

**HIDALGO COUNTY
COMMISSIONER PRECINCT No. 2:**

BY: _____

PART 8. ACCEPTANCE AND APPROVAL

This Work Authorization is hereby accepted, approved by Hidalgo County Commissioners' Court on (DATE) _____ as indicated below and effective as of _____ day of _____, 20__.

THE ENGINEER:
B2Z ENGINEERING, LLC

THE OWNER:
HIDALGO COUNTY

By: _____
Print Name

By: Richard F. Cortez, County Judge

ATTEST:

By: Arturo Guajardo Jr., County Clerk

EXHIBIT “A”
SCOPE OF SERVICES TO BE PROVIDED BY THE ENGINEER

SECTION 1 - EXECUTIVE SUMMARY

The Environmental Protection Agency (E.P.A.) released an update to the Overview of Clean Water State Revolving Fund Eligibilities (CWSRF) in May of 2016. CWSRF is a state program that can fund a wide variety of water quality protection efforts. Eligibility for CWSRF assistance requires that a project meet the criteria of one of the eleven CWSRF eligibilities.

- Centralized Wastewater Treatment
- Energy Conservation
- Water Conservation
- Stormwater
- Agricultural Best Management Practices
- Decentralized Wastewater Treatment
- Resource Extraction
- Contaminated Sites
- Landfills
- Habitat Protection and Restoration
- Silviculture
- Desalination
- Groundwater Protection and Restoration
- Surface Water Protection and Restoration
- Planning/Assessment

Stormwater

Eligible stormwater projects include gray and green infrastructure. Stormwater harvesting and use and land conservation/easements are also suitable. Stormwater projects must have a water quality benefit.

Green Infrastructure projects include:

- Rainwater harvesting collection, storage, management, and distribution systems

Assistance may be provided:

- to any municipality or inter-municipal, interstate, or State agency for publicly owned stormwater projects. Section 603(c)(1)
- to any municipality or municipal entity to manage municipal wet weather discharges on an integrated watershed or subwatershed basis to demonstrate the effectiveness of a unified wet weather approach. Section 603(c)(7)
- to any municipality or municipal entity for the development and implementation of a municipality-wide stormwater management plan. Section 603(c)(7)

EXHIBIT “A”
SCOPE OF SERVICES TO BE PROVIDED BY THE ENGINEER

SECTION 2 - 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

PROJECT NAME: Hidalgo County Precinct 2 Stormwater Management Project

PROJECT/DESCRIPTION: Developing a stormwater management plan within Hidalgo County Precinct 2 boundary to manage, reduce, and recapture rural stormwater. The project shall include PS&E for Precinct 2 staff to implement.

PROJECT AREA: Within Hidalgo County Precinct 2 managed limits.

LIMITS: All rural roads maintained by Hidalgo County Precinct 2 (Approx. 86 Miles)

PROJECT CLASSIFICATION

(Place an “X” in only one Project Classification)

- Surface Treatment
- Overlay
- Rehabilitation Existing Road (Scarify & Reshape)
- Stormwater
- 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 – Hike & Bike Trail

EXHIBIT “A”
SCOPE OF SERVICES TO BE PROVIDED BY THE ENGINEER

SECTION 3 – DATA COLLECTION & PROCESSING

B2Z, through this scope of services, shall collect project data using two methods. sUAV Drone Data Collection and Field Surveying.

B2Z, using commercial-grade sUAV drones, will collect high-resolution digital photogrammetric frame imagery. B2Z will process the sUAV data to produce a fully rectified and seamless orthoimage mosaic, including a Digital Terrain Model (D.T.M.) to provide existing elevations for modeling and design use.

B2Z shall provide all aerial photography and data processing services as noted under this scope of services for Hidalgo County Precinct 2’s (Client) use. B2Z shall maintain a direct line of communication and coordination with the Client throughout the project.

B2Z, using commercial-grade field surveying equipment, will collect all existing field elevations that were not accessible by the sUAV drone including, but not limited to existing culvert and outfall flow lines.

Data collected and processed during this section include:

- All Precinct 2 managed roadways, including all R.O.W. limits;
- All Precinct 2 managed roadside ditches, including flow line elevations;
- All Precinct 2 managed culverts and inlets, including flow line elevations;
- All Precinct 2 managed detention and retention facilities, including pond elevations;
- All Precinct 2 managed drain ditch data, including top of bank and flow line elevations.

SECTION 4 – EXISTING SYSTEM INVENTORY

B2Z, through this scope of services, shall develop a database of Precinct 2’s existing roadside ditch quantities, existing outfalls, and existing culverts. Data cataloged will include, but not be limited to:

- Existing roadside ditch quantities, including
 - Condition assessment
 - Operable or Inoperable
- Existing outfall quantities, including,
 - Condition assessment
 - Material
 - Size
 - Length
- Existing culvert quantities, including
 - Condition assessment
 - Material
 - Size
 - Length

B2Z will deliver this database in excel format to Precinct 2 Field Operations Director for inventory and future use.

EXHIBIT “A”
SCOPE OF SERVICES TO BE PROVIDED BY THE ENGINEER

SECTION 5 – STORMWATER MANAGEMENT PLAN

B2Z, through this scope of services, shall develop a stormwater management plan that will address stormwater runoff, potential water quality and quantity issues, and the complexity of regulatory compliance on the local, state, and federal levels. This plan will include developing retrofits, rehabilitate existin stormwater assets, and assessing post-construction maintenance programs.

B2Z, through this scope of services, shall develop the following services for the County:

- Stormwater Management Plan
- Stormwater Best Management Practices (BMPs)
- Slope and Site Stabilization Planning and Design
- Erosion and Sediment Control
- Hydrologic & Hydraulics Analysis

SECTION 6 – PLANS, SPECIFICATIONS, & ESTIMATE (PS&E)

B2Z, through this scope of services, shall develop a stand-alone PS&E set for Hidalgo County Precinct 2 Field Operations department. The PS&E set shall include the following sheets:

- Title Sheet
- Sheet Index
- Project layout
- Estimate & Quantities
- Plan & Profile Sheets
- Drainage Sheets
- AASHTO and TxDOT Standard sheets describing the methods and techniques to retrofit, replace, and install all stormwater system components.

**EXHIBIT B
FEE PROPOSAL**

Hidalgo County Precinct 2: Stormwater Management Project

Work Authorization #1



| Hidalgo County Precinct 2: Stormwater Management Project | | | MANHOURS | | | | | | Total | Subtotal |
|---|---|----|-----------------|-----------------|----------------|----------------------|-------------------------|-----------|-------|-------------|
| | | | Project Manager | Design Engineer | GIS Technician | Sr. Engineering Tech | Engineering Tech/Survey | UAS Pilot | | |
| TASKS | | | | | | | | | | |
| I. DATA COLLECTION & PROCESSING | | | | | | | | | | |
| 1 | Drone Data Collection | | | | | | | 140 | 140 | \$11,813.20 |
| 2 | Drone Data Processing | | | | | | | 282 | 282 | \$23,795.16 |
| 3 | Field Surveying | | | | | 160 | | | 160 | \$12,500.80 |
| II. EXISTING SYSTEM INVENTORY | | | | | | | | | | |
| 4 | Existing Roadside Ditch Quantities | | | 61 | 84 | 75 | | | 220 | \$23,079.95 |
| 5 | Existing Culvert Quantities and Condition Data Collection | | | 43 | 72 | 62 | | | 177 | \$18,501.46 |
| 6 | Existing Outfall Quantities and Condition Data Collection | | | 43 | 54 | 43 | | | 140 | \$14,879.31 |
| III. RURAL DRAINAGE SYSTEM DESIGN | | | | | | | | | | |
| 7 | Designing of all culverts, existing and Proposed (Flow line elevations) | 9 | 81 | | | | | | 90 | \$12,038.40 |
| 8 | Designing of all roadside ditch upstream and downstream elevations | 9 | 81 | | | | | | 90 | \$12,038.40 |
| 9 | Designing of all outfalls, existn and proposed (Flow line elevations) | 5 | 43 | | | | | | 48 | \$6,437.98 |
| IV. PLANS, SPECIFICATION & ESTIMATE (PS&E) | | | | | | | | | | |
| 10 | PLAN SET | 48 | 59 | 31 | 264 | 264 | | | 666 | \$73,236.59 |
| | 60% PS&E | 10 | | | 176 | 176 | | | | |
| | FINAL PS&E | 10 | | | 88 | 88 | | | | |

| | | | | | | | | |
|--------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-------------|----------------------|
| Labor Hours | 71 | 264 | 178 | 474 | 604 | 422 | 2013 | |
| Hourly Base Rates | \$ 68.00 | \$ 40.00 | \$ 38.00 | \$ 38.00 | \$ 25.00 | \$ 27.00 | | |
| Contract Rate FY2021 | \$ 212.51 | \$ 125.01 | \$ 118.76 | \$ 118.76 | \$ 78.13 | \$ 84.38 | | |
| Total Labor Costs | \$ 15,088.21 | \$ 33,002.64 | \$ 21,139.28 | \$ 56,292.24 | \$ 47,190.52 | \$ 35,608.36 | | \$ 208,321.25 |

| | |
|------------------------------------|---------------------|
| Direct Expenses | |
| Aerial Drone Flight (\$250.00/hr) | \$ 17,500.00 |
| Mileage (\$0.56/mile) | \$ 252.00 |
| 8 1/2" X 11" Copies (\$1.00/sheet) | \$ - |
| 11" X 17" Copies (\$1.50/sheet) | \$ 225.00 |
| Total Direct Expenses | \$ 17,977.00 |

B2Z Engineering Total Cost

\$ 226,298.25