HIDALGO COUNTY
Professional Engineering Services
Contract # C-13-333-12-03
Work Authorization Form

WORK AUTHORIZATION NO. 2

THIS WORK AUTHORIZATION is made pursuant to the terms and conditions of Article 1 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 Engineering Services required for the preparation of the Right-of-Way Map for the Shary Road (FM 494) project from FM 676 (Mile 5) to SH 107.

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 $228,000.00. This amount is based upon the costs outlined in the Estimated **Cost Proposal** attached hereto as ***EXHIBIT "D-1"- Estimated Project Fee Schedule and Man-hour Breakdown.***

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. 2 shall be funded through funding source:
Account No. 7-1350-431-00-123-105-0-841
Requisition Number 315475 (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 serves as a Notice to Proceed as per Article 3, Period of Service on the Agreement. This Work Authorization shall terminate upon completion of scopes of the work authorization, as identified on ***EXHIBIT "C" – 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 No. 3, Commissioner Joe Flores as to the content and detail of this Work Authorization No. 2.

HIDALGO COUNTY
COMMISSIONER PRECINCT NO. 3

BY:_____

PART 8. ACCEPTANCE AND APPROVAL

This Work Authorization is hereby accepted, approved by Hidalgo County Commissioners' Court on 2/21/17 as indicated below.

THE ENGINEER:
L&G ENGINEERING

_____
By: Jacinto Garza, P.E.
President

THE OWNER:
HIDALGO COUNTY

_____
By: Ramon Garcia,
County Judge

ATTEST:

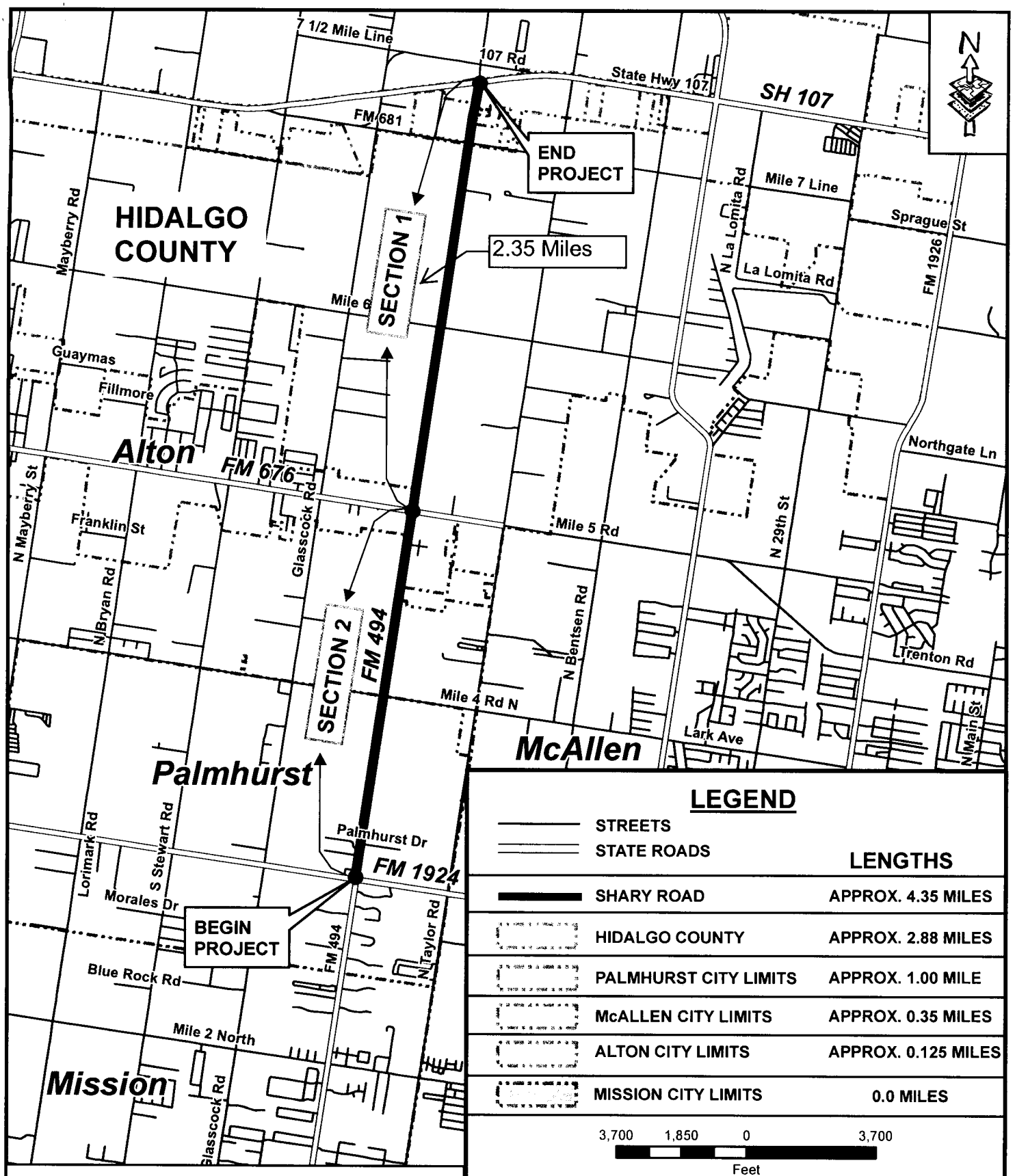
_____
By: Arturo Guajardo, Jr., County Clerk

COMMISSIONERS COURT
HIDALGO COUNTY, TEXAS

APPROVED BY
COMMISSIONERS' COURT
ON: 2/21/17

LIST OF EXHIBITS

Location Map
Exhibit A – Services to be provided by Owner
Exhibit B – Services to be provided by Engineer
Exhibit C – Work Schedule
Exhibit D-1 – Estimated Project Fee Schedule and Man-hour Breakdown



LEGEND

	LENGTHS
STREETS	
STATE ROADS	
SHARY ROAD	APPROX. 4.35 MILES
HIDALGO COUNTY	APPROX. 2.88 MILES
PALMHURST CITY LIMITS	APPROX. 1.00 MILE
McALLEN CITY LIMITS	APPROX. 0.35 MILES
ALTON CITY LIMITS	APPROX. 0.125 MILES
MISSION CITY LIMITS	0.0 MILES

3,700 1,850 0 3,700

Feet

1 inch = 3,750 feet

EXHIBIT A

SHARY ROAD (FM 494) LOCATION MAP

FROM FM 1924 (MILE 3) TO SH 107

APPROX. PROJECT LENGTH 4.35 MILES

THE COUNTY OF HIDALGO TEXAS

JOE FLORES
HIDALGO COUNTY PCT# 3 COMMISSIONER

L&G Engineering
Highway/Civil • Structural/Bridge
Environmental • Geotechnical
Construction Material Testing
Right-of-Way Acquisition Provider Services

2100 W Expressway 83
Mercedes, TX 78570
Phone: (956) 565-9813
Fax: (956) 565-9018
Toll Free: (888) 565-9813

900 S. Stewart Rd., Ste 9
Mission, TX 78572
Phone (956) 585-1909
Fax (956) 585-1927
Toll Free (888) 585-1909

G:\AMAPS\SHARY RD MILE 3 TO 107

EXHIBIT "A"

Services to be provided by the County

1. The County will issue work authorization to initiate all required services and designate the authorized representative of the coordination of each work authorization.

2. The County will provide copies of all subdivision plats of record and/or in the subdivision process.

3. The County will provide the Engineer with on-going guidance, timely reviews, and decisions necessary to complete services required by the work authorization in order to permit the Engineer to maintain an agreed upon project schedule.

4. The County will provide a Purchase Order and process all acceptable requests for payment in a timely manner.

5. The Work Authorization will identify the Notice to Proceed date.

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:	0864-01-068
PROJECT/DESCRIPTION:	PREPARATION OF THE ROW MAP FOR THE FM 494 (SHARY RD) PROJECT
LENGTH:	2.35 MILES
HIGHWAY:	FM 494 (SHARY RD)
LIMITS:	FROM FM 676 (MILE 5) TO SH 107

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
- X 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)

ENGINEER shall mean L&G Engineering.

STATE shall mean Texas Department of Transportation

COUNTY shall mean HIDALGO County.

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

SECTION 5 - RIGHT-OF-WAY DATA

(Function Code 130)

Services Provided By:
SURVEYOR CITY/COUNTY

NOTE: No work involving right-of-way (ROW) data is to be performed until the ENGINEER has given the SURVEYOR written approval of the final location of the proposed ROW lines as approved by TxDOT and the CITY.

A. RIGHT-OF-WAY MAPPING:

1. **PURPOSE:**
   The purpose of right-of-way mapping is to prepare documents suitable for the acquisition of real property interests and the probable issuance of a title policy.
2. **DEFINITIONS:**
   For purposes of this Contract, the following definitions shall apply:
   2.1. Abstract Map – A drawing to scale prepared from record documents depicting proposed right-of-way lines, existing right-of-way lines, easement lines, and private property lines with relevant grantee names, recording data, and recording dates.
   2.2. Closure/Area Calculation Sheet – A computer generated print-out of the area and the perimeter bearings, distances, curve data, and coordinates of an individual parcel of land to be acquired.
   2.3. Access Denial Line – A line which indicates specific location where access to the roadway is denied.
   2.4. Property Descriptions – A written metes and bounds description delineating the area and the boundary and describing the location of an individual parcel of land unique to all other parcels of land.
   2.5. Owner – The most current title holder of record as determined by a study of the Real Property Records.
   2.6. Parcel Plat – An 8 ½ inch by 11 inch drawing to scale depicting all the information shown on the right-of-way map regarding an individual parcel of land to be acquired.
   2.7. Parent Tract – A unit or contiguous units of land under one ownership, comprising a single marketable tract of land consistent with the principle of highest and best use. A parent tract may be described by a single instrument or several instruments. A single parent tract cannot be severed by a public right-of-way, easement, or separate ownership which destroys unity of use.
   2.8. Parent Tract Inset – A small line drawing, to an appropriate scale, of the parent tract perimeter placed upon the right-of-way map in the proximity of the respective parcel. Parent tract insets are used in cases where the parent tract cannot be shown to the same scale as the right-of-way map. Since parent tract insets are used to identify the limits and location of parent tracts, they should include public right-of-ways, utility easements and fee strips, and identifiable water courses which bound the parent tract.
   2.9. Point of Beginning (P.O.B.) – A corner of the parcel of land to be acquired, located on the proposed right-of-way line and being the beginning terminus of the first course of the property description.
   2.10. Point of Commencing (P.O.C.) – A monumented property corner which can be identified in the Real Property Records and is located outside the proposed right-of-way corridor. For title purposes, the point of commencing should be a monumented back corner of the parent tract. In the event a monumented back corner of the parent tract cannot be recovered, the nearest identifiable monumented property corner located outside the proposed right-of-way corridor may be used.

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

Services Provided By:
SURVEYOR CITY/COUNTY

2.11. Preliminary Right-of-Way Layout/Abstract Map – A drawing to scale depicting proposed right-of-way lines, existing right-of-way lines, proposed pavement, access denial lines, the proposed centerline alignment, private property lines, easement lines, visible improvements, visible utilities, the station and offset from the centerline alignment to each Point of Curvature (PC), Point of Tangency (PT), and angle point in the proposed right-of-way lines and to each PC, PT, and angle point in the existing right-of-way lines in areas of no proposed acquisition. *(Reference Sample Attached)*

2.12. Right-of-Way Maps/Property Description/Parcel Plats – A series of 22 inch by 34 inch and 11 inch by 17 inch drawings to scale depicting the results of relevant elements of records research, field work, analysis, computation, and map making required to determine title, delineate areas and boundaries, locate and describe utilities and improvements to the extent necessary to appraise the value and negotiate the acquisition of individual parcels of private land for a proposed right-of-way project. *(Reference Sample Attached)*

3. WORK TO BE PERFORMED:

YES N/A 3.1. Preliminary Right-of-Way Layout/Abstract Map:

An abstract map shall be prepared sufficient to determine the following:

3.1.1. Any and all interests of public record held in the land to be acquired.

3.1.2 The total record holdings of an owner contiguous to land to be acquired from that owner.

3.1.3. Any and all interests in land to be acquired held in common (shopping mall parking lots, subdivision reserves, etc.)

3.1.4. Any and all improvements proposed by other agencies which may have a bearing on project development.

3.1.5. All called monuments, bearings, and distances as per recorded information.

3.1.6. Preliminary Parcel numbering system.

3.1.7. Any and all utilities (permitted or of record)

3.1.8. Reference Sample provided.

YES N/A 3.2. Right-of-Way Map:

The SURVEYOR shall field locate property corners, existing right-of-way markers, improvements, visible utilities, verify and update the planimetric file, if provided, and as directed by the ENGINEER.

A right-of-way map shall be prepared for each proposed right-of-way project. A right-of-way map shall include a title sheet, an index sheet, a survey control index sheet, a horizontal and vertical control data sheet, and sufficient plan sheets to cover the proposed project, or as directed by the ENGINEER. The STATE has developed standard title sheets, index sheets, and plan sheets, copies of which the SURVEYOR shall request and secure for all purposes of this Contract. Plan sheets shall include, but need not be limited to, the following items of information.

By mutual agreement between the Texas Board of Professional Land Surveying and the TxDOT, right-of-way maps need not be signed and sealed by a Registered Professional Land Surveyor.

3.2.1. Proposed right-of-way lines shall be delineated with appropriate bearings, distances, and curve data. Curve data shall include the radius, delta angle, arc length, and long chord bearing and distance.

3.2.2. Existing right-of-way lines shall be delineated with appropriate bearings, distances, and curve data to the extent necessary to describe the individual parcels of land to be acquired. Curve data shall include the radius, delta angle, arc length, and long chord bearing and distance.

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

Services Provided By: SURVEYOR	CITY/COUNTY	
YES	N/A	3.2 *Right-of-Way Map Continued (continued)*

3.2.3. The proposed project baseline alignment shall be delineated with appropriate bearings, distances, and curve data. Curve data shall include the station of the curve Point of Intersection (PI), radius, delta angle, arc length, tangent length, long chord bearing and distance, and the N and E coordinates of the curve PI. All alignment PCs, PTs, and even 500 foot stations shall be labeled as to station.

3.2.4. Proposed paving lines combined with relevant existing paving lines shall be shown to the extent necessary to compile a complete picture of proposed traffic movements. Proposed paving on the final mylars submitted to the ENGINEER shall be shaded with a dot pattern or highlighted by some other means acceptable to the ENGINEER.

3.2.5. Access denial lines shall be shown sufficiently to indicate areas where access is to be denied and where access is to be permitted if required by the ENGINEER.

3.2.6. Private property lines shall be delineated with appropriate bearings, distances, and curve data to the extent necessary to describe the individual parcels of land to be acquired. Curve data shall include the radius, delta angle, arc length, and long chord bearing and distance.

3.2.7. Porción lines, subdivision lines and survey lines shall be shown and identified by name and Porción number.

3.2.8. County lines and city limit lines shall be located and identified by name.

3.2.9. A north arrow shall be shown on each sheet, and, if possible, located in the upper right corner of the sheet.

3.2.10. Monumentation set or found shall be shown and described as to material and size.

3.2.11. A station and offset shall be shown for each PC, PT, and angle point in the proposed right-of-way lines. Stations and offsets shall be with respect to the proposed centerline alignment.

3.2.12. Intersecting and adjoining public right-of-ways shall be shown and identified by name, right-of-way width, and recording data.

3.2.13. Railroads shall be shown and identified by name, right-of-way width, and recording data.

3.2.14. Utility corridors shall be identified as to easement or fee and recording information shall be identified.

3.2.15. Easements and fee strips shall be shown and identified by width, owner, distance of easement to a property corner of the parent track, and recording data.

3.2.16. Building lines or set-back lines shall be shown and identified.

3.2.17. Visible improvements located within the proposed right-of-way corridor or within 50 feet of a proposed right-of-way line shall be shown and identified.

3.2.18. Structures shall be identified as commercial or residential, by number of stories, and as to type (brick, wood frame, etc.).

3.2.19. Structures which are severed by a proposed right-of-way line shall be dimensioned to the extent necessary to completely delineate the severed parts.

3.2.20. Parking areas, billboards, and other on-premise signs which are severed by a proposed right-of-way line shall be dimensioned to the extent necessary to delineate that portion of the parking area, billboard, or sign which is located within the proposed right-of-way corridor.

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

Services Provided By: SURVEYOR	CITY/COUNTY	
YES	N/A	3.2 *Right-of-Way Map Continued (continued)*

3.2.21. In cases where structures are located outside the proposed right-of-way corridor and within 25 feet of a proposed right-of-way line, the shortest distance between the structure and the proposed right-of-way line shall be shown and field verified.

3.2.22. Visible utilities located within the proposed right-of-way corridor or within 50 feet of a proposed right-of-way line shall be shown and identified.

3.2.23. The location of underground utilities and fuel storage tanks situated within the proposed right-of-way corridor or within 50 feet of a proposed right-of-way line shall be determined and shown as required by the ENGINEER. The visible location of stand pipes, vents and filler caps in conjunction with available design and as-built drawings may be used to determine a most probable location and size in the event an actual location is indeterminable.

3.2.24. Points of commencing and points of beginning shall be shown and labeled. Points of beginning shall be shown with their respective N and E surface coordinates. As an exception, a point of commencing will not be required in the case of a total taking without a remainder.

3.2.25. Each parcel of land to be acquired shall be identified by a parcel number which shall appear in the ownership tabulation and on the right-of-way map in the proximity of the respective parcel. If the SURVEYOR is unfamiliar with the criteria used by the STATE to assign parcel numbers, he shall seek the assistance of the ENGINEER at the time the abstract map is complete. THE SURVEYOR SHALL SEEK ASSISTANCE FROM THE ENGINEER IN DEVELOPING AN OWNERSHIP TABULATION TABLE.

3.2.26. An ownership tabulation shall be shown which shall include the parcel number, existing area of the parent tract, lot(s) and block(s) constituting the parent tract when applicable, owner's name, type of conveyance, film code, county clerk's file number, taking area, and remaining area of the parent tract located left and/or right of the centerline alignment. Types of conveyance, film code and file numbers refer to conveyances into the STATE and will be added to the right-of-way map by the STATE at a later date. Several blank lines shall be provided in the tabulation block to facilitate future map additions.

3.2.27. A parent tract inset shall be shown for each parent tract which cannot be shown to scale on the right-of-way map. The use of broken scale lines should be avoided. When parent tract insets are used, the point of commencing with the appropriate bearing and distance to the point of beginning may be shown on the parent tract inset.

3.2.28. A note shall be included on the title sheet and each map sheet stating the source of bearings, coordinates, and datum used.

3.2.29. Appropriate notes shall be included on the title sheet and each map sheet stating the following:

a. Month(s) and year abstracting upon which the map is based.
b. Month(s) and year field surveys were conducted upon which the map is based.
c. Month and year the map was completed by the SURVEYOR.

3.2.30. The right-of-way CSJ number, if available, shall be shown on each right-of-way map sheet.

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

Services Provided By: SURVEYOR	CITY/COUNTY	
		3.3. Exhibits: An Exhibit shall be prepared for each parcel or tract consisting of a property description and a parcel plat.
YES	N/A	3.3.1. Property Description:

A property description shall be prepared for each parcel of land to be acquired. Standard formats for property descriptions, copies of which the SURVEYOR shall request to the ENGINEER and secure for all purposes of this Contract. Property descriptions shall include, but need not be limited to, the following items of information.

All property descriptions shall be signed and sealed by a Registered Professional Land Surveyor. The property description shall begin with a general description which shall include as a minimum:

a. State, County, and Survey within which the proposed parcel of land to be acquired is located.
b. A reference to unrecorded and recorded subdivisions by name, lot, block, and recording data to the extent applicable.
c. A reference by name to the grantor and grantee, date and recording data of the most current instrument(s) of conveyance describing the parent tract. Use execution dates in deed references as opposed to recording or filing dates. In any case, the property description shall make clear which date is being used.
   The property description shall continue with a metes and bounds description which shall include as a minimum:
d. A point of commencing.
e. A point of beginning with the appropriate N and E surface coordinates.
f. A series of courses, identified by number and proceeding in a clockwise direction, describing the perimeter of the parcel of land to be acquired, and delineated with appropriate bearings, distances, and curve data.
   Curve data shall include the radius, delta angle, arc length, and long chord bearing and distance. Each course shall be identified either as a proposed right-of-way line, and existing right-of-way line, or a property line of the parent tract. Each property line of the parent tract shall be described with an appropriate adjoiner call.
g. A description of all monumentation set or found shall include, as a minimum, size and material.
h. A reference to the source of bearings, coordinates, and datum used.

YES	N/A	3.3.2. Parcel Plat:

A parcel plat shall be prepared for each parcel of land to be acquired. The STATE has developed standard formats for parcel plats, copies of which the SURVEYOR shall request from the ENGINEER and secure for all purposes in this Contract. Parcel plats shall include each and every item of information shown on the right-of-way map which concerns the individual parcel. All parcel plats shall be signed and sealed by a Registered Professional Land Surveyor.

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

Services Provided By: SURVEYOR	CITY/COUNTY		
		4.	**DELIVERABLES:** In preparing right-of-way maps, the following is an outline of the work to be submitted (records should be delivered in a binder):
YES	N/A	4.1.	An Abstract Map of the current record title holders included in the Preliminary Map showing the proposed schematic and existing right-of-way as per General Specifications defined in 2.11.
YES	N/A	4.2.	A Right-of-Way map for the project limits under cover of Title Sheet, Index Sheet, Control Data Sheet, and Exhibits of the property descriptions and parcel plats as per General Specifications defined in 2.12, 3.2 and 3.3. ROW Map Submittal Requirements: 4.2.1. Two (2) paper sets of half-size ROW maps (11"x 17") 4.2.2. One (1) paper set of the full-size ROW maps (22"x 34") 4.2.3. Four (4) sets of original metes & bounds descriptions (field notes) with parcel plats (signed & sealed by the surveyor). *Do not include traverse sheet.* 4.2.4. City requires one (1) electronic copy of the ROW Map on a CD, and One (1) copy of the DGN electronic file on a CD from the surveyor-Both the electronic copy of the ROW Map and the DGN file can be on one CD. IF Roadway is ON-SYSTEM and after Administrative Approval of the ROW Maps by Division (REVISIONS) Submittal Requirements: 4.2.5. Two (2) paper sets of the half-size of the affected ROW map sheets (11"x17"), detailing the revision 4.2.6. One (1) paper set of the full-size of the affected ROW map sheets (22"x 34"), detailing the revision 4.2.7. Four (4) sets of any revised original metes & bounds descriptions (field notes) with parcel plats (signed & sealed by the surveyor). *Do not include traverse sheet.* 4.2.8. Division needs one (1) electronic copy of the revised ROW Map sheets on a CD, and 4.2.9. One (1) copy of the DGN electronic file on a CD from the surveyor-detailing the revision-Both the electronic copy of the revised ROW Map sheets and the DGN file can be on one CD.
YES	N/A	4.3.	Appropriate monuments on the proposed right-of-way lines at intersecting property lines, and at all PCs, PTs, angle points, intersecting right-of-way lines of side streets, and at 1,000 foot stations of the proposed centerline alignment.
YES	N/A	4.4.	Appropriate monuments on the existing right-of-way lines in areas of no acquisition at all PCs, PTs, angle points, and 1,000 foot stations, and as directed by the ENGINEER of the proposed centerline.
YES	N/A	4.5.	A SURVEYOR's report, outlining the approach, reasons or basis for the existing right-of-way determination, and conclusions made.
YES	N/A	4.6.	Records used to establish ownership.
YES	N/A	4.7.	ROW and parcel filed notes signed and sealed by a RPLS.
YES	N/A	4.8.	Computation sheets of survey closures, ground surveys, etc. used to develop plats and meets and bound information.
YES	N/A	4.9.	Items indicated under the Automation Requirements Section 6.
YES	N/A	4.10	Completed (Attached) Checklist with submittal of ROW Map etc.

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

Services Provided By:
SURVEYOR CITY/COUNTY

5. GENERAL REQUIREMENTS:

For purposes of this Contract, the following general requirements shall apply:

YES N/A

5.1. Copies of instruments of record submitted to the ENGINEER shall be indexed by parcel number.

5.2. Coordinates appearing on right-of-way maps, on parcel plats, and in property descriptions shall be surface coordinates based on the Texas State Plane Coordinate System. The combined adjustment factors (sea level factor x scale factor) which have been developed by the STATE for its use are as follows:

5.2.1. In (List Applicable Counties): Counties (---------- Zone), grid coordinates are multiplied by a combined adjustment factor of 1.xxxxxx to obtain surface coordinates. For work in Counties other than those listed, the ENGINEER will provide the combine adjustment factor.

5.3. Line and curve tables may be used when necessary.

5.4. The number of centerline alignment stations to be shown on a single plan sheet shall be restricted to the extent necessary to allow approximately 4 inches between match lines and sheet borders for future details and notes.

5.5. A minimum 4 inch by 4 inch space shall be reserved at the bottom right corner of each map sheet for future revision notes.

6. AUTOMATION REQUIREMENTS:

In addition to standard hard copy plots and mylar copies, the following will be required electronically:

YES N/A

6.1. Right-of-way maps and parcel plats shall be prepared using a *Micro Station* software graphics system capable of producing graphics files that can be plotted and viewed without further modification or conversion using the State's *Micro Station V8* graphics system.

6.2. It is the intent of the ENGINEER to secure graphics files which have elements of equal integrity, singularity, and attributes as elements prepared using the State's *Micro Station V8* graphics system.

6.3. For purposes of clarity, consistency, and ease of utilization, the SURVEYOR shall request and secure standards relevant to right-of-way mapping to the extent necessary to ensure that the needs of the ENGINEER are met. This includes, but may not be limited to, TxDOT seed file and corresponding units.def file, TxDOT font resource file, TxDOT GEOPAK SMD file, TxDOT DGNLIB, associated cell libraries and custom line styles, and other files as deemed appropriate for the project.

6.4. Graphics files furnished to the ENGINEER by the SURVEYOR shall be submitted on a Compact Disk CD, DVD or USB, in a format compatible with the STATE's computer system. The SURVEYOR shall confer with the ENGINEER regarding acceptable media and formats before making submissions. The SURVEYOR shall request and secure a Consultant File Index form provided by the ENGINEER, to be completed by the SURVEYOR, and to be submitted to the ENGINEER along with the graphics files.

6.5. Property descriptions shall be prepared using a computer word processing system capable of producing data files readable using *Microsoft Office Word Version 2007* word processing software.

6.6. Data files furnished to the ENGINEER by the SURVEYOR shall be submitted in ACSII format on a CD, DVD or USB.

6.7. Provide to the ENGINEER electronic copies of all instruments of record acquired pursuant to a work authorization.

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

Services Provided By:
SURVEYOR CITY/COUNTY

7. GENERAL SPECIFICATIONS:

For purposes of this Contract, the following general specifications for right-of-way mapping shall apply:

YES N/A

7.1. Completed right-of-way maps shall be submitted to the ENGINEER on single or double matte mylar, 22 inches by 34 inches in size with a 21 inch by 32 inch printed border positioned ½ inch from the top, bottom, and right edge of the sheet. Two copies on 11 inch by 17 inch paper will also be supplied to the ENGINEER.

7.2. Parcel plats shall be submitted to the ENGINEER on 8 ½ inch by 11 inch bond paper with respective borders of 7 ½ inches by 10 inches, positioned ½ inch from the top, bottom, and right edge of the sheet. Match lines shall be used where more than one sheet is required.

7.3. Right-of-way maps shall be drawn to a scale of 1 inch = 50 feet. An appropriate scale other than 1 inch = 50 feet may be used on some proposed right-of-way projects upon prior approval by the ENGINEER.

7.4. Since right-of-way maps are reduced in size by one-half for archiving purposes, the smallest size lettering acceptable on a right-of-way map shall be 1/10 of one inch (Leroy #100). A right-of-way map which contains any lettering smaller than 1/10 of one inch will not be accepted by the ENGINEER.

7.5. Parcel plats shall be drawn to a preferred scale of 1 inch = 50 feet. An appropriate scale other than 1 inch = 50 feet may be used on some proposed right-of-way projects upon prior approval by the ENGINEER. In the case of a very large parcel which would be difficult to show with clarity on a single 8 ½ inch by 11 inch sheet, the SURVEYOR shall use multiple 8 ½ inch by 11 inch sheets with matching lines.

7.6. The smallest size lettering acceptable on a parcel plat shall be 0.06 of an inch (Leroy #60).

7.7. Property descriptions shall be submitted on 8 ½ inch by 11 inch bond paper.

7.8. The ENGINEER has encountered a number of mylar products which are considered unacceptable. The SURVEYOR shall confer with the ENGINEER regarding mylar products he intends to use which have not been previously used on State projects.

7.9. Zip-A-Tone or other similar stick-on products shall not be used on right-of-way maps or parcel plats.

8. ADHERENCE TO STANDARDS:

For purposes of clarity, consistency, and ease of understanding, the CITY/COUNTY, as an acquiring agency of private property for public use, has adopted the STATE standards and formats for right-of-way mapping which have proven to facilitate the processes of negotiation, appraisal, relocation assistance, and condemnation. It shall be the responsibility of the SURVEYOR to adhere to these standards and formats to every extent possible to ensure that the needs of the acquiring agency are met.

SAMPLES ATTACHED FC 130:

- PRELIMINARY Right-of-Way Layout / Abstract Map
- Right-of-Way Map, Field Notes, Parcel Sketches and Area Computation Sheets

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

ROW MAP CHECKLIST

Consultant: _____
Contract/WA# _____
Responsible Office: _____
Project Manager: _____
County: _____
Highway: _____
RCSJ: _____
CCSJ: _____

As the responsible consultant project manager, I hereby certify that the attached ROW Map has undergone a QA/QC review, with the following applicable items specifically checked for accuracy, completeness and constructability (as noted by Checkmarks)

_____
Signature Date

_____
Printed Name

(This Checklist must be signed by the RPLS and turned in with all proposed ROW Projects.

MAP:

General

___ All documents have been proofread and are accurate.
___ Title Commitments for each individual parcel.
___ Graphics files compatible with Micro station and Word software are provided.
___ Photos of proposed ROW staking included.
___ Field notes and Parcel Plats are numbered continuous.
___ Scale shall be 1"=50' or 1"=100".

Title Sheet Requirements

___ Title and description of project including county, limits, etc....
___ Vicinity map with beginning and ending station
___ Equations and Exceptions
___ Index
___ Legend
___ Title block completely filled out with Construction and R.O.W. CSJs'
___ List all Major Utilities from Station to Station

Individual Map Sheet Requirements

___ Sheet size 34" X 22"
___ Text legible when reduced to half-scale.
___ Title block completely filled out with R.O.W. CSJ
___ Matchlines
___ Project layout sheet
___ Existing utility lines and easements, deed reference, as shown on Schedule "B" of the Title Commitment, and defined on parcel plats

Existing information:

___ R.O.W. lines
___ Whole property or whole property inset
___ Roadways
___ Survey, county, and city limit lines shown and labeled
___ Improvements shown and labeled *(see below)*
___ Monumentation i.e. P.C., P.T., Break Points
___ North arrow
___ Scale
___ Property lines

___ Property descriptions i.e., lot, block, tract, subdivision, etc...
___ Identify existing and proposed access denial locations *(if applicable)*

Proposed information:
___ #5- 2-ft iron road set monumentation i.e. P.C., P.T., Break Points and 1000' stations at proposed ROW lines and where existing ROW line is the proposed ROW.
___ Survey and R.O.W. lines
___ Basis of bearings
___ Parcel bearings and distances correspond with traverse sheet
___ Outside ties (P.O.C.) corresponds with field notes
___ Point of beginning (P.O.B.) established on proposed R.O.W. line
___ Parcel tied to baseline
___ Baseline information shown i.e. Stationing, bearings, curve data, etc...
___ Conveyance information shown in tables i.e. parcel number, grantors name, amount of take, remainder etc.
___ Math checked on remainder

Improvements:
___ Improvements bisected or within 25' of proposed R.O.W. line are shown on map with stationing and distance from proposed R.O.W. line. Buildings are labeled and dimensioned.
___ Off-premise outdoor advertising signs within proposed R.O.W. are shown and labeled.

Utilities:
___ All utilities within or crossing existing and proposed right of way are shown and labeled as to size, easement or fee width, and recording data of instrument.
___ Location of underground storage tanks and/or filler caps are shown and labeled

FIELD NOTES - Heading
___ County
___ Highway
___ Parcel number
___ R.O.W. CSJ
___ Construction CSJ

General Description or "preamble"
___ Area of parcel to be acquired is shown in acreage (0.000) for rural land and/or square feet (to nearest whole sq. ft.) for urban land or smaller parcels
Parent tract data is shown:
___ Size of parent tract
___ Survey data or lot, block, and subdivision
___ Name of last recorded seller and buyer
___ Date, volume and page or document number of last recorded conveyance
___ Records and county of last recorded conveyance

Beginning Description
___ Point of commencement is on outside tie and is described accurately by bearings and distances as it leads to the point of beginning.
___ Point of beginning is on proposed R.O.W. line

Particular Description
___ Traverse calls are clockwise sequence
___ Bearings and distances correspond exactly with map, parcel sketch, and traverse sheet
___ Bearings are to nearest whole second and distances are to the nearest one-hundredth of a foot
___ Calls are numbered
___ Denial of access shall be described from beginning to end *(if applicable)*

Closing Description
___ Last call leads back to P.O.B.
___ Restates area of parcel

___ Establishes taking in existing road R.O.W. if applicable
___ Legal description is referenced to Plat
___ Sealed and signed
___ Include an access clause whether access is permitted or denied *(if applicable)*

PARCEL SKETCH:

___ Shows P.O.B. and P.O.C.
___ All data corresponds exactly with Map and Field Notes
___ Sheet size is no larger than 81/2" x 11"
___ Plat closely matches example provided
___ Plat referenced to legal description
___ Sealed and signed
___ Include an access clause whether access is permitted or denied *(if applicable)*
___ Existing utility lines and easements (deed reference, if available);

TRAVERSE SHEET

___ Computations show area to be acquired in sq. ft. or acres, whichever is applicable
___ Computations show area that is existing road R.O.W. if applicable
___ Traverse calls are in clockwise sequence
___ Error of closure meets the following:

Secondary rural	.0003
Primary rural - secondary urban	.0002
Urban or industrial	.00013

Client: Hidalgo County

EXHIBIT "C"

PROJECT WORK SCHEDULE
Shary Road (FM 494) Project
From FM 1924 (Mile 3) to SH 107
Length = 4.35 miles

TASK AND DESCRIPTION	FIRM	2015												2016												2017												2018				2019			
		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN-MAR	APR-JUN	JUL-SEP	OCT-DEC	JAN-MAR	APR-JUN	JUL-SEP	OCT-DEC
Shary Road (FM 494)																																													
SCHEMATIC																																													
Develop Schematic	L&G																																												
TxDOT Review & Revisions	TxDOT																																												
TxDOT Approval	TxDOT																																												
Revise to TxDOT & Public Meeting Comments	L&G																																												
ENVIRONMENTAL CLEARANCE																																													
Public Involvement	L&G																																												
Process Technical Reports	TxDOT																																												
Agency Coordination	TxDOT																																												
Process Administratively Complete Document	TxDOT																																												
Environmental Decision	TxDOT																																												
PS&E (BY TXDOT)																																													
30% Completion	TxDOT																																												
60% Completion	TxDOT																																												
90% Completion	TxDOT																																												
TxDOT Approval	TxDOT																																												
ROW MAP																																													
Prepare ROW Map	L&G																																												
TXDOT Review & Revisions	TxDOT																																												
TxDOT Approval	TxDOT																																												
TXDOT RELEASE OF ROW																																													
Release (Dependent on Availability of Funds)	TxDOT																																													
ACQUISITION SERVICES																																													
ROW Acquisition (County)	L&G																																												
PROPOSED LETTING																																													
Let Project (Est. Earliest Date: FY 2019 - FY 2020) (Dependent on Availability of Funds)	TxDOT																																												

L&G FUNCTION
TXDOT FUNCTION

11:31 AM2/2/2017

EXHIBIT D-1

PROJECT FEE SCHEDULE AND
ESTIMATED MANHOUR BREAKDOWN

SHARY ROAD (FM 494) PROJECT

		MANHOURS								
		Senior Engineer	Project Engineer	Design Engineer	EIT	CADD Operator	Admin / Clerical	TOTAL HOURS	Sub-Contract Amounts / ROW COST	TOTAL LINE ITEM COST
CONTRACT RATE		167.89	123.54	114.04	82.36	66.52	57.02			
WORK AUTHORIZATION NO. 2										
PHASE II - ROW MAPPING										
1	Complete ROW Map (Estimated 60 Parcels) (See Exhibit D-1, page 2 of 2)							0	$ 192,000.00	$ 192,000.00
2	Coordination with the Surveyor for the ROW Map	40	80	70	80	70	3.04	343.04		$ 36,000.14
SUB-TOTAL		**40**	**80**	**70**	**80**	**70**	**3.04**	**343.04**	**$**	**228,000.14**

Subtotal Manhour Fee with Sub-Consultant Costs:	$ 228,000.14
*** Total Project Fee:**	**$ 228,000.00**

*Rounded Figure

EXHIBIT "D-1"
BUDGET
LUMP SUM RATE BASIS OF PAYMENT

Highway: Shary Rd.
County: Hidalgo County, Texas
From: Mile 5 Rd. to SH107

R.O.W. Surveying Services, LLC

Description of Work: ROW Map

	TASK AND DESCRIPTION FC 150 Field Surveying	Survey PM	RPLS	Survey Technician	4-man Survey Crew	3-man Survey Crew	2-man Survey Crew	Admin/ Clerical	Total Hours	Cost
	HOURLY RATE	$124.00	$125.00	$82.00	$175.00	$155.00	$130.00	$50.00		
	PHASE 1 - FC 130 (ROW MAP) Lump Sum per Parcel									
	Reports (60 parcels @$3200/parcel)									
	Sub-Total FC130									$ 192,000.00
	Grand Total FC 130 and FC 150									**$192,000.00**

REVISED EXHIBIT "B"

ESTIMATED PRELIMINARY PROJECT COSTS

SHARY ROAD (FM 494) PROJECT

(Limits: from FM 1924 (Mile 3) to SH 107

Mileage Breakdown:

***NOTE: Total Length includes 1/2 of the Roadway in the City of McAllen and Alton.

SECTION I & II (4.35 Miles)			SECTION I ONLY (2.35 Miles)		
*** HIDALGO COUNTY	2.88 Miles	66%	HIDALGO COUNTY	1.968 Miles	83%
CITY OF MCALLEN	0.35 Miles	8%	CITY OF MCALLEN	0.32Miles	14%
CITY OF PALMHURST	1.0 Miles	23%	CITY OF PALMHURST	0.0 Miles	0%
CITY OF ALTON	.125 Miles	3%	CITY OF ALTON	.062 Miles	3%

ROADWAY PROJECT	SHARY ROAD (FM 494)	SHARY ROAD (FM 494)	
LIMITS: .....(SECTION 1)	from FM 676 (Mile 5) to SH 107	from FM 676 (Mile 5) to SH 107	
LIMITS: .....(SECTION 2)	from FM 1924 (Mile 3) to FM 676 (Mile 5)	from FM 1924 (Mile 3) to FM 676 (Mile 5)	
EXISTING ROADWAY SECTION:	40-ft Rural	40-ft Rural	
EXISTING ROW WIDTH:	65' to 100' Varies	65' to 100' Varies	
PROPOSED ROADWAY SECTION:	4-lane divided urban	4-lane divided urban	
PROPOSED ROW WIDTH: SECTION 1	120FT	120FT	
ESTIMATED CONSTRUCTION COST ...(SECTION 1)	**$10,575,000.00**	$10,575,000.00	***HCMPO FUNDING AS OF 2/7/2017***
ESTIMATED CONSTRUCTION COST ...(SECTION 2)	**$9,000,000.00**	$9,000,000.00	
LENGTH FOR 4-LANE ROADWAY ...(SECTION 1)	2.35 Miles	2.35 Miles	
LENGTH FOR 4-LANE ROADWAY ...(SECTION 2)	2 Miles	2 Miles	

ESTIMATED PROJECT COSTS	ORIGINAL ESTIMATE AS PER AGREEMENT						REVISED PROJECT ESTIMATE COST		
	Total Estimated Project Costs		* HIDALGO COUNTY	* CITY OF McALLEN	* CITY OF PALMHURST	* CITY OF ALTON	STATE/MPO	* LPA	
	STATE / MPO	* LPA							
WORK AUTH. NO. 1 (Entire Length of Section 1 &2)									
(FROM FM 1924 (MILE 3) TO SH 107)									
PHASE I - EA, PUBLIC INVOLVEMENT, SCHEMATIC, DESIGN									
Environmental Assessment with TxDOT	$ -	$ 95,000.00							
Public Involvement for the project with stakeholders and 1 Public Meeting	$ -	$ 25,000.00							
Archeological and Historical Research	$ -	$ 30,000.00							
Engineering Technical Support at Public Mtgs with Layouts etc	$ -	$ 24,000.00							
Schematic by L&G	$ -	$ 293,625.00							
Hydrological Mapfor County use to identify outfall	$ -	$ 42,000.00					NO REVISED CHANGES TO PHASE I		
Estimated Environmental Document Review Charges by TxDOT	$ -	$ -							
Off. Surveys for Schematic (Prel. Owner Ident. and Prop. Rights) for Co. Use	$ -	$ 21,000.00							
Preliminary Compensable Utilities Identification on Schematic for Co. Use	$ -	$ 18,000.00							
Update Schematic based on comments as provided by TxDOT/County for schematic and EA update w/ FHWA	$ -	$ 30,000.00							
Engineering Technical Support at Public Hearing with Layouts etc	$ -	$ 12,000.00							
Public Involvement for 1 Public Hearing	$ -	$ 25,000.00							
SUB-TOTAL	$ -	$ 615,625.00	$ 406,312.50	$ 49,250.00	$ 141,593.75	$ 18,468.75	$ -	$ 615,625.00	$ -
(TO BE COMPLETED BY TXDOT) (SURVEY BY LPA)(SECT I ONLY)									
PHASE II- PS&E and CONSTRUCTION OVERSIGHT									
Outfall Identification Preliminary Property Ownership and Hydraulics	TXDOT	$ -							
PS&E Development (8% Engineering Fee)	TXDOT	$ -							
Engineering Fee to Create 1 set of Plans and Submit through TxDOT	TXDOT	$ -					NO REVISED CHANGES TO PHASE II		
PS&E Development for OUTFALL(S)	TXDOT	$ -							
Permitted Utilities Coordination to adjust	TXDOT	$ -							
ROADWAY CONSTRUCTION COST	$ 10,575,000.00	$ -							$ 8,000,000.00
Field Surveys for Design and Construction		$ 112,800.00							
TxDOT Construction Inspection (11%)	$ 657,966.00	$ -							$ 657,966.00
Eng Consultant Construction Management (18 Months)	TXDOT	$ -							
SUB-TOTAL	$ 11,232,966.00	$ 112,800.00	$ 93,624.00	$ 15,792.00	$ -	$ 3,384.00	$ 11,232,966.00	$ 112,800.00	$ 8,657,966.00
WORK AUTH. NO. 2 (FOR SECTION I ONLY)									
PHASE III - ROW Map									
Complete ROW Map (est. 56 Parcels incr. to 60 Parcels)	$ -	$ 212,800.00						$ 228,000.00	
SUB-TOTAL	$ -	$ 212,800.00	$ -	$ -	$ -	$ -	$ -	$ 228,000.00	
PHASE III - FOR INFORMATION PURPOSED ONLY									
WORK AUTH. NO. 3 (FOR SECTION I ONLY)									
PHASE III - ROW Acquisition									
Est. Co. Attny Costs for Condem. ($15,000/parcel based on 20% total parcels)	$ -	$ -						$ 180,000.00	
ROW Costs - Acq,Serv. @ (est. 56 Parcels @13,500 p/p increased to 60 parcels @ 13,800p/p)	$ -	$ 756,000.00						$ 828,000.00	
Est. Comp. Util. Mgmt for Acq. of Property Rights & Comp for Utility Adjust(s) (2) Two High Pressure Pipelines and (2) Parallel Irrigation Easements	$ -	$ 84,000.00						$ 84,000.00	
Estimated Roadway Right-of-Way Costs (40ft. For 2.35 Miles @$4.5/sq ft) (80/20) minus EDC 95/5 (1.7%)	$ 2,121,768.00	$ 111,672.00					$ 2,479,890.18	$ 42,887.22	$ 2,957,145.00
COMPENSABLE UTILITY COSTS (Est 2 Pipeline Crossings at $130,000 ea to lower and encase) (1.7%)	$ 247,000.00	$ 13,000.00					$ 646,375.58	$ 11,178.42	
SUB-TOTAL	$ 2,368,768.00	$ 964,672.00	$ 977,301.76	$ 164,846.08	$ -	$ 35,324.16	$ 3,126,265.77	$ 1,146,065.63	$ 2,957,145.00
TOTAL	**$13,601,734.00**	$ 1,905,897.00	**$1,477,238.26	**$229,888.08	**$141,593.75	**$57,176.91	**$14,359,231.77**	$2,102,490.63	$11,615,111

* Local Public Agencies (LPA)

** Estimated Cost Based on Percentage of Road Length

Work Authorization No. 1 (Phase I & II)	FY 13	$	728,425.00	**ISSUED**
Work Authorization No. 2 (Phase III)	FY 16	$	212,800.00	**NOT ISSUED**
Work Authorization No. 3 (Phase III)	FY 17	$	912,000.00	**ESTIMATED**

LOCAL PUBLIC AGENCY:	**SECTION I & II**	**SECTION I ONLY**	**TOTAL**
Estimated County Cost:	$ 406,312.50	$ 1,070,925.76	$ 1,477,238.26
Estimated City of McAllen Cost	$ 49,250.00	$ 180,638.08	$ 229,888.08
Estimated City of Palmhurst Cost:	$ 141,593.75	$ -	$ 141,593.75
Estimated City of Alton Cost:	$ 18,468.75	$ 38,708.16	$ 57,176.91
Estimated Total Project LPA Cost:	$ 615,625.00	$ 1,290,272.00	$ 1,905,897.00

COMBINED TOTAL REVISED ESTIMATED PROJECT COST FOR SECTION I & II: $ 16,461,722.40 **13%**

EST. CO. OR LPA (LOCAL PUBLIC AGENCY) COSTS NOT INCL. IN WORK AUTH'S $ 234,065.63

State / Fed Estimated Costs