum disk on a 5/8" iron rod set in concrete spaced throughout the limits of the project. Establish elevations on set points within the specifications of the TSPS Category 8. If applicable, NGS first order benchmarks shall be incorporated into the level loops utilizing the NAVD88 Datum elevations. Signed and Sealed, RPLS, control data sheets shall be created for the newly establish BMs and included in the deliverables.
- 4) Work will include the northbound frontage road for 100 feet east and west of the intersection with Mile 2W. Also 100 foot south of the intersection of Mile 2W and Westbound Frontage Road.
- 5) Obtain cross sections every 100 ft at whole stations.
- 6) Obtain driveway cross sections.
- 7) Update Inventory public access, commercial, and private driveways by type (dirt, caliche, gravel, concrete or paved).
- 8) Side Drains

- a) Obtain approximate roadway centerline station.
 - b) Obtain size, length, description of structure, and conditions.
 - c) Obtain F.L. elevations at both ends and offsets to driveway or turnout centerline.
 - d) Label descriptions (size and length) on each side drain.
- 9) Fence, Mailboxes, and Sign Inventory:
- a) Locate and obtain mailboxes inventory (type-identify as single, double or multiple) for all mailboxes within R.O.W. and at all intersection locations. Include photographs.
 - b) Locate and obtain sign inventory (type) for all signs within R.O.W. and at all intersection locations Include pictures.
- 10) Miscellaneous
- a) This item requires the surveyor to pick up any items that may be an obstruction for the proposed construction or may require special attention during the development of construction plans (ex: oil and gas on proposed right of way, etc.)
 - b) ASCII files shall be provided to the State. These files shall be retrieved from GPS/Data Collector and shall be compatible with Microstation.
 - c) Field books, containing all information gathered in the field, this information shall be to the surveyor's best knowledge, accurate and complete.

UTILITY SURVEY

- 1) The Engineer shall meet with Utility providers periodically to coordinate the work efforts and resolve any utility related problems.
- 2) The Engineer shall develop the typical sections, alignment, and preliminary cross sections and shall forward these to the respective utility company.
- 3) The Engineer shall update all files and plans based on the utility company responses.
- 4) The Engineer shall identify all utility conflicts.
- 5) The Engineer shall verify the proposed relocation plan submitted by the Utility companies to assure their design is according to Utility Accommodation Policy Manual. Upon the Engineer's review and concurrence with the proposed relocation plan, they shall forward their recommendation for approval to the State.
- 6) Contact "One Call" to request marking of underground utilities
- 7) Request existing utility information from local utility companies
- 8) The Engineer will perform any surveying necessary to survey in located, "Flagged", underground utilities and visible overhead utilities.
- 9) The Engineer will obtain measure downs on utilities as follows
 - a) Top of key on gas line values
 - b) Top of key on water line values
 - c) Flowline, size of tie-ins and direction of flow for sanitary sewer manholes
 - d) Flowline, size pipe for irrigation systems
 - e) Flowline and size of system for inverted siphons.
- 10) Subsurface Utility Engineering is not included in the scope of work.

PLAN, SPECIFICATIONS AND ESTIMATE SERVICES

- 1) The Engineer shall prepare and submit work under this task in accordance to the PS&E Preparation Manual. The location of project should depict the entire project with beginning and ending (Station Numbers) for each noted CSJ. Mapping landmarks (side streets, creeks, etc.) along with North Arrow and a scale should be shown to help relate the physical location of the project.
- 2) The Engineer shall use the design criteria from CSJ: 0921-02170
- 3) The existing typical section should be shown with current roadway (pavement, right of way, etc.) characteristics. The proposed typical sections should be shown below the existing typical section with all related pertinent (pavement, right of way, etc.) information for the proposed roadway construction.
- 4) Pavement Design to be as per CSJ 0921-02-170
- 5) For Roadway, Bridge and Traffic quantities, the Engineer shall prepare and submit work under this task in accordance to the PS&E Preparation Manual and other deemed necessary State approved manuals. All summaries shall be consolidated

per CSJ, City or County participation, etc. Any quantities shown "For Contractor Information Only" should be shown as such.

TRAFFIC CONTROL PLANS (TCP)

- 1) The Engineer will modify CSJ 0921-02-170 Phase V TCP to provide a two phase TCP from Mile 8 N to US 83.
- 2) The Engineer shall include the work limits, the location of channelizing devices, positive barrier, location & direction of traffic, work area, stations, pavement markings, and other information deemed necessary for each phase of sequence of construction.
- 3) The Engineer will develop TCP plans as double stacked, 1" = 100'. TCP plans will be developed for a two phase approach to traffic control.

ROADWAY DETAILS

- 1) The alignment sheet(s) include the following for complex projects and/or where it is not desirable to show the following information on the plan and profiles sheet(s): include the project limits for the entire project, label curve data bearings/coordinates for each alignment, computer generated data may be graphically place on the sheet(s) and if applicable the State Plane Coordinates System should be noted on this sheet(s).
- 2) The Engineer shall design the plan (horizontal) and profile (vertical) including roadway transitions based on the controlling criteria previously defined and as set forth in the previously listed. The Engineer shall develop the alignment for the project in GEOPAK format. Plan and Profile sheets will be developed at 1" = 50'.
- 3) The Engineer shall develop and verify all cross sections. In addition, the cross sections shall be drained to maintain the natural watershed unless otherwise directed by the State.
- 4) The Engineer shall determine all cut and fill quantities.
- 5) The Engineer shall design all intersections to accommodate the design vehicles turning radius.
- 6) The Engineer shall design all longitudinal barriers (railing and guardrail), raised median, fencing, bus bays, parking areas, mailboxes, and shoulder texturing in accordance to the criteria set forth in the roadway design manual and standards. Miscellaneous Details Sheet(s) may be developed to illustrate any necessary additional construction details not covered by the Standards.

DRAINAGE DETAILS

- 1) The Engineer shall use the Roadway Design Manual, Hydraulic Manual, PS&E Preparation Manual, and other deemed necessary State approved manuals to prepare and submit the work under this section
- 2) The Engineer will develop road side ditches for a 2 year storm. No other drainage work will be developed.
- 3) The Engineer shall show the location of culverts and ditches on the roadway plan view.
- 4) The Engineer shall use TxDOT standards preferably at all times...

TRAFFIC ITEMS

The Engineer shall inventory all signage through the project limits including those limits that are considered incidental to the project limits. All intersections and roadway signage shall be designed and spaced according to the requirements set forth in TxDOT's Sign Crew Field Book and standards for work under this task. Any signs no longer used by the State shall be taken out and replaced by an accepted TxMUTCD signs. The Engineer shall design all signage according to the latest version of the TxMUTCD, Supplemental to TxMUTCD, and TxDOT's Signs and Markings Manual. Design of flashing beacons at Mile 7 North/School Entrance will be provided. Modification of the pedestrian pole location in the northwest quadrant of the westbound frontage road and replacing of the Mile 2W southbound approach to the westbound frontage road will be provided. Additional locations will be added by supplemental agreement.

STORM WATER POLLUTION PREVENTION PLANS (SW3P)

The Engineer shall submit and prepare separate SW3P sheets when soil is to be disturbed as part of the erosion control measures during each phase of the sequence of construction. The general plan for the SW3P on this project is to enclose the area under construction including existing and proposed inlets with erosion control devices and provide a stabilized construction entrances at points where traffic will be entering or leaving the construction site. Plan sheets will be developed separate from TCP as 1"=100', double stacked.

CROSS SECTIONS

For the Final Submission, the Engineer shall furnish the final cross - section plots, on 11" x 17" sheets, showing both the original terrain and the design cross-sections, showing the roadway template, at a vertical scale of 1"=10' and a horizontal scale of 1"=10'. The design cross - sections shall indicate the slope rate on the side slopes. The Engineer shall use GeoPak software and provide the state with the applicable files. Cross sections are to show proposed pavement thickness, top of subgrade, finish grade of side bar ditches with slopes and location of right of way. Indicating other features within the cross sections is not part of the scope of work, i.e. Underground utilities, storm sewer lines, top soil, etc.

DELIVERABLES

PS&E

The Engineer shall deliver to the County and TxDOT Project Manager one copies and one CD's containing PDF's of the plan sheets provided. There will be one review submittal. The final submittal, the Engineer shall submit one set in Mylar and eleven paper copies and two CD's containing PDF's of the final plans. Any additional copies over the above amounts will be added by supplemental agreement.

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EXHIBIT "C"

Preliminary Work Schedule

- 1) Survey: 3 weeks from NTP with PO from Purchasing Department
- 2) Preliminary Design: 3 weeks after completion of survey
- 3) PS&E: 4 weeks after acceptance of Preliminary Design by TxDOT
- 4) Support services till end of work authorization for
 - a. Response to TxDOT comments
 - b. Questions from Contractor
 - c. Miscellaneous item

**WORK AUTHORIZATION NO. 2
EXHIBIT "D" COST PROPOSAL
MILE 2W PHASE II
US-83 to 0.44 miles north of US-83**

November 28, 2012

Description	General Management/Coordination						
	Sr. Project Manager	Senior Engineer	Project Engineer	EIT	Sr. Eng. Tech	Admin	
Project Meetings (2)	8		8			2	18
Preliminary Estimate	2	4	8				14
Project Administration	12					12	24
Total	22	4	16	0	0	14	56

Description	Topographic Survey						
	Sr. Project Manager	Senior Engineer	Project Engineer	EIT	Sr. Eng. Tech	Admin	
QA/QC Survey		6		12			18
Subconsultant Management	6					6	12
Total	6	6	0	12	0	6	30

Description	Utility Coordination						
	Sr. Project Manager	Senior Engineer	Project Engineer	EIT	Sr. Eng. Tech	Admin	
Utility coordination/meeting	8				16	8	32
Prepare and send utility submittals	1				8	4	13
Determine/resolve utility conflicts	4		8		8		20
Maintain communication documentation	1		4			4	9
Total	14	0	12	0	32	16	74

Description	General PS&E						
	Sr. Project Manager	Senior Engineer	Project Engineer	EIT	Sr. Eng. Tech	Admin	
Title Sheet	0.5		2		4		6.5
Project Layout			1		4		5
Typ Sections	0.5		2		4		6.5
General Notes		4				4	8
Estimate and Quantity	2		8		8		18
Miscellaneous Forms	8			8		1	17
Preparation of Submittals	2			8	8		18
Review meetings	4		4				8
QA/QC Submittals	8	8					16
Summaries	1			8	8		17
Total	26	12	17	24	36	5	120

Description	Traffic Control Plan						
	Sr. Project Manager	Senior Engineer	Project Engineer	EIT	Sr. Eng. Tech	Admin	
Phase Narrative	4	16				8	28
Typical Sections	2		4		8		14
Phase Layouts (Two Phase, Double Stacked, 1"=100')	4	8	16		24		52
Total	10	24	20	0	32	8	94

Description	Roadway Details						
	Sr. Project Manager	Senior Engineer	Project Engineer	EIT	Sr. Eng. Tech	Admin	
Alignment Sheets	1	2			4		7
Benchmark Data Sheets		1			4		5
Plan and Profile (Roadway)(1"=50')	12	24	40	40	40		156
Intersection Details	4		16	16	16		52
Cross Sections	1			40	40		81
Driveway Details	1		8		16		25
Misc. Details	1			8	8		17
Typical Section	1		4		4		9
Total	21	27	68	104	132	0	352

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Drainage Details	Sr. Project Manager	Senior Engineer	Project Engineer	EIT	Sr. Eng. Tech	Admin	
Culvert Layouts, Cross-sections and Detail Sheets	4	8	16	24	24		76
Misc. Details			4		12		16
Total	4	8	20	24	36	0	92

Traffic Items	Sr. Project Manager	Senior Engineer	Project Engineer	EIT	Sr. Eng. Tech	Admin	
Signing and Striping Plans		8	16		20		44
Summary of Quantities for Signs		1			4		5
Summary of Quantities for Striping		1			4		5
Intersection striping details		4			4		8
Flashing Beacon at Mile 7 North		2		8	12		22
Existing Traffic Signal Layout (North half only)		1		6	9		16
Prop Traffic Signal Layout (Ped NW Only and SB Loops)		1		6	9		16
Total	0	18	16	20	62	0	116

Environmental & SW3P	Sr. Project Manager	Senior Engineer	Project Engineer	EIT	Sr. Eng. Tech	Admin	
SW3P Sheets (Two Phases, Double Stacked, 1"=100')	4		8		24		36
Total	4	0	8	0	24	0	36

Total Hours	107	99	177	184	354	49	970
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\$ 199.09	\$ 180.13	\$ 142.21	\$ 110.61	\$ 94.81	\$ 63.20		
\$ 21,302.63	\$ 17,832.87	\$ 25,171.17	\$ 20,352.24	\$ 33,562.74	\$ 3,096.80	\$	\$ 121,318.45

Project DirectCosts		
Mileage (8 trips at 100 miles round trip)		\$ 400.00
Roll Plots		\$ 500.00
11"x17" Bond Plots		\$ 1,000.00
11"x 17" Mylars		\$ 500.00
11"x 17" copies		\$ 2,000.00
CD's		\$ 100.00
Overnight (Letter)		\$ 200.00
Overnight (Box)		\$ 300.00
Subtotal		\$ 5,000.00

Sub-Total Basic Fee \$ 126,318.45

Additional Services

Horiz. & Vert. Control Benchmarks	3 Ea. X \$2,500.00/ Ea.	=	\$7,500.00
Topographic Survey	3,000 LF X \$5.00/ LF	=	\$15,000.00

Sub-Total Additional Services = \$22,500.00

Total Lump Sum Fee (Basic + Additional) = \$ 148,818.45