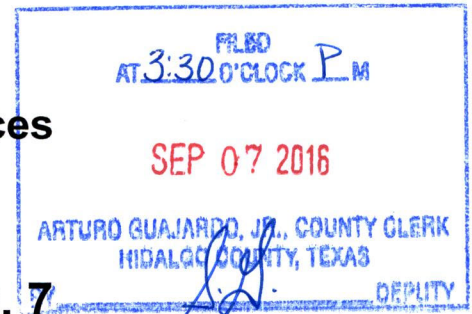


HIDALGO COUNTY
Professional Engineering Services
Contract # C-15-046-03-03



WORK AUTHORIZATION NO. 7

THIS WORK AUTHORIZATION is made pursuant to the terms and conditions of Article I. of the Agreement made by and between **HIDALGO COUNTY**, action herein by and through the **Commissioner's Court**, hereinafter called the "**Owner**," and, **L & G Consulting Engineers, Inc. d/b/a L & G Engineering**, professional engineers of Mercedes, Texas, hereinafter called "**Engineer**".

PART 1. SCOPE OF WORK

The purpose of this Work Authorization is for the **Engineer** to provide Illumination, Landscaping & Irrigation Layout Services for the Precinct 2 Regional Linear Park Project from San Antonio Avenue to Ridge Road.

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 **\$84,996.09**. This amount is based upon the costs outlined in the Estimated **Cost Proposal** attached hereto as **EXHIBIT "D" Fee Schedule**.

PART 3. PAYMENT

Compensation and payment to the **Engineer** for the services established under this Work Authorization shall be made in accordance with **Article 6** of the Agreement.

PART 4. FUNDING

This Work Authorization No. 7 shall be funded through funding source:

Account No. _____

Requisition Number _____

PART 5. PERIOD OF SERVICE

This Work Authorization shall become effective on the date of final acceptance of the parties hereto, and terminate upon completion of scopes of the work authorization.

EXHIBIT “A”
Services to be Provided by the Owner

The following provides an outline of the services to be provided by the **Owner** for Regional Linear Park Project within the limits of South San Antonio Avenue to Ridge Road in Hidalgo County hereinafter denoted as the **Project**.

GENERAL:

The **Owner** will provide to the **Engineer** the following:

- 1) Provide the authorization to proceed with services through coordination with the project consulting and design Engineer.
- 2) Payment for work performed by the **Engineer** and accepted by the **Owner** in accordance with Article 3 of the Agreement.
- 3) Assistance to the **Engineer**, as necessary, to obtain the required data and information from other local, regional, State and Federal agencies the **Engineer** cannot easily obtain.
- 4) Provide any available relevant data the **Owner** may have on file concerning the **Project**.
- 5) Provide timely review and decisions in response to the **Engineer’s** request for information and/or required submittals and deliverables, in order for the **Engineer** to maintain the agreed upon work schedule prepared in accordance with Exhibit “C” attached to this Work Authorization.
- 6) Attend and participate in progress meetings as required and as coordinated and conducted by **Engineer**.

EXHIBIT "B"
SCOPE OF SERVICES TO BE PROVIDED BY THE ENGINEER

SECTION 1 - PROJECT DESCRIPTION

The services designated herein as "Services provided by the ENGINEER" shall include the performance of all engineering services for the following described facility:

COUNTY/CITY: HIDALGO COUNTY

CONTROL: _____

PROJECT/DESCRIPTION: Illumination, Landscaping & Irrigation Layout
Services for the Hidalgo County Pct. 2 Linear
Park Project

LENGTH: 2.57 Miles (Approx.)

HIGHWAY: Prop. Linear Park

LIMITS: From San Antonio Ave. to Ridge Road

EXISTING FACILITY

PROJECT CLASSIFICATION

(Place an "X" in only one Project Classification)

- Surface Treatment
- Overlay
- Rehabilitation Existing Road (Scarify & Reshape)
- Convert Non-Freeway to Freeway
- Widen Freeway
- Widen Non-Freeway
- New Location Toll Freeway
- New Location Non-Freeway
- Interchange (New or Reconstruct)
- Bridge Widening or Rehabilitation
- Bridge Replacement
- Upgrade to Standards - Freeway
- Upgrade to Standards - Non-Freeway
- Miscellaneous Studies (Use Function Code 110 for All Tasks)
- Pedestrian Facility – Linear Park

ENGINEER shall mean L&G Consulting Engineers, Inc.

STATE shall mean Texas Department of Transportation (TxDOT).

COUNTY shall mean the Hidalgo County.

EXHIBIT "B"
SCOPE OF SERVICES TO BE PROVIDED BY THE ENGINEER

Services
 Provided By:
ENGINEER COUNTY

- | | |
|--|--|
| <p><u>YES</u> <u>NO</u></p> | <p>2. Traffic Control Plan, Detours and Sequence of Construction
 Traffic Control Plans (TCP) are required for all projects. A detailed TCP shall be developed when traffic handling during construction involves complications for which a feasible solution is not covered by the Texas MUTCD or the current Barricade and Construction (BC) Standards. The following items are required on all Traffic Control Plan Layouts:</p> <ul style="list-style-type: none"> a. The sequence of construction and method of handling traffic during each phase. b. The existing and proposed traffic control devices that will be used to handle traffic during each construction sequence. Include signals, regulatory signs, warning signs, construction warning signs, guide signs, route markers, construction pavement markings, channelizing devices, portable changeable message signs, flashing arrow boards, barricades, barriers, etc. c. The proposed traffic control devices (stop signs, signals, flag person, etc.) at grade intersections during each construction sequence. d. Where detours are provided, typical cross sections shall be shown. e. Road construction work hours shall be developed after an investigation of the traffic volumes has been performed. <p>3. Illumination (See attached Exhibit B-1 for details)</p> |
| <p><u>YES</u> <u>NO</u>
 <u>YES</u> <u>NO</u></p> | <p>4. Miscellaneous Drafting/Standards (See attached Exhibit B-2 for details)</p> <ul style="list-style-type: none"> a. Erosion Control b. Landscape Development |
| <p><u>YES</u> <u>NO</u></p> | <p>5. Compute and Tabulate Quantities (See attached Exhibit B-2 for details)</p> |
| <p><u>YES</u> <u>NO</u></p> | <p>6. Special Utility Details (Irrigation lines) (See attached Exhibit B-2 for details)</p> |
| <p><u>N/A</u> <u>N/A</u>
 <u>N/A</u> <u>N/A</u></p> | <p>7. Miscellaneous Structures</p> <ul style="list-style-type: none"> a. Type of Structure* <ul style="list-style-type: none"> (1) Overhead Sign Bridges (O.S.B.)
 Modifications or special O.S.B. designs shall be prepared using the same design assumptions that are used for the standard O.S.B structures. (a) New O.S.B. structure(s) (b) Structural evaluation of existing O.S.B. structure(s) that are to remain in place or to be relocated. (2) High Mast Illumination Poles (HMIP) (3) Traffic Signal Supports (4) Conventional Illumination Poles (See attached Exhibit B-1 for details) (5) Sound Barrier Walls |
| <p><u>N/A</u> <u>N/A</u>
 <u>N/A</u> <u>N/A</u>
 <u>YES</u> <u>NO</u>
 <u>N/A</u> <u>N/A</u>
 <u>YES</u> <u>N/A</u></p> | <ul style="list-style-type: none"> b. Checklist for Layouts (See attached Exhibit B-1 for details) <ul style="list-style-type: none"> (1) Reference appropriate O.S.B. standard (2) Drilled shaft size and length (3) Soil strength used for design {indicate basis and boring(s) used} (4) Design height (5) Tower heights (6) Leg spacings (7) Design wind speed |
| <p><u>N/A</u> <u>N/A</u></p> | <ul style="list-style-type: none"> c. Foundation Studies (Show cost estimate with Function Code 110)
 The soils exploration requirements for miscellaneous structures on this project are as follows: (To be provided by the Engineer on an as-needed basis) |
| <p><u>N/A</u> <u>N/A</u>
 <u>N/A</u> <u>N/A</u></p> | <p>8. Agreements</p> <ul style="list-style-type: none"> a. Utility Agreements b. Exhibits for Utility Agreements |

EXHIBIT "B"
SCOPE OF SERVICES TO BE PROVIDED BY THE ENGINEER

Services Provided By:		
<u>ENGINEER</u>	<u>COUNTY</u>	
<u>N/A</u>	<u>N/A</u>	c. Railroad Agreements
<u>N/A</u>	<u>N/A</u>	d. Railroad Exhibits
<u>N/A</u>	<u>N/A</u>	(1) Railroad Underpasses
<u>N/A</u>	<u>N/A</u>	(2) Railroad Overpasses
<u>N/A</u>	<u>N/A</u>	(3) Railroad Grade Crossing (Replanking)
<u>N/A</u>	<u>N/A</u>	(4) Railroad Grade Crossing Warning Systems (Signals)
<u>N/A</u>	<u>N/A</u>	(5) Other Miscellaneous Sketches for Railroads
<u>N/A</u>	<u>N/A</u>	e. Traffic Signal Agreements
<u>N/A</u>	<u>N/A</u>	f. Exhibits for Traffic Signal Agreements
<u>YES</u>	<u>NO</u>	9. Estimate (See attached Exhibits B-1 and B-2 for details)
<u>YES</u>	<u>NO</u>	10. Specifications and General Notes (See attached Exhibits B-1 and B-2 for details)

EXHIBIT "B-1"

SCOPE OF SERVICES FOR CONTINUOUS ILLUMINATION DESIGN Along the Regional Linear Park Project - Section I H&B Trail from Ridge Road to South San Antonio Street in Precinct 2, Hidalgo County, Texas

Project Understanding

A new Hike & Bike Trail (H&B Trail) is proposed along both banks of HCDD #1 PSJA Lateral Drain, from Ridge Road to South San Antonio Street, a distance of approximately 13,000 feet or 2.5 miles.

A portion of the H&B Trail will cross under South I Road in a tunnel. The H&B Trail will be illuminated by Continuous Lighting, inclusive of the tunnel.

ETSI will produce a complete set of Plans, Specifications and Cost Estimates (PS&E) that will cover continuous lighting along the proposed H&B Trail within the aforementioned project limits. All work will conform to TxDOT methodologies and practices.

ETSI will provide the following services:

TASK 1 – Conduct Photometric Analysis

ETSI will conduct a photometric analysis by developing three Alternative Illumination Schemes using AGI32 software for the surface and tunnel portions of the H&B Trail. Input factors will include variable pole heights, fixtures, lighting patterns, pole spacing and aims. ETSI will produce scaled layouts that show iso-footcandle contour lines showing the proposed H&B Trail requiring lighting coverage. Minimum, maximum and average lighting intensities will be shown as well, along with uniformity ratios. The results of the analyses will be compared and a recommendation will be made for implementation, considering overall system efficiency. This would include initial capital costs, plus maintenance and operating costs.

TASK 2 – General Notes for Illumination

ETSI will setup the General Notes for the illumination design, which will include, continuous and tunnel lighting.

TASK 3 – Quantities Summary sheet

ETSI will prepare a Summary of Quantities sheet that will show all items to be furnished and installed by the contractor along with their respective specification item number and description code as applicable.

TASK 4 – Proposed Illumination Layouts

ETSI will prepare layout sheets that will show at a minimum the following:

- Existing topographic features
- Existing Utilities
- Existing and proposed Right-of-Way
- Proposed H&B Trail alignment and geometry
- Proposed light poles, mounting heights and luminaire positions
- Proposed conduit runs and call outs
- Proposed electrical services
- Tables with light fixture details
- Special notes
- Sheet quantities

ETSI with assistance from L&G Engineering will contact the local power company for electrical service requirements for the project.

Continuous lighting layout sheets will be set-up at 1"=50' scale on 11x17 size drawings.

ETSI will produce submittals for Client's review at the 90% and 100% completion levels or as directed by L&G.

TASK 5 – Voltage Drop Calculations

ETSI will design wiring circuits to connect the proposed lighting fixtures as efficiently as practical. ETSI will calculate circuit voltage drops to ensure TxDOT and NEC requirements are met. Accordingly, ETSI will determine wire sizes, conduit sizes as well as electrical service requirements.

TASK 6 – Wiring Diagrams

ETSI will prepare sheet layouts that will show wiring diagrams and details as follows:

- Electrical service details
- Circuit runs, branches and lengths
- Cable sizes and types
- Light fixtures details

TASK 7 – Tunnel Lighting Layout and Details

ETSI will prepare a larger scale sheet layout that will show the location of the tunnel lighting fixtures, along with their conduit runs and cable call outs.

ETSI will also prepare special mounting details for tunnel light fixtures as needed.

The tunnel lighting system will be designed to be water resistant considering its low elevation and its proximity to the drainage ditch.

TASK 8 – Standard Sheets

ETSI will prepare all illumination related standard sheets necessary for the 90% and 100% submittals.

TASK 9 – Specifications

ETSI will review and select the proper standard specifications that apply to the Illumination design. ETSI will also develop special specifications if necessary to accommodate special one-time use items. Such special specifications will be submitted to L&G and TxDOT for review and approval.

TASK 10 – Cost Estimate

ETSI will calculate all relevant item quantities for the Illumination Design. Based on Pharr District average bid prices, ETSI will also develop a construction cost estimate for the Illumination design. The cost estimate and quantities will be submitted in spreadsheet form.

TASK 11 – Field Investigation and Coordination Meetings

ETSI will conduct field investigations along the project to record existing conditions and availability of electrical service. ETSI will also identify potential illumination design issues.

ETSI will participate in one project coordination meeting with L&G and/or TxDOT.

SERVICES TO BE PROVIDED BY L&G ENGINEERING

L&G shall furnish ETSI hard copies and electronic versions of the existing topographic data as well as the proposed geometric design with all related reference files.

L&G will be responsible for contacting all utility companies within the project limits. ETSI will assist L&G in identifying and resolving utility conflicts as required by L&G.

L&G shall also provide coordination and communication for the progress of the illumination design among all parties involved.

TIME SCHEDULE

Assuming all information is available, ETSI can produce 90% complete drawings within six weeks of the notice to proceed, assuming all required topographic and roadway data become available. After receipt of 90% comments, ETSI can produce 100% complete drawings within two weeks.

Exhibit “B-2”
Scope of Services
Services to be Provided by B2Z

General Project Information

B2Z, through this scope of services, shall provide Landscaping & Irrigation Layout Services for the Pct 2 Regional Linear Park Project (San Antonio Ave to Ridge Road), hereinafter denoted as the **Project**.

B2Z shall provide all engineering services as noted under this scope of services for the **Engineer**. **B2Z** shall maintain a direct line of communication and coordinate with the **Engineer** throughout the project.

B2Z shall furnish all equipment, materials, supplies, and incidentals as needed to perform the services required, except as otherwise specified to be provided by the **Engineer**.

Specific activities to be performed by **B2Z** include the following:

Task 1 – Landscaping & Irrigation Layout Services

B2Z will provide engineer with detailed layouts and estimates on the County’s options for low maintenance, eco-friendly, sustainable landscaping for the **Project**. **B2Z** will put all efforts into working with the County to include native vegetation and landscaping aspects to create a seamless flow between nature and the **Project**. **B2Z** will provide **L&G** signed and sealed 11x17 plan sheets of the landscaping and irrigation layouts to be included within the overall plan set. General notes and specifications specific to erosion control, irrigation and landscaping will be furnished for inclusion into the project specifications. **B2Z** will work with **L&G** in identifying bench/shade areas for plan development of personal park space.

EXHIBIT C
PROJECT DEVELOPMENT SCHEDULE
 Regional Linear Park Project
 Section: From San Antonio Ave. to Ridge Road
 Length = 2.57 miles

Work Authorization #7

TASK AND DESCRIPTION	FIRM	2016												2017				
		MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR						
illumination, Landscaping & Irrigation																		
Coordination & Mgmt of Illumination Design Sub	L&G																	
SUB: ETSI ~ Illumination Design	ETSI																	
Coordination & Mgmt of Landscaping & Irrigation Layouts Sub	L&G																	
SUB: B2Z ~ Landscaping & Irrigation Layouts	B2Z																	



**EXHIBIT D-2
FEE PROPOSAL**

**Landscaping & Irrigation Layout Services
Precinct #2 Regional Linear Park Project**

		MANHOURS				Total
		Senior Project Manager	Senior Engineer	CADD Operator		
Precinct #2 Regional Linear Park Project (San Antonio Ave to Ridge Rd)						
TASK						
I	Landscaping & Irrigation Layouts	12	36	246		294
	Subtotal	12	36	246		294
Labor Hours						
	Hourly Base Rates	12	36	246		294
	Contract Rate FY2016	\$ 80.00	\$ 72.00	\$ 21.00		
		\$ 237.60	\$ 213.84	\$ 62.37		
	Total Labor Costs	\$ 2,851.20	\$ 7,698.24	\$ 15,343.02		\$ 25,892.46

Direct Expenses Mileage, Printing Reproduction, Binding, etc \$ 107.54

Total Direct Expenses \$ 107.54

B2Z Engineering Total Cost

\$ 26,000.00

9/1/16
✓ BRS

AI-55993
CC - REGULAR

Purchasing Department 17. B. 2.

Meeting Date: 08/23/2016

Submitted For: Eddie Cantu, COMM. PCT. #2 **Submitted By:** Erika Zamora, COMM. PCT. #2

Department: COMM. PCT. #2

Information

CAPTION

A. Acceptance and approval of Work Authorization No. 7 (with an estimated cost of \$84,996.09) as submitted by project engineer, L&G Consulting Engineers, to provide illumination, landscaping, and irrigation layout services for the Pct 2 Regional Linear Park Project from San Antonio to Ridge Road through Contract#C-15-046-03-03.

B. Pursuant to current contract with L&G Consulting Engineer (Article 14), a request for approval by engineer to permit the subcontracting of Ergonomic Transportation Solutions, Inc. and B2Z Engineering, LLC in connection with C-15-046-03-03 for Pct 2 Regional Linear Park Project.

BACKGROUND

Fiscal Impact

FISCAL YEAR: 2016

ACCT. #: 6-1350-452-00-122-110-0-740

FUNDS AVAILABLE Y/N?: Y

MATCHING FUNDS Y/N?: N

BUDGETARY IMPACT:

Funding available as of 8/19/16.

Attachments

Work Authorization #7

Subcontracting Notice

WA7

Form Review

Inbox	Reviewed By	Date
Purchasing Department	Letty Saenz	08/19/2016 04:11 PM
Budget & Management	Veronica Ortiz	08/19/2016 04:14 PM
Final Approval	Monica Badillo	08/19/2016 05:04 PM
Form Started By: Erika Zamora		Started On: 08/19/2016 02:50 PM
Final Approval Date: 08/19/2016		