

**HIDALGO COUNTY**  
**Professional Engineering Services**  
**Contract # C-07-358-09-04**  
**Work Authorization Form**

**Work Authorization No. 12**

**THIS WORK AUTHORIZATION** is made pursuant to the terms and conditions of Article 1. of the Agreement made by and between the **HIDALGO COUNTY**, acting herein by and through Commissioner's Court, hereinafter called the "**Owner**," and, **R. GUTIERREZ ENGINEERING CORPORATION**, professional engineers of Pharr, Texas, hereinafter called "**Engineer**".

**PART 1. SCOPE OF WORK**

The purpose of this Work Authorization is for the **Engineer** to provide engineering and surveying services for the preliminary engineering, final design, and construction phase services for the improvement of an existing Hidalgo County Irrigation No. 2 drain ditch. Hidalgo County Drainage District No. 1 will take over the responsibility for the drain ditch and requires the ditch be upgraded. The project includes development of plans, specifications, and estimates (PS&E), right-of-way map and parcels preparation and construction phase services. The lateral will be designed to accommodate a 25-year flood frequency, but constructed to accommodate a drainage basin agricultural runoff based on a 9.5-year flood frequency. This project is intended to alleviate existing drainage problems in and around the Southfork Estates Subdivision area.

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 included in **Exhibit D – Fee Estimate**. The actual amount payable for services under this Work Authorization will be in accordance with Article 5.

**PART 3. PAYMENT**

Payment to the **Engineer** for the services established under this Work Authorization shall be made in accordance with Article 8.

**PART 4. FUNDING**

This Work Authorization No. 12 shall be funded through funding source:

Account No. \_\_\_\_\_

Requisition No. \_\_\_\_\_ (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 shall terminate upon completion of the scope of services of the work as provided in Article 3.

**PART 6. RESPONSIBILITIES AND OBLIGATIONS**

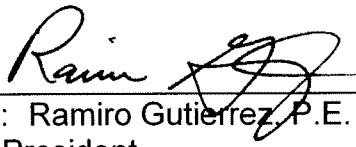
This Authorization does not waive the parties' responsibilities and obligations provided under the Agreement.

**PART 7. ACCEPTANCE AND ACKNOWLEDGEMENT**

This Work Authorization is hereby accepted and acknowledged as indicated below and effective as of 3rd day of September, 2007.

**ENGINEER:**

R. Gutierrez Engineering Corporation

By:   
Name: Ramiro Gutierrez, P.E.  
Title: President

**OWNER:**

COUNTY OF HIDALGO

By: \_\_\_\_\_  
Name: Hector "Tito" Palacios  
Title: Commissioner Pct. No. 2

By: \_\_\_\_\_  
Name: Juan D. Salinas  
Title: County Judge

**LIST OF ATTACHMENTS**

- EXHIBIT A – Services to be Provided by the Owner
- EXHIBIT B – Services to be Provided by the Engineer
- EXHIBIT C – Work Schedule
- EXHIBIT D – Fee Estimate

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**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 **Project**.

**I. GENERAL**

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

- (1) Authorization to the **Engineer** to begin work in accordance with Article 7 of this agreement.
- (2) Payment for work performed by the **Engineer** and accepted by the **Owner** in accordance with Article 5 and Article 6, both of this Agreement.
- (3) Assistance to the **Engineer**, as necessary, to obtain the required data and information from other local, Regional, State and Federal agencies that 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 **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 the **Engineer**.
- (7) Provide a copy of any engineering studies, previously prepared by other parties contracted by the Owner and any associated documentation that may be relevant to the Engineer in the evaluation and verification of those studies. The Owner will also make available all the associated hydraulic modeling accomplished under the Hidalgo County FEMA Program.

- (8) Assist **Engineer** with obtaining permission to enter on properties for the purpose of surveying and engineering investigations for the project.

## II. PRELIMINARY PROJECT PLANNING & DEVELOPMENT

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

- (1) Approve the **Work Plan** prepared by the **Engineer** and more particularly identified in **Exhibit "B"** attached to this Work Authorization.
- (2) Approve the **Project Development Schedule** prepared by the **Engineer** and more particularly identified in **Exhibit "C"** attached to this Work Authorization.
- (3) Provide the **Engineer** a copy of historical bid tabulations, if available, for similar projects and periodically review and approve the **Construction Estimate** as developed and prepared by the **Engineer** and more particularly identified in **Exhibit "B"** attached to this Work Authorization.
- (4) If Public Meetings are required, the Owner will assist the Engineer in the preparation of the project mailing list; provide representation at all public meetings; provide representation at all public hearings; additionally:

Public Meetings (if required)

- i. Approve agenda and exhibits prior to each public meeting;
- ii. Approve date and location of the public meeting;
- iii. Review/approve Public Meeting Report.

## III. PRELIMINARY ENGINEERING, FINAL DESIGN & CONSTRUCTION

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

### **Preliminary Engineering**

- (1) Attend the **Preliminary Project Conference** coordinated and conducted by the **Engineer** and more particularly identified in **Exhibit "B"** attached to this Work Authorization.
- (2) Assist the **Engineer** as required in the coordination with any other coordinating agency and entity.
- (3) Review and approve the "**Preliminary Engineering Report**" prepared by the **Engineer** and more particularly identified in **Exhibit "B"** attached to this Work Authorization.

### **Right-of-Way**

- (4) Upon approval of the schematic, authorize the **Engineer** to begin work on the Right-of-Way (ROW) map.
- (5) Provide the **Engineer** any available right-of-way plans.
- (6) Assist the **Engineer**, as necessary, with coordination of any utility relocations that may be required.
- (7) Review and approve the preliminary ROW map and authorize preparation of the field notes and parcel descriptions.
- (8) Review and approve ROW map, field notes and parcel descriptions.
- (9) Acquire ROW in accordance with federal and/or county guidelines and procedures.

### **Final Design**

- (10) Review and approve the **Project Design Criteria** developed and prepared by the **Engineer** and more particularly identified in **Exhibit "B"** attached to the Work Authorization.
- (11) Review and approve **plan, specifications, and estimate (PS&E)** for the Project or portions of the Project as prepared by the **Engineer** and more particularly identified in **Exhibit "B"** attached to this Work Authorization.

### **Construction**

- (12) Provide the "**Construction Management Policy & Procedures Manual**" developed and prepared by the **Owner** and more particularly identified in **Exhibit "B"** attached to this Work Authorization.
- (13) Review and approve all services provided by the **Engineer** (and more particularly identified in **Exhibit "B"** attached to this Work Authorization) regarding advertising for each authorized construction contract for the Project, the opening and tabulation of bids, and the preparation of contract document for the award of construction contracts.
- (14) Review and approve change orders as required and prepared by the **Engineer**.

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**EXHIBIT B**

**Services to be Provided by the Engineer**

The project will consist of data collection, preliminary engineering analysis, engineering design, bidding assistance, and construction administration services for the proposed drainage channel and appurtenances for a new outfall beginning at a point off of "I" Road approximately 0.25 miles north of US 281 (Military Hwy). The alignment will begin east of "I" Road and continue in a non-linear direction for approximately 10,850 feet at which point it converges with the existing North Floodwater Channel.

The project is divided into six phases, Data Collection, Preliminary Engineering and Design, Final Design, Construction Phase Services, QA/QC Services, and Special Services.

The Data Collection Services includes compilation of survey, engineering and related data.

The Preliminary Engineering and Design phase will provide the general data collection, and develop the Preliminary Engineering Report and plans to the schematic level, and will include typical channel sections, locations and sizes of drainage structures at roadway and irrigation canal crossings, and related information to provide information for Final Design. This phase will develop the proposed plans to the 30-percent level required for completed plans, specifications and estimate (PS&E).

The Final Design Phase will include a new outfall beginning at a point off "I" Road approximately 0.25 miles north of US 281 (Military Hwy). The alignment will begin on the east side of "I" Road and continue east in a non-linear direction for approximately 10,850 feet at which point it converges with the existing North Floodwater Channel. This section of the project will be developed to complete the PS&E, for use by the County.

Construction Phase Services will also be provided and will include assisting the County to take the completed PS&E portion of the project through advertisement, bidding, award, preconstruction meetings, site visits, and project completion.

QA/QC Services involves monitoring, coordination and checking of the design documents at 30%, 60%, 90% and Final Plans Review milestones.

Special Services includes the surveying effort (topographic surveys, prepare land descriptions and drawings, metes and bounds descriptions and drawings, right-of-entry letters and cross-sections) and printing project documents.

## **PHASE I Data Collection**

### **A. Survey**

1. Ties to physical features within a 150-foot corridor centered on the proposed alignment (building corners, edge of pavement, water, sewer, electric, telephone, cable, and irrigation systems, driveways, sheds, trees).
2. Ground shots for topo, within the 150-foot corridor centered on the proposed alignment. Ground shots will include tops and toes of slopes of existing irrigation ditch, tops and toes of berms, tops and flowline shots of any culverts, natural ground at centerline of alignment and at 150-foot left and right of centerline, roadway crossings, slab elevations, and related features.
3. Cross-sections will be taken at approximately 250-foot intervals. Additional sections will be taken at upstream and downstream of roadway crossings, and ditch crossings.

### **B. Engineering**

1. Proposed plans and calculations.
2. As-built plans for existing underground irrigation facilities.
3. LIDAR and aerial photos when available.
4. County design requirements.
5. Go-by plans from County.
6. Plans for other projects impacted by proposed drainage channel.
7. Develop project criteria.

### **C. Other**

1. Count requirements for Specifications and Contract Documents.
2. Agreement between County and land owners affecting design.
3. Agreement between County and Irrigation District on R.O.W. sharing.

## **PHASE II Preliminary Engineering and Design**

### **A. Preliminary Engineering Report**

1. Confirm route selection and limits of work.
2. Prepare project layout and drainage area map.
3. Prepare basic hydrologic & hydraulic calculations based on County requirements.
4. Determine typical channel sections and locations based on County requirements.
5. Develop hydraulic model of project.
6. Develop preliminary Engineers Opinion of Construction Cost estimates.
7. Prepare Preliminary Report.
8. County Review.

## **B. Preliminary Design Plans (30%)**

1. Prepare General Drawings.
2. Prepare Plan and Profile Schematic.
3. Preliminary plan and profile for drainage structures.
4. Preliminary hydraulic calculations sheets.
5. Preliminary typical sections sheets.
6. Submit for Count Review and approval prior to final design.

## **PHASE III Final Design**

### **A. Plans (60%)**

1. Plan and Profile sheets for channel.
2. Final Drainage Area Map and Drainage Master Plan.
3. Final hydraulic Data sheets for drainage structures.
4. Final typical sections.
5. Preliminary Detail sheets.
6. Preliminary SWPPP layout.
7. Preliminary Specifications.
8. Preliminary Quantities.
9. Update Engineers Opinion of Construction Cost.
10. Submit for County Review.

### **B. Right-of-Way Survey and Documentation**

1. Right-of Way Map.
2. Ownership Data spreadsheet.
3. Individual Right-of-Way documents for County acquisition.
4. Submittal for review is due immediately after 60% plan submittal.
5. Submit for Count Review.

### **C. Plans (90%)**

1. Final general plan sheets.
2. Final Plan and Profile sheets.
3. Final Typical Sections and Details sheets.
4. Final SWPPP sheets.
5. Final Specifications.
6. Final Quantities.
7. Final Engineers Opinion of Construction Cost.
8. Submit for County Review.

### **D. Permits**

1. TCEQ TPDES Documentation.
2. Section 404 Permit (Nationwide Permit or Individual Permit) from U.S. Army Corps of Engineers, if necessary.
3. State Water Quality Certification (Section 401 Certification), if necessary.
4. All permits will be prepared after Preliminary SWPPP is developed, but before Final Plans.

**E. Final Plans (100%)**

1. Address all comments received from 90% review.
2. Submit to Count for acceptance.

**F. Reviews (30%, 60%, 90%)**

1. Provide required materials to County for review.
2. Address comments received.
3. Document comments and responses.

**PHASE IV Construction Phase Services**

**A. Pre-Bid**

1. Prepare advertisement information for Bidders and provide to County.
2. Prepare bland Bid Tabulation.
3. Prepare copies of the plans and specifications as required.
4. Address Bidder questions.

**B. Bid Opening**

1. Attend Bid Opening and receive bids opened by County.
2. Prepare Bid Tabulation of bids received.
3. Check Bidder Qualifications, including bonding for lowest bidder.
4. Prepare recommendation of award.
5. Prepare final contract documents.

**C. Construction Phase**

1. Issue Notice to Proceed and attend preconstruction conference.
2. Review shop drawings as needed.
3. Issue Change Orders, if needed (limit 2).
4. Review monthly Contractor's Estimate of Work Completed and recommend payment.
5. Project site visits will be performed during the project and at final project completion to confirm work completed.
6. Prepare final punch list upon completion of final inspection.
7. Prepare recommendation for final payment.

**PHASE V QA/QC**

**A. General Requirements**

1. Required prior to 30%, 60%, 90%, and Final reviews.
2. Document in project files.

**B. Personnel**

1. QA/QC Manager.
2. Project Manager.
3. Principal-in-Charge.
4. Specialists, including Surveyor.

**PHASE VI Special Services**

**A. Surveying**

**B. Printing**

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**EXHIBIT C**  
**Work Schedule**

The schedule for the work in this Work Authorization shall commence on the date of execution of this Work Authorization and continue for:

(1) a period which may reasonably be required for performing the Data Collection, Preliminary Engineering and Design, Final Design, Construction Phase Services, QA/QC Services, and Special Services for the proposed drainage channel and appurtenances called for as described in Exhibit B of this Work Authorization including any extra work and any required additions thereto; or

(2) a period extending 12 months after the completion of the services called for as described in Exhibit B of this Work Authorization.

The final acceptance by the Owner of the services called for as described in Exhibit B of this Work Authorization shall serve as evidence of completion of the work on this Work Authorization.

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**EXHIBIT D**  
**Fee Estimate**

TASK	PART I - CONTRACT AMOUNT
<b>Basis for Engineering Fee based on Article 5A of Contract</b>	
<b>Project Estimated Construction Cost</b>	\$2,879,250
<b>Engineering Services Fee (8% of Construction Cost)</b>	\$230,340
<b>Topographic Survey Services Fee (2.5% of Construction Cost)</b>	\$71,981
<b>Basic Fee (Prelim Eng, Design &amp; Construction Services Fee)</b>	<b>\$302,321</b>
<b>PART I - DATA COLLECTION &amp; PRELIMINARY ENGINEERING AND DESIGN (50% of Basic Fee)</b>	<b>\$151,161</b>
DATA COLLECTION (40% of Prelim Eng Fee)	\$60,464
SCHEMATIC DESIGN (60% of Prelim Eng Fee)	\$90,696
<b>SUB-TOTAL (Prelim Eng Fee)</b>	<b>\$151,161</b>
<b>PART II - RIGHT-OF-WAY MAP (Add'l Services)</b>	<b>\$39,200</b>
OBTAIN TITLE REPORTS (Est 14 Parcels) (@ \$600.00/Parcel) ***	\$8,400
DEVELOP PARCELS & R.O.W. MAP (Est 14 Parcels) (@ \$2,200.00/Parcel)	\$30,800
<b>SUB-TOTAL (R.O.W. Map Fee)</b>	<b>\$39,200</b>
<b>PART III - FINAL DESIGN (25% of Basic Fee)</b>	<b>\$75,580</b>
30% Plans Submittal (30% of PS&E Fee)	\$22,674
60% Plans Submittal (30% of PS&E Fee)	\$22,674
90% Plans Submittal (30% of PS&E Fee)	\$22,674
100% Plans Submittal (10% of PS&E Fee)	\$7,558
<b>SUB-TOTAL (PS&amp;E Fee)</b>	<b>\$75,580</b>
<b>PART IV - CONSTRUCTION SERVICES (25% of Basic Fee)</b>	<b>\$75,580</b>
Construction Services	\$75,580
<b>SUB-TOTAL (Construction Services Fee)</b>	<b>\$75,580</b>
<b>PART V - SPECIAL SERVICES (Add'l Services)</b>	<b>\$980</b>
Printing (Est. 20 Sets @ 100 Sheets/Set @ 0.20/Sheet)	\$400
Mileage (Est. 50 Trips @ 20 Miles/Trip @ 0.58/Mile)	\$580
<b>SUB-TOTAL (Special Services Fee)</b>	<b>\$980</b>
<b>TOTAL</b>	<b>\$342,501</b>