L&G Engineering
Transportation Consultants

August 20, 2012

The Honorable Joseph Palacios
Commissioner, Hidalgo County Pct. No. 4
Attn: Gloria Beltran
1051 N. Doolittle
Edinburg, Texas 78539

RE: FM 1925 Project (C-11-234-09-13)
Limits: from Kenyon Road to FM 907 (N Alamo Road)
Supplemental No. 1 to Work Authorization No. 1

Dear Commissioner Palacios:

As requested, attached for your review and further consideration is Supplemental No. 1 to Work Authorization No. 1 and the attachments listed below for the FM 1925 and North Alamo Road Expansion Project:

- Supplemental No. 1 to Work Authorization No. 1
  - Location Map
  - Exhibit A – Services to be provided by County
  - Exhibit B – Services to be provided by Engineer
  - Exhibit C – Work Schedule
  - Exhibit D – Fee Schedule

Please note that the original Work Authorization No. 1 will increase from $429,600.00 to $650,640.00; therefore the amount of Supplemental No. 1 is $221,040.00.

Should you have any questions, please feel free to give me a call at (956) 565-9813.

Sincerely,

Jacinto Garza, P.E.
CEO/President

Attachments

2100 W. Expressway 83 • Mercedes, TX 78570 • Office (956) 565-9813 • Fax (956) 565-9018
900 S. Stewart Rd., Ste. 9 • Mission, TX 78572 • Office (956) 585-1909 • Fax (956) 585-1927

EXHIBIT "F"

Supplemental Agreement Form

THE STATE OF TEXAS §
§
COUNTY OF HIDALGO §

SUPPLEMENTAL AGREEMENT NO. 1
TO WORK AUTHORIZATION NO. 1
TO AGREEMENT FOR PROFESSIONAL SERVICES
C-11-234-09-13

This **SUPPLEMENTAL AGREEMENT** is made pursuant to the terms and conditions of Article 8 of the Agreement made by and between **HIDALGO COUNTY**, hereinafter called the "**Owner**", and **L&G ENGINEERING**, professional engineers of Mercedes, Texas, hereinafter called the "**Engineer**".

WITNESSETH

WHEREAS, the **Owner** and the **Engineer** executed the Main Contract Agreement on the 13 the day of September, 2011 concerning professional engineering services for the **"FM 1925 (Phase I) from Kenyon Road to FM 907 (Old Alamo Road)**, (for preparation of Roadway Schematic, Hydrologic Map, Schematic Surveys, Coordinate Environmental Assessment with TxDOT, Limited Public Involvement for Environmental Assessment, Compensable utilities Management Oversight, ROW Map, ROW Acquisition Services) hereinafter referred to as the "**Project**"; and,

WHEREAS, it has become necessary to amend *"Exhibit B – Services to be provided by the Engineer"* of Work Authorization No. 1, Part 1 of the Agreement – Scope of Work as identified below:

(1) Extend the limits to Work Authorization No. 1 to include the Re-alignment of Alamo Road from FM 1925 North approximately 0.5 miles as identified on the attached *Location Map.*

(2) Increase the Engineering scope of work to Work Authorization No. 1 to the revised project limits and as identified; and,

WHEREAS, it has become necessary to amend *"Exhibit C – Work Schedule"* of Work Authorization No. 1, Part 5 of the Agreement – Period of Service, to include sufficient time needed for the additional services to be provided.

WHEREAS, it has become necessary to amend *"Exhibit D-1 – Revised Fee Schedule"* of Work Authorization No. 1, Part 2 of the Agreement – Estimated Cost, to increase the original Work Authorization amount of **$429,600.00** to **$650,640.00**; therefore the amount of **Supplemental No. 1 is $221,040.00**.

A. AGREEMENT

NOW THEREFORE, premises considered, the **Owner** and the **Engineer** agree that said **Agreement** is amended as follows:

I. Sections of the Agreement, EXHIBIT "B" – SERVICES TO BE PROVIDED BY THE ENGINEER, EXHIBIT "C" – WORK SCHEDULE and EXHIBIT "D-1" – REVISED FEE SCHEDULE, are revised to reflect the above listed modifications of this Supplemental.

All other provisions are unchanged and remain in full force and effect.

IN WITNESS WHEREOF, the Engineer and the Owner have caused this Supplemental Agreement to the Agreement for Professional Services to be executed as of the _____ day of _____, 2012.

THE ENGINEER:
ENGINEER

BY: _____
Jacinto Garza, P.E., President

ATLAS & HALL, LLP.

BY: _____
Stephen L. Crain

THE OWNER:
HIDALGO COUNTY

BY: _____
Ramon Garcia, County Judge

LIST OF EXHIBITS:
LOCATION MAP
EXHIBIT A – "Services to be provided by County"
EXHIBIT B – "Services to be provided by Engineer"
EXHIBIT C – "Work Schedule"
EXHIBIT D-1 – "Revised Fee Schedule"

EXHIBIT "A"

Services to be provided by the Owner

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 process all acceptable requests for payment in a timely manner.

GENERAL INSTRUCTIONS

ENGINEER shall mean L&G Engineering.

STATE shall mean Texas Department of Transportation.

COUNTY shall mean Hidalgo County.

PROJECT DESCRIPTION

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

County: Hidalgo County

Control: 1803-02-028

Project/Description: Schematic Design, Right-of-Way Mapping, Acquisition Services for the FM 1925 Project

Length: 0.5 Miles

Highway: North Alamo Road

Limits: from FM 1925 North 0.5 Miles

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
_X_ 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)

NOTES

ROUTE AND DESIGN STUDIES
(Function Code 110)

Services Provided By: Engineer	County		
NO	NO	1.	Route Location Studies*****
NO	NO	2.	Level of Service Analysis
NO	NO	3.	Traffic Evaluations and Projections
YES	NO	4.	Develop Roadway Design Criteria
YES	NO	5.	Preliminary Cost Estimates
YES	NO	6.	Design Schematic
YES	NO	7.	Preliminary Right-of-Way Requirements
YES	NO	8.	Design Concept Conference
		9.	Soil Core Hole Drilling
NO	NO		a. Pavement
NO	NO		b. Retaining Walls
NO	NO		c. Miscellaneous Structures
NO	NO		d. Bridges

* The Phase I or better survey for hazardous material should be included as a determining factor of route selection. Projects which do not require additional right of way should be considered separately from an expansion or new location.

NOTES
SOCIAL, ECONOMIC AND ENVIRONMENTAL STUDIES AND PUBLIC INVOLVEMENT
(Function Code 120)

Services Provided By: Engineer	COUNTY	
		1. Environmental Reports All Environmental Reports shall be in accordance with 43 Texas Administrative Code (TAC) 2.40-2.51, Code of Federal Regulations, Title 23, Part 771 and Highway Design Operations and Procedures Manual, Part II-B.
		a. Environmental Assessments
NO	NO	(1) An Environmental Assessment shall be prepared, anticipating a Categorical Exclusion.
YES	NO	(2) A Re-Evaluation of the Environmental Assessment that received a Finding of No Significant Impact will be coordinated with TxDOT on the prior EA completed 9 years ago with the addition of the North Alamo Road Realignment.
NO	NO	(3) An Environmental Assessment shall be prepared, anticipating the need for a Draft Environmental Impact Statement.
		b. Environmental Impact Statement
NO	NO	(1) A Draft Environmental Impact Statement shall be prepared. After appropriate interagency and public reviews within time limits prescribed by the Code of Federal Regulations, Title 23, Part 771 and 43 Texas Administrative Code 2.40-2.51, a Final Environmental Impact Statement shall be prepared.
NO	NO	(2) A Section 4(f) Statement (Department of Transportation Act) shall be provided by the **Engineer**. The format and content of the statement is found in FHWA Technical Advisory T6640.8A.
		2. Public Involvement All public involvement procedures shall be in accordance with 43 Texas Administrative Code (TAC) 2.40-2.51, Code of Federal Regulations Title 23, Part 771 and Highway Design Operations and Procedures Manual, Part II-B.
YES	NO	a. Limited public involvement shall be scheduled, coordinated and conducted with affected Property Owners as required.
YES	NO	b. Technical assistance, meeting(s)/hearing(s) preparation, maintenance of contacts lists, minutes of meeting(s), exhibit preparation, and other tasks outlined by TxDOT, shall be provided.
YES	NO	3. Cultural Resources Formal consultation with the State Historic Preservation Office (SHPO) and the Texas Historical Commission (THC) will be conducted by the ENGINEER.
YES	NO	a. Historic Structure Studies A records search and reconnaissance survey shall be performed, and documentation prepared regarding identification efforts, National Register eligibility and potential impacts to historic properties in accordance with the state's historic structure requirements.
		b. Archeological Studies
YES	NO	(1) Files searches shall be conducted to determine if known archeological sites are present; to identify whether these sites have been listed or determined eligible for the National Register of Historic Places or have been designated State Archeological Landmarks; and to identify the need (if any) to perform additional archeological investigations.
YES	NO	(2) Archeological reconnaissance will be performed under a Texas Antiquities Permit (13 TAC 26) signed for the Sponsor by a professional archeologist with the STATE.

Services
Provided By:
Engineer COUNTY

YES NO (3) Archeological survey shall be performed under a Texas Antiquities Permit (13 TAC 26) signed for the Sponsor by a professional archeologist with the STATE.

4. Noise and Air Quality Analyses

YES NO a. Noise Analysis
A noise analysis shall be prepared, including predicted noise levels and the consideration and evaluation of noise mitigation, in accordance with the STATE'S Noise Guidelines. The noise analysis or a summary of the noise analysis shall be included in the environmental document for the project.

YES NO b. Air Quality Analysis
An air quality analysis shall be prepared in accordance with the STATE'S Air Quality Guidelines. The air quality analysis or a summary of the air quality shall be included in the environmental document for the project.

YES NO 5. Ecological Investigations
A wetland survey and if necessary, a wetland delineation shall be conducted and a "wetland finding" shall be provided if necessary. As part of the environmental phase of the project, the consultant should notify the District if it is believed that a Section 404 or Section 9 permit is required, and provide the technical data to the District for application to the U.S. Army Corps of Engineers and/or the U.S. Coast Guard.

A determination should be made if there are potential federally listed endangered or threatened species that could be impacted. The District will be notified as soon as possible that Section 7 or 10 consultation may be required. Supporting data will be furnished to the district when consultation with the U.S. Fish and Wildlife Service is undertaken.

YES NO 6. Hazardous Materials
The consultant shall perform an Environmental Site Assessment for hazardous materials impact in accordance with the American Society for Testing and Materials (ASTM) 1528.93 (Transaction Screen Process).

YES NO 7. General Guidelines for Preparation of Environmental Documents

a. The environmental document prepared shall be provided on paper and on a formatted diskette that is compatible with the word processor program and equipment of the district office.
b. Three draft copies and twelve final copies of the Environmental Assessment shall be provided.
c. Ten draft copies and thirty final copies of the Draft and Final Environmental Impact Statements shall be provided.
d. The environmental document shall be prepared in accordance with the content and format of FHWA Technical Advisory T6640.8A.
e. Exhibits in the environmental document shall be limited to 297 millimeters by 420.5 millimeters (11 inches by 17 inches) where possible.

RIGHT-OF-WAY DATA
(Function Code 130)

Services Provided By:
Surveyor County

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

YES NO 1. Ownership Data in a .dgn file
   a. The entire project limits.
   b. Compensable utility ownership who have property rights on ROW shall be researched and provided.
   c. For each drainage outfall property
   d. For each irrigation structure pipe.

YES NO 2. Parcel plats & Right-of-Way Map
   a. A ROW map, parcel plats and field notes shall be prepared and furnished.
   b. All plats and field notes must be signed and sealed by a Registered Professional Land Surveyor (RPLS).
   c. ROW map must depict all improvements affecting ROW.

YES NO 3. Utilities (Compensable)
   a. Property ownership with recording information shall be shown on ROW Map and Parcel Plats with distance ties to property corners in an effort to locate utility.

YES NO 4. Field Notes
   a. Field notes and plats, signed and sealed by a Registered Professional Land Surveyor, for all parcels on the ROW Map
   b. Computation Sheets for Survey Closure and Area for Each Parcel.
   c. Ground surveys and preparation of parcel maps, legal descriptions, and right of way maps.

YES NO 5. Survey and Stake Right-of-Way

YES NO 6. Records as Required by the County and State
   a. Records used to establish ownership

YES NO 7. General Guidelines for Preparation of Right-of-Way Maps (Sample ROW Maps and Parcel Plats and field notes attached)

General Specifications

a. All data submitted by the surveyor will be legible, organized and well documented.

b. The surveyor shall provide temporary signs and shall control traffic near surveying operations adequately to comply with provisions of the MUTCD; a copy of which the Surveyor acknowledges has been furnished to him. All signs, flags, and safety equipment are to be provided by the surveyor.

c. Permission to enter private property for surveying (Right-Of-Entry) shall be the sole responsibility of the surveyor.

d. The surveyor will be held responsible for the correctness of his services. The surveyor will be responsible for the completion of his services.

e. The surveyor will be required to complete the attached "Right-of-Way Map Checklist" and submit along with the completed R.O.W. map. All requirements of attached R.O.W. map

checklist must be complete, accurate and also considered to be essential and is a part of this contract.

Project specific scope of services

FC 130 – Right of Way Data – Abstract analysis, development of ROW Map sheets including parcel plats and field notes with Metes & Bounds field descriptions, and Title Commitments.

FC 150 – Field Surveying for Parcel Mapping – Recover horizontal & vertical control, locate and field tie existing ROW and boundary corners. Update topography, and reestablish corners for ROW map revisions.

SURVEYING SCOPE OF SERVICES FOR PARCEL MAPPING

RIGHT-OF-WAY DATA

Right-of-Way Documents - The **Surveyor** will utilize State examples and provide the following:

General

a. Abstracting: The **Surveyor** will determine Ownership Data.
b. Prepare individual parcel maps and field notes as needed to properly describe the right-of-way the **State** is to acquire.
c. All procedures involving right-of-way maps will be in accordance with the **State's** Right-of-Way Book I and Book II, the **State's** local operating procedures and according to the Texas Board of Professional Land Surveying Practices Act.
d. All required documents will be in English units.
e. The **Surveyor** will monument all corners with a 5/8 inch iron rod with a Surveyor's plastic cap on all parcel boundary corners.
f. The **Surveyor** will provide to the State a copy of Instruments of Record.
g. The **Surveyor** will attach graphics files compatible with the latest version of Micro-Station graphics software.
h. The **Surveyor** will attach documents or text files compatible with the latest version of Word software.

Parcel Plats

a. A parcel plat will be prepared for each parcel of land to be acquired. The **State** has developed standard formats for parcel plats, copies of which the **Surveyor** will request and secure for all purposes
b. Parcel boundary lines will be delineated with appropriate bearings, distances, and curve data.
c. Private property lines will be delineated with appropriate bearings, distances, and curve data to the extent necessary to describe the individual parcels of land to be acquired.
d. League lines and survey lines will be shown and identified by name and abstract number.
e. A north arrow will be shown on each sheet and, if possible, in the upper right hand corner.
f. Monumentation set or found will be shown and described as to material and size.
g. A station and offset will be shown for each PC, PT, and angle point in the proposed right-of-way lines and the existing right-of-way lines in areas of no proposed acquisition.
h. Intersecting streets will be shown and identified by name and right-of-way width.
i. A parent tract inset will be shown for each parent tract.
j. A note will be included on each map sheet stating the basis of bearings, coordinates, and datum used.
k. Appropriate notes will be included on the title sheet stating the following:
    a. Month(s) and year abstracting was performed 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 map was completed by the **Surveyor**.
l. The right-of-way account number and R.O.W. CSJ if available will be shown on each parcel map sheet.
m. All parcel maps should be 8-1/2" x 11" signed and sealed by a Registered Professional Land Surveyor and note referencing legal description.
n. The acreage of the part taken should be shown to three decimal places, rounded.

Field Note Descriptions - A field note description will be prepared for each parcel of land to be acquired. Field note descriptions will include, but need not be limited to, the following:

a. The field note description will begin with a general description that will include, as a minimum:
    a. State, county, and city 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.

b. The field note description will continue with a metes and bounds description that will include, as a minimum:
    a. A point of commencing (outside property corner).
    b. A point of beginning on proposed R.O.W. line.
    c. 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.
    d. A description (8-1/2" x 11") of all monumentation set or found to include, as a minimum, size and material.
    e. All field note descriptions will be signed and sealed by a Registered Professional Land Surveyor.
    f. Note referencing parcel plat.

PHARR DISTRICT
ROW MAP CHECKLIST

Consultant: _____
Contract/WA# _____
Responsible Office: _____
TXDOT 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. Pharr District ROW will not accept project without this checklist.)

MAP

General
___ All documents have been proofread and are accurate.
___ Title Commitments for each individual parcel.
___ Graphics files compatible with Microstation 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:
___ Type II Monumentation i.e. P.C., P.T., Break Points and 1500' intervals
___ 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

** DO NOT SEAL MAP*

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

FIELD SURVEYING AND PHOTOGRAMMETRY
(Function Code 150)

Services Provided By: Engineer	County	
		1. Field Surveying
NO	NO	a. Primary Project Control - 3 to 5 miles spacing Precision shall be 1 part in 20,000 or better, unless otherwise directed by the district engineer. (1) Establish horizontal control points (2) Establish vertical control points NOTE: ALL BEARING AND DISTANCE SHALL BE BASED ON THE STATE PLANE COORDINATE SYSTEM NAD 1983, SOUTH ZONE. ALL DISTANCES AND COORDINATES SHALL BE SURFACE AND MAY BE CONVERTED TO GRID BY MULTIPLYING BY A COMBINED SCALE FACTOR OF 0.999960
NO	NO	b. Secondary Project Control (Surveyor shall recover and/or reset H&V Control Points as provided by the Engineer and create Survey Data Sheets for inclusion in the Project Plans. • No traverse should exceed 25 angle points. Planimetrics shall be 20 ft Lt & Rt from the proposed ROW as per the schematic provided by the Engineer. • The unadjusted angular error should not exceed 2 seconds per angle, plus 14 seconds. • The unadjusted ratio of precision should be one part in 10,000 or better. (The ratio of precision is the total length of the traverse divided by the total error.) • The unadjusted vertical error should not exceed 0.03 foot per mile of traverse. (1) Project control base lines
NO		(2) Photogrammetric ground control
NO		(a) Establish horizontal control
NO		(b) Establish vertical control points
NO		(c) Place and maintain control point targets
NO	NO	c. Other Field Surveying
		(1) The limit of the Design surveys shall be 500-ft before and after the limits of the project as identified by the Project Engineer on the schematic. Establish horizontal and vertical control. Set benchmarks at 1000-ft intervals along the project proposed right-of-way. Provide x,y,z for each Benchmak. Provide a BM along each outfall identified on the Hydrologic Map. The BM's shall be #5 I.R. 2-ft in depth set in concrete. The surveyor shall provide A H&V Book (a Sample shall be provided by the Engineer to the Surveyor). The Surveyor will provide a 3-pt reference sketch with ties to the BMs for inclusion in the H&V Control Book. Establish benchmark circuit throughout the project with a tolerance of 0.03'/ft per mile error vertically.
		(2) Complete topographic and cross section survey, data processing, and CADD mapping (2D & 3D) for the limits of the project.
		(3) Locate all visible utilities, data processing and CADD mapping (2D & 3D) including irrigation lines. Follow sample provided by the Engineer.
		(4) Field locate cross culverts, driveway culverts, inlets, irrigation lines, within the project limits, data processing and CADD mapping (2D & 3D).
		(5) Right of Entry, Right of Way Research, and Appraisal District Records is the responsibility of the Surveyor.
		(6) The Surveyor shall also paint the proposed centerline on the existing pavement as approved by Engineer. (500-ft stations and a tick mark at 100-ft. stations –12 inches long with approved paint by Engineer) before construction for the purpose of utility adjustments and project location.

(7) Profile and cross section intersecting streets for ties into project (500-ft. beyond the proposed ROW per schematic and 20-ft wider than the existing ROW of intersecting street).

(8) Cross section irrigation crossings for a distance of 20-ft beyond the proposed ROW at 100-ft intervals in a DTM file. Provide a complete description of irrigation appurtenances as identified by the engineer sample layout.

(9) Tie Horizontally and Vertically any existing storm drain system that lies within the existing proposed ROW including the pipe inverts/flow lines and elevation of the outfall of said recovered existing storm drain systems.

NO NO (10) Tie to existing underground and overhead utilities (location, elevation and direction)

Horizontally – the surveyor shall call the 1-800 number for the utilities to be marked on the ground as well as any city water and sewer lines. He shall tie all visible utility crossings with name, address and Phone #'s of utility companies. The engineer will coordinate with the utility companies and jointly the Surveyor and the Engineer will identify which utilities were missed and need to be tied down.

Vertically – The engineer shall identify all utilities that are potential conflicts and that need to be tied vertically. The engineer will advise the surveyor in writing of the needed vertical ties and the surveyor will tie the lines vertically once the surveyor has coordinated the exposure and provide the information to the engineer.

NO NO (11) Additional Field Surveying as shown below:

(A) IRRIGATION LINES – The surveyor will meet with the engineer before he ties down any irrigation lines. The Engineer will provide him the existing Irrigation District Maps and the A&M Data of existing irrigation lines that are identified of record. He will follow the sample given to him by the engineer and tie the structures horizontally and vertically and provide a Field Book to the engineer.

(B) OUTFALLS – The surveyor will provide a complete 2D & 3D File including utilities along the outfalls identified on the Hydrologic Map.

Driveways and Turnouts

(a) Inventory commercial entrances, public roads and side streets separately.

(b) Obtain centerline station. (Width at ROW, PAV'T and existing radius.

(c) Inventory by type (dirt, caliche, gravel or paved). If paved, indicate condition in terms of no patches, has patches or has potholes.

(d) Obtain elevations at both edges of the driveway or turnout in line with the side drain.

NO NO (12) ROW staking (Existing and Proposed @ 1,000 ft. stations PC's PT's and Angle points as per ROW Map)

NO NO (13) Soil core hole staking -

NO NO (14) Determine changes in topography from voids and outdated maps due to development, erosion, etc.

NO NO (15) Profiles of existing drainage facilities

NO NO (16) Measurement of hydraulic opening under existing bridges

NO NO (17) Obtain elevations of manholes and valves of utilities

NO NO (18) Provide temporary signs, traffic control, flags, safety equipment, etc.

NO NO (19) Ties to existing bridges or culverts that may conflict with new construction.

N/A N/A (20) Bridge widening top of deck and/or top of cap elevations at the Profile Grade Line (PGL) and the edges of slab at bent locations.

NO NO (21) Inventory signs, mailboxes, and driveways

NO NO (22) Survey controlled data sheets per TxDOT guidelines.

N/A N/A 2. Photogrammetric Products

a. Uncontrolled Photography

(1) Contact Prints

(2) Mosaics

(3) Digital ortho plots

b. Mapping

(1) Planimetric Maps

(2) Contour Maps

(3) Cross Sections

(4) Profiles

(5) Digital Terrain Models (DTM)

ROADWAY DESIGN CONTROLS
(Function Code 160)

Services Provided By:
Engineer County

1. Geometric Design

YES NO a. Horizontal and Vertical Alignment
YES NO b. Schematic Layout
   (1) The location of interchanges, main lanes, grade separations, frontage roads and ramps.
   (2) Develop vertical and horizontal alignment of main lanes, ramps and cross roads at proposed interchanges or grade separations. Frontage road alignment data need not be shown on the schematic; however, it should be developed in sufficient detail to determine ROW needs. The degree of horizontal curves and vertical curve data, including "K" values, shall also be shown for ease of checking.
   (3) For freeways, show the location and text of the proposed main lane guide signs. Lane lines and/or arrows indicating the number of lanes shall also be shown.
   (4) The tentative ROW limits.
      (a) Provide a roadway Microstation file of the preliminary earthwork to verify ROW requirements.
      (b) Provide a graphics file containing the approved schematic.
   (5) The geometric (pavement cross slopes, lane and shoulder widths, slope rates for fills and cuts) of the typical sections of proposed highway lanes, ramps, frontage roads, and cross roads.
   (6) The current and projected traffic volumes as provided by TxDOT (20 year traffic projection, unless otherwise determined by the District Engineer).
   (7) The control of access lines if Interstate or designated under House Bill 179.
   (8) Direction of traffic flow on all roadways.
   (9) Location and width of median openings for highway without access control.
   (10) The geometric of speed change (acceleration, deceleration, climbing) lanes.
   (11) Complete & provide the TxDOT Schematic Checklist.

Services Provided By: Engineer	County	
YES	NO	2. General Guidelines for Project Development (Completed)

a. Prior to preparing detailed plans for a proposed project, a preliminary schematic layout shall be prepared which indicates the general geometric features and location requirements peculiar to the project. Four copies of the schematic layout shall be submitted through the district to the Design Division for approval and subsequent coordination with the Federal Highway Administration (FHWA) where applicable.

   The layout shall be submitted for two-lane highway projects on new locations and for all multi-lane highway projects. **No geometric design is to be performed until the COUNTY and TxDOT have given the engineer written approval of the preliminary schematic layout.**

b. All geometric design shall be in conformance with the State's Design Division, Operations and Procedures Manual, except where variances are permitted in writing by the STATE.

c. The schematic layout shall include basic information which is necessary for the proper review and evaluation including the items listed above in the checklist for schematic layout.

d. Handling of traffic during construction shall be a consideration in the development of preliminary designs.

e. Upon approval of the schematic layout by Design Division (FHWA on Federal-aid projects), it shall be the basis for an exhibit at any required public hearing prior to final development of the project. If there are any changes to the schematic after the Design Division and FHWA approval and before the public hearing, four copies of the revised schematic, as displayed at the hearing, shall be submitted either prior to or accompanying the public hearing data. If there are no changes in the schematic as displayed at the hearing, only photographs of the schematic and other displays shall be submitted with the public hearing data.

f. For all freeway construction projects, these schematics shall show the location and text of the proposed main lane guide signs. A schematic layout shall be submitted through the district to the Traffic Operations Division, Traffic Safety Section for approval and subsequent coordination with the FHWA. All signing shall be in conformance with the Texas MUTCD.

g. On complex projects, informal contact through the district with the Design Division and FHWA personnel is encouraged with regard to development of preliminary design prior to official schematic submission.

h. The engineer shall furnish project files that are compatible with the STATE's computer system, a project listing, and a cross section plot showing the original design sections containing the earthwork input and original cross sections for the project. **Accuracy of the earthwork design is of utmost importance since it is the basis for contractor payments and construction staking.**

NO	NO	3. Exhibit for Airway/Highway Clearance Permits

Services Provided By: Engineer	County		
		4.	Grading Design
NO	NO	a.	Refine the horizontal and vertical alignment of main lanes, frontage roads, ramps, cross roads and direct connectors based upon the approved schematic layout. Determine vertical clearances at grade separations and overpasses, taking into account the appropriate superelevation rate.
YES	NO	b.	Typical Sections
NO	NO	c.	Design Cross Sections
NO	NO	d.	Determine Cut and Fill Quantities
N/A	N/A	e.	Slope Stability Analysis
N/A	N/A	f.	Embankment Foundation Stability Analysis
N/A	N/A	g.	Embankment Settlement Analysis
		5.	Pavement Design
NO	NO	a.	Prior to initiating detailed plan preparations for a project, a preliminary investigation shall be made to determine the approximate section and pavement type to be used for the pavement structure.
NO	NO	b.	The typical section shall also reflect proposed geometric including pavement cross slopes, lane and shoulder widths, and slope rates whenever this data have not been previously shown on a schematic submission.
		c.	Embankment and Subgrade
			(1) Soil Core Holes
NO	NO		(a) Along center line
NO	NO		(b) Along center line of each roadway
			The location and minimum number of soil core holes required for this project are as follows: (To be determined when schematic is being completed)
NO	NO		(2) Identify, interpret and summarize geologic features that affect engineering design (PI, Sulfate content, % of lime)
NO	NO	d.	Traffic Data for Pavement Design by **STATE**
NO	NO	e.	Basic Design Criteria
NO	NO	f.	Life Cycle Cost Analysis (es)
NO	NO	g.	Cost Data
NO	NO	h.	Pavement Material Properties
NO	NO	i.	Rehabilitation Investigations
NO	NO		(1) Core Hole Survey (Show cost estimate with Function Code 110)
			(a) Determine type and depth of existing material, pavement, etc. The Engineer will determine whether to salvage ACP and FLEXBASE as well as their properties and provide this information to TxDOT.

DRAINAGE
(Function Code 161)

Services Provided By: Engineer	County	
		All hydraulic design shall be in accordance with the TxDOT's Hydraulic Manual, except where variances are permitted in writing by the **COUNTY & STATE**.
		1. Hydrologic Studies, Discharges
YES	NO	a. Drainage area maps showing existing conditions and proposed improvements.
YES	NO	b. Hydrologic data/discharge determination
		2. Hydraulic Drainage Study and Documentation
		a. Hydraulic computations
N/A	N/A	(1) Storm water detention available within the ROW (linear ft. along side drain ditch).
NO	NO	(2) Storm water detention required outside the ROW (as per HCDD#1)
NO	NO	(3) Culverts
NO	NO	(4) Bridge waterways
NO	NO	(5) Channels
NO	NO	(6) Storm sewers/inlets
NO	NO	(7) Pump stations
NO	NO	(8) Storm Water Management facilities
NO	N/A	(9) Other
		(a) Irrigation Canals/Siphons
NO	NO	b. Hydraulic report(s)
NO	NO	c. Federal Emergency Management Agency (FEMA) floodway requirements
NO	NO	d. Determine impact of proposed drainage plan on the following receiving stream(s)
		(1) Hidalgo County Drainage District Outfalls
		(2) All Irrigation District Outfalls impacted

Services Provided By: Engineer	County		
		3.	Layout, Structural Design and Detailing of Drainage Features
		a.	Culverts
NO	NO		(1) New culverts
NO	NO		(2) Culvert widening and/or lengthening
NO	NO		(3) Culvert replacements
		b.	Storm sewers
NO	NO		(1) New storm sewers
NO	NO		(2) Modify existing storm sewers
NO	NO		(3) Inlets
NO	NO		(4) Manholes
NO	NO		(5) Trunk lines
NO	NO	c.	Pump stations
NO	NO	d.	Subsurface drainage at retaining walls
NO	N/A	e.	Outfall channel(s) within the ROW
NO	NO	f.	Outfall channel(s) outside the ROW
NO	NO	g.	Detention Pond(s) within the ROW
NO	NO	h.	Detention Pond(s) outside the ROW
NO	NO	i.	Summary of Quantities
NO	NO	j.	Storm Water Management facilities
NO	NO	4.	Storm Water Pollution Prevention Plan (SW3P)
NO	NO	5.	Scour Evaluation - Waterway Structures only (to be completed by Bridge Engineer under FC 170).

PROJECT: FM 1925
LIMITS: from Kenyon Road to FM 907 (Old Alamo Road)
CLIENT: Hidalgo County

EXHIBIT C
WORK SCHEDULE

8/20/2012

TASK AND DESCRIPTION	FIRM	2011			2012												2013												
		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
Work Authorization No. 1																													
Project Planning																													
Obtain Right of Entry (Surveying)	RODS																												
Existing Right-Of-Way Layout	RODS																												
Hydrologic Map	L&G																												
Utility Coordination	L&G																												
Coordination with Irrigation District	L&G																												
Schematic & Environmental Doc Development																													
Develop Schematic with Outfalls	L&G																												
Meet w/TxDOT & Revise Schematic as per Comments	L&G																												
TxDOT & County approves Schematic	TxDOT																												
Meet with Affected Property Owners (Limited PI)	L&G																												
Prepare Re-Evaluation Document	L&G																												
Submit Final Draft Document	L&G																												
Agency Review & Revisions	TxDOT																												
Approval by TxDOT/FHWA - FONSI	TxDOT																												
ROW Mapping (Approx. 15 Parcels)																													
Develop ROW Map, Parcel Sketches & Field Notes	RODS																												
TxDOT Review	TxDOT																												
Revisions as per TXDOT Comments	L&G																												
TxDOT Approve ROW Map	TxDOT																												
ROW Acquisition (Approx. 15 Parcels)																													
Project Administration	L&G																												
Coordination with County and TxDOT	L&G																												
Title Commitments	L&G																												
Appraisal Reports	L&G																												
Appraisal Review Reports	L&G																												
Appraisal Update Reports	L&G																												
Approved Values by TxDOT	TxDOT																												
Acquisition Negotiation Offers	L&G																												
Title Curative Process	L&G																												
Title Commitment Updates	L&G																												
Payments for Parcels	L&G																												
L&G Condemnation Support Process	L&G																												
Eminent Domain Proceedings by County	County																												
Title Insurance Policies	L&G																												
Consummation of Outstanding Cases	L&G																												

L&G ENGNEERING TASK
TxDOT TASK
COUNTY TASK

NOTE: THIS SCHEDULE ASSUMES THAT A FULL RE-EVALUATION OF THE FONSI WILL NEED TO BE PERFORMED. IN ADDITION, THIS SCHEDULE ASSUMES THAT ROW ACQUISITION WILL NOT BEGIN UNTIL THE RE-EVALUATION IS COMPLETE DUE TO FUNDING.

REVISED EXHIBIT D-1

FM 1925 & NORTH ALAMO RD. EXTENSION PROJECT

ROADWAY PROJECT:	FM 1925 PROJECT		N. Alamo Rd. Realignment & Rev FM 1925 Alignment		
LIMITS: ...**PHASE I**	Kenyon East to FM 907		From FM 1925 North		
LIMITS: ... **PHASE II**	FM 907 East to FM 88		1/2 Mile to Connect at Existing Co. Rd.		
EXISTING ROADWAY SECTION:	40' -- Rural		New Location		
EXISTING ROW WIDTH:	80 Varies		New Location		
PROPOSED ROADWAY SECTION:	4-lane divided urban with Grade Separations (FM 907, Hid Loop, FM 493 &		Proposed 28 ft Rural Roadway		
PROPOSED ROW WIDTH:	Varies 120ft - 150ft		Varies Proposed 120ft		
ESTIMATED CONSTRUCTION COST **PHASE I**	**$4,000,000.00**				**$350,000.00**
ESTIMATED CONSTRUCTION COST **PHASE II ROADWAY FM1925**	$28,000,000.00				
ESTIMATED CONSTRUCTION COST **PHASE II COUNTY ROAD CONNECTIONS**	$6,000,000.00				
ESTIMATED CONSTRUCTION COST **PHASE II OVERPASSES (4 ESTIMATED)**	$35,000,000.00				
ESTIMATED CONSTRUCTION COST **PHASE II**	**$69,000,000.00**				
LENGTH: **PHASE I**	1 Miles		.5 Miles		
LENGTH: **PHASE II**	7 Miles				

ESTIMATED PROJECT COSTS	*STATE/MPO*	*LOCAL*	*STATE/MPO*	***Suppl. No. 1 to Work Auth. No. 1***
WORK AUTHORIZATION NO. 1 (Part I of Phase I)				
PHASE I - PLANNING & PUBLIC INVOLVEMENT				
Schematic **PHASE I**		$ 57,600.00		$ 5,040.00
Hydrological Map		$ 30,000.00		$ 5,000.00
Surveys for Schematic (Preliminary ROW Mapping, H&V Control) **PHASE I**		$ 20,000.00		$ 12,000.00
Coordiate Environmental Assessment with TxDOT **PHASE I**		$ 35,000.00		$ -
Suppl to Revise Env Doc Necessary for New Rev Scope of Phase I incl Realign of Alamo Rd				$ 50,000.00
Archeological Investigation				$ 10,000.00
Historical Research				$ 10,000.00
Limited Public Involvement for Environmental Assessment **PHASE I**		$ 20,000.00		$ -
SUB-TOTAL BUDGET FY 2012	$ -	**$ 162,600.00**		**$ 92,040.00**
PHASE I - DESIGN, ROW MAPPING & UTILITIES				
Compensible Utilities, Management Oversight (Est 2 Utilites on FM 1925 and 4 on N Alamo)	$ -	$ 22,500.00		$ 40,000.00
ROW Map (Estimated 15 Parcels for FM 1925) (Estimated 5 Parcels for Alamo Rd. Realignment)		$ 52,500.00		$ 25,000.00
SUB-TOTAL BUDGET FY 2012	$ -	**$ 75,000.00**		**$ 65,000.00**
PHASE I- ROW ACQUISTION				
Right-of-Way Costs - Acq.Services @ (est. 15 Parcels @ $12,800/Parcel Avg. for FM 1925 and 5 for North Alamo Rd)		$ 192,000.00		$ 64,000.00
Roadway Right-of-Way Costs - (40 ft. for 1 mile @ $3.00/sq ft)(STATE 98%)(LOCAL=2%) After "EDC" for FM 1925 (for N. Alamo Road Re-Alignment (120' x 2640' of New ROW))	$ 620,928.00	$ 12,672.00	$ 160,000.00	$ 40,000.00
Relocated Homes/Businesses	$ -	$ -		
Transmission line Adjustments and High Pressure Gas lines (STATE 98%)(LOCAL=2%)	$ -	$ -		
SUB-TOTAL BUDGET FY 2012	$ 620,928.00	**$ 204,672.00**		**$ 104,000.00**
TOTAL PART I OF PHASE I		**$ 442,272.00**		**$ 261,040.00**
WORK AUTHORIZATION NO. 2 (Part II of Phase I)				
PHASE I - DESIGN, ROW MAPPING & UTILITIES				
Field Surveys for Design and Construction		$ 40,000.00		$ 28,000.00
PS&E Development		$ 320,000.00		$ 28,000.00
Signal Design		$ 60,000.00		$ 12,000.00
Permitted Utilities Coordination	$ -	$ 22,500.00		$ 16,000.00
SUB-TOTAL	$ -	**$ 442,500.00**		**$ 84,000.00**
PHASE I - CONSTRUCTION				
ROADWAY CONSTRUCTION COST	$4,000,000.00		$ 350,000.00	$ 17,500.00
TxDOT Construction Inspection (11%)	$ 440,000.00			
L&G Construction Management		$ 56,000.00		$ 18,000.00
SUB-TOTAL	$ 4,440,000.00	**$ 56,000.00**		**$ 35,500.00**
TOTAL PART II OF PHASE I		**$ 498,500.00**		**$ 119,500.00**
SUB-TOTAL	**$5,060,928.00**	**$ 940,772.00**	**$ 510,000.00**	**$ 380,540.00**

Work Authorization No. 1 (Part I of Phase I)	**FY 12**	$ 429,600.00	**ISSUED**
Supplemental No.1 to Work Auth. No. 1	**FY 12**	$ 221,040.00	**NOT ISSUED**
Work Authorization No. 2 (Part II of Phase I)	**FY 12**	$ 600,500.00	**NOT ISSUED**

TOTAL ESTIMATED COUNTY COST: $ 1,321,312.00 19.17%

TOTAL ESTIMATED PROJECT COST: $6,892,240.00

State/Fed Estimated Cost

Local Estimated Cost

COUNTY COSTS NOT INCLUDED IN WORK AUTHORIZATIONS $ 70,172.00

8/20/2012