THE STATE OF TEXAS §
§
COUNTY OF HIDALGO §

SUPPLEMENTAL AGREEMENT NO. 1
TO WORK AUTHORIZATION NO. 3
TO AGREEMENT FOR PROFESSIONAL SERVICES
C-15-161-11-17

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 7th day of December 2015, concerning professional engineering services for the **"Veterans Boulevard (SH 495)** project from IH2 (US83) to La Homa (SH 364) hereinafter referred to as the "**Project**"; and,

WHEREAS, it has become necessary to amend the "Exhibit B" Scope of Services to be provided by the Engineer" of Work Authorization No. 3 as follows:

1. Remove "Signal Design/Sub" – FC 16250 and replace with "Roadway Design" – FC 16001
2. Amend scope of work to include jug handle widening along Abram Road and design/analysis of second outfall for drainage.

WHEREAS, it has become necessary to amend the "Exhibit D-1" Estimated Man-Hour Breakdown of Work Authorization No. 3to reflect the re-distribution of costs associated with the tasks required for said professional engineering services. This Supplemental does not increase or decrease this Work Authorization.

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 and EXHIBIT "D-1" – ESTIMATED MAN-HOUR BREAKDOWN, 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 _____, 2019.

THE ENGINEER:
ENGINEER

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

THE OWNER:
HIDALGO COUNTY

BY: _____
Richard Cortez, County Judge

LIST OF EXHIBITS:

EXHIBIT "A" - "Service to be provided by the County" - OMITTED

EXHIBIT "B" - "Services to be provided by Engineer"

EXHIBIT "C" – "Work Schedule"

EXHIBIT "D-1" – "Estimated Man-Hour Breakdown"

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
CONTROL:	CSJ: 0865-01-108
PROJECT/DESCRIPTION:	Jug handle widening along Abram Rd., Design/Analysis of second outfall for drainage
LENGTH:	2000-ft
HIGHWAY:	Veterans Blvd.
LIMITS:	From Veterans Blvd. to Mission Lateral

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.

LPA shall mean Hidalgo County.

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

SECTION 7 - ROADWAY DESIGN CONTROLS
(Function Code 160)

Services Provided By: ENGINEER	LPA	
		1. Geometric Design
N/A	___	a. Horizontal and Vertical Alignment (Preliminary based on office surveys)
N/A	___	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) A complete explanation of the sequence and methods of stage construction, if proposed, including the initial and ultimate proposed treatment of crossovers and ramps.
		(5) The tentative ROW limits.
		(a) Provide a roadway Design System (RDS) or (GEOPAK) computer tape of the preliminary earthwork to verify ROW requirements.
		(b) Provide a graphics file containing the approved schematic.
		(6) The geometric (pavement cross slopes, lane and shoulder widths, slope rates for fills and cuts) of the typical sections of proposed highway main lanes, ramps, frontage roads, and cross roads.
		(7) The current and projected traffic volumes as provided by the TxDOT (20 year traffic projection, unless otherwise determined by the District Engineer).
		(8) The control of access lines if Interstate or designated under House Bill 179.
		(9) Direction of traffic flow on all roadways.
		(10) Location and width of median openings for highway without access control.
		(11) The geometric of speed change (acceleration, deceleration, climbing) lanes.
N/A	___	2. General Guidelines for Project Development
		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. An uncontrolled aerial mosaic will be provided for this use. 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 arterial highway projects on new locations and for all multi-lane highway projects. **No geometric design is to be performed until the COUNTY has 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.

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

Services Provided By: ENGINEER	LPA	
N/A	___	2. General Guidelines for Project Development *(continued)*
		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 a project tape that is 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.**
N/A	___	3. Exhibit for Airway/Highway Clearance Permits
		4. Grading Design
N/A	___	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 super elevation rate.
YES	___	b. Typical Sections
N/A	___	c. Design Cross Sections
YES	___	d. Determine Cut and Fill Quantities
N/A	___	e. Slope Stability Analysis
N/A	___	f. Embankment Foundation Stability Analysis
N/A	___	g. Embankment Settlement Analysis
		5. Pavement Design
N/A	___	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. The Flexible Pavement Design Manual for flexible pavement, "Appendix F" of the Design Division, Operations and Procedures Manual, and the current AASHTO Guide for the Design of Pavement Structures, may be used for this purpose.
N/A	___	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 (Show cost estimate with Function Code 110)
N/A	___	(a) Along center line
N/A	___	(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)

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

Services Provided By: ENGINEER	LPA	
		5. Pavement Design *(continued)*
		c. Embankment and Subgrade *(continued)*
N/A	___	(2) Identify,interpret and summarize geologic features that affect engineering design (PI, Sulfate content, % of lime)
N/A	___	d. Traffic Data for Pavement Design by STATE
N/A	___	e. Basic Design Criteria
N/A	___	f. Life Cycle Cost Analysis(es)
N/A	___	g. Cost Data
N/A	___	h. Pavement Material Properties
N/A	___	i. Rehabilitation Investigations
N/A	___	(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.

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

SECTION 8 - DRAINAGE
(Function Code 161)

Services Provided By: ENGINEER	LPA	
		All hydraulic design shall be in accordance with the TxDOT's Hydraulic Manual, except where variances are permitted in writing by the LPA.
		1. Hydrologic Studies, Discharges
N/A	___	a. Hydrologic Map showing drainage areas, contours and drainage Q's.
N/A	___	b. Drainage area maps showing existing conditions and proposed improvements.
N/A	___	c. Hydrologic data/discharge determination
		2. Hydraulic Drainage Study and Documentation
		a. Hydraulic computations
N/A	___	(1) Storm water detention available within the ROW (linear ft. along side drain ditch).
N/A	___	(2) Storm water detention required outside the ROW (as per HCDD#1)
N/A	___	(3) Culverts
N/A	___	(4) Bridge waterways
N/A	___	(5) Channels
YES	___	(6) Storm sewers/inlets
N/A	___	(7) Pump stations
N/A	___	(8) Storm Water Management facilities
N/A	___	(9) Other
		(a) Irrigation Canals/Siphons
N/A	___	b. Hydraulic report(s)
N/A	___	c. Federal Emergency Management Agency (FEMA) floodway requirements
YES	___	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
		3. Layout, Structural Design and Detailing of Drainage Features
		a. Culverts
N/A	___	(1) New culverts
N/A	___	(2) Culvert widening and/or lengthening
N/A	___	(3) Culvert replacements
		b. Storm sewers
YES	___	(1) New storm sewers
YES	___	(2) Modify existing storm sewers
YES	___	(3) Inlets
YES	___	(4) Manholes
YES	___	(5) Trunk lines
N/A	___	c. Pump stations
N/A	___	d. Subsurface drainage at retaining walls
N/A	___	e. Outfall channel(s) within the ROW
N/A	___	f. Outfall channel(s) outside the ROW
N/A	___	g. Detention Pond(s) within the ROW
N/A	___	h. Detention Pond(s) outside the ROW
YES	___	i. Summary of Quantities
YES	___	j. Storm Water Management facilities
YES	___	4. Storm Water Pollution Prevention Plan (SW3P)
N/A	___	5. Scour Evaluation - Waterway Structures only (to be completed by Bridge Engineer under FC 170.

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

SECTION 9 - SIGNING, MARKINGS AND SIGNALIZATION

(Function Code 162)

Services Provided By: ENGINEER	LPA	
YES	___	1. Signing and Markings Layout a. Requirements (Separate Layout) (1) Roadway layout (2) Center line with station numbering (3) ROW lines (4) Culverts and other structures that present a hazard to traffic (5) Location of utilities, if not shown on plan and profile (6) Existing signs to remain, to be removed, to be relocated (7) Proposed signs (illustrated and numbered) (8) Existing overhead sign bridges to remain, to be revised, removed or relocated (9) Proposed overhead sign bridges indicating location by plan layout (electrical details need not be shown on this layout) (10) Proposed markings (illustrated and quantified) which include pavement markings, object markings and delineation (12) Quantities of existing pavement markings to be removed (13) Proposed delineators and object markers b. For projects involving freeway to freeway or other types of directional interchanges, projects including left-hand ramps or connections, the following information must be provided: (1) The location of interchanges, main lanes, grade separations, frontage roads and ramps (2) complete explanation of the sequence and methods of stage construction, where applicable, which would include the initial and ultimate proposed treatment of crossovers and ramps (3) The number of lanes in each section of proposed highway and the location of changes in numbers of lanes (4) The projected traffic volumes as provided by the STATE (20 year traffic projection, unless otherwise determined by the District Engineer) (5) Tentative ROW limits (6) Direction of traffic flow on all roadways (7) Main lane, ramp, frontage road, and necessary cross road profiles at proposed interchanges or grade separations
YES	___	2. Summary of Small Signs Tabulation
N/A	___	3. Summary of Large Signs Tabulation including all Guide Signs
N/A	___	4. Sign Detail Sheets a. All signs except route markers b. Design details for large guide signs c. Dimensions of letters, shields, borders, corner radii etc. d. Designation of shields attached to guide signs e. Designation of arrow used on exit direction signs

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

Services Provided By: ENGINEER	LPA	
		5. Traffic Signals
		a. Development of Justification (Warrant) Data
N/A	___	(1) Location Map Relationship of proposed installation to other traffic signals, highways, business areas and traffic generators
N/A	___	(2) Photographs as appropriate
N/A	___	(3) Accident data as appropriate
		(4) Vehicle volumes (provided by TxDOT)
N/A	___	(a) Existing
N/A	___	(b) Estimated
N/A	___	(c) Projected
N/A	___	(d) Pedestrian
N/A	___	(5) Traffic Survey - Count Analysis
N/A	___	(6) Recommendation based on above data
N/A	___	b. Layout
		(1) Title Sheet (when applicable)
		(a) Describe the location
		(b) Type of installation
		(c) Area map with project limits for each location
		(d) Index of sheets
		(e) Space for official signatures
		(2) Estimate and quantity sheet (when applicable)
		(a) List of all bid items
		(b) Bid item quantities
		(c) Specification item number
		(d) Paid item description and unit of measure
		(3) Basis of estimate sheet (list of materials)
		(4) General notes and specification data sheet
		(5) Condition diagram
		(a) Highway and intersection design features
		(b) Roadside development
		(c) Traffic control including illumination
		(6) Plan sheet(s)
		(a) Existing traffic control that will remain (signs and markings)
		(b) Existing utilities
		(c) Proposed highway improvements
		(d) Proposed installation
		(e) Proposed additional traffic controls
		(f) When applicable, proposed conduit for Railroad interconnect with standard details for runs under tracks.
		(g) Proposed illumination attached to signal poles.
		(7) Notes for plan layout
		(8) Elevation sheet(s) (span wire design)
		(9) Phase sequence diagram(s)
		(a) Signal locations
		(b) Signal indications
		(c) Phase diagram
		(d) Signal sequence table
		(e) Flashing operation (normal and emergency)
		(f) Preemption operation (when applicable)
		(g) Interval timing, cycle length and offset

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

Services Provided By: ENGINEER	LPA	
		5. Traffic Signals *(continued)*
N/A	___	b. Layout *(continued)*
		(10) Construction detail sheets(s)
		(a) Poles (TxDOT standard sheets)
		(b) Detectors
		(c) Pull Box and conduit layout
		(d) Controller Foundation standard sheet
		(11) Marking details (when applicable)
		(12) Barricade and warning sign standard sheet and any special details for work zone traffic control for special conditions
		(13) Aerial or underground interconnect details (when applicable)
		c. General Requirements
		(1) Contact local utility company
N/A	___	(a) Confirm power source
N/A	___	(b) Discuss route of aerial or underground interconnect cable (when applicable)
N/A	___	(c) Adjustment of overhead utility lines
N/A	___	(2) Prepare governing specifications and special provisions list
N/A	___	(3) Prepare project estimate
N/A	___	d. Summary of Quantities

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

ADDITIONAL RESONSIBILITIES

Easements, Letters of Permission, Etc.

The ENGINEER shall be responsible for delineating easements. The ENGINEER will be responsible for securing the necessary legal instruments.

Coordination of Utilities

The ENGINEER shall furnish the LPA prints of a project layout which will be distributed by ENGINEER to various utility companies to determine which utilities are in the limits of the project. These shall be preliminary layouts. Upon completion of the preliminary drainage plans and U&D sheets, the ENGINEER shall distribute to the various utility companies and request return. Upon return of these prints, the ENGINEER will schedule a meeting with the various utility companies to discuss potential conflicts and conformance with the State's Utility Accommodation Policy. The ENGINEER is responsible for coordination with the various utility companies for exposing potential conflicts and field ties to uncover utilities in potential conflict areas.

Meetings

Meetings will be held with the FHWA, State Officials, local governments, property owners, utility owners, railroad companies, other consulting firms, etc., as needed or required by the LPA. The ENGINEER shall coordinate through the LPA for the development of this project with any local entity having jurisdiction or interest in the project (i.e., city, county, etc).

Specifications, Special Provisions, Special Specifications

Use the State's standard specifications or previously approved special provisions and/or special specifications. If a special provision and/or special specification is developed for this project, it shall be in the State's format and incorporate references to approved State test procedures.

Project Manager/Engineer Communication

The ENGINEER shall designate one Texas Registered Professional Engineer to be responsible throughout the project for project management and all communications, including billing, with the LPA's Director. Any replacements to the ENGINEER's designated Project Manager/Engineer must be approved by the LPA.

Engineering documents produced for the department's engineering projects shall be signed, sealed and dated or CADD sealed in accordance with Administrative Order No. 5-89 and Administrative Circular No. 26-91.

Design Responsibilities

The ENGINEER is responsible for design errors and/or omissions that become evident before, during or after construction of the project. The ENGINEER's responsibility for all questions arising from design errors and/or omissions will be determined by the LPA and all decisions shall be final and binding. This would include, but not necessarily be limited to:

1. All design errors and/or omissions resulting in additional design work to correct the errors and/or omissions.
2. Preparation of design documents and detail drawings necessary for a field change due to design errors and/or omissions.
3. Revision of original tracings to the extent required for a field change due to design errors and/or omissions.

The ENGINEER shall promptly make necessary revisions or corrections resulting from the ENGINEER's errors, omissions or negligent acts without additional compensation. Acceptance of the work by the LPA will not relieve the ENGINEER of the responsibility for subsequent correction of any such errors or omissions or for clarification of any ambiguities.

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

Document and Information Exchange

Data, Plan Sheets, General Notes and/or Specifications provided to the LPA shall be furnished on 8GB USB flash drives. Each 8 GB flash drive shall have a file titled Table of Contents. The Table of Contents shall indicate the locations of files within the directory structure of the documentation.

General Notes and specifications shall be provided in MS Office 2007 format. Plan sheets shall be provided in Microstation DGN or GEOPAK GPK format. PDF copies of plan sheets shall also be provided.

Two copies of the documentation shall be provided to the LPA.

If required, the ENGINEER shall provide to the LPA, a CD that contains all the plan sheets for the project. The graphics tape shall be compatible with the LPA's computer system.

CD Tape Required (YES or NO): YES

Proposal Time

The time indicated in the proposal and the contract shall include time necessary for reviews, approval, etc.

Office Location

The ENGINEER will perform the services to be provided under this agreement out of their office or offices listed below:

Service	Office Location
Right-of-Way Acquisition	Mission Office
Construction Management	Mission Office

The work effort will be managed out of the Mercedes (City)

office located at 2100 West Expressway 83 (Address),

Mercedes (City), Texas (State).

APPENDIX A - PLAN SHEET SEQUENCE PROCEDURE

1. Title Sheet
   Detailed Index of Sheets

2. Typical Sections

3. General Notes and Specifications Data

4. Estimate and Quantity Sheets

5. Storm Water Pollution Prevention Plan (SW3P) Sheets

6. Traffic Control Plans
   a. Sequence of Construction Layouts
   b. Detour Plan/Profile/Typical Sections/Quantities

7. Roadway Layouts
   a. Roadway Plan/Profile Sheets
   b. Intersection Plan/Profile Sheets
   c. Intersection Layouts
   d. Alignment Layouts/Data
   e. Ramp Layouts/Profiles
   f. Connection Roads/U-turns Layouts/Profile

8. Roadway Details
   a. Concrete Pavement Details/Standards
   b. Concrete Pavement Terminal Anchorage Details/Standards
   c. Bridge Approach Details/Standards
   d. Bridge Terminal Anchorage Details/Standards
   e. Roadway/Median Barrier Details/Standards
   f. Curb Details
   g. Driveway Details/Typical Sections/Standards

9. Signing Layouts and Marking Layouts

10. Traffic Signal Layouts

11. Lighting Layouts

12. Illumination Detail Standards (HMID, HMIF, HMIP, RID)

13. Utility Layouts/Profiles

14. Drainage Area Maps and Hydraulic Data
   a. General Drainage Area Maps
   b. Stage-Discharge Curves
   c. Main Cross-Drainage Culvert/Bridge Hydraulic Data
   d. Drainage Area Maps/Culverts/Storm Sewer
   e. Hydraulic Data/Culverts/Inlets/Storm Sewer/Pumps

15. Detailed Drainage Plans
   a. Drainage Plan/Profile Sheets (Storm Sewer Plan/Profile Sheets)
   b. Channel Plan/Profiles/Typical Sections
   c. Box Culvert Plan/Profile
   d. Pipe Sewer/Culvert Cross Sections

APPENDIX A - PLAN SHEET SEQUENCE PROCEDURE (Continued)

16. Drainage Structural Details/Standards
    a. Inlet Details/Standards
    b. Manhole Details/Standards
    c. Junction Box Details/Standards
    d. Safety End Treatment Details/Standards
    e. Box Culvert Details/Standards
    f. Culvert Wingwall Details/Standards
    g. Excavation-Backfill Diaphrams
    h. Riprap Details/Standards
    i. Temporary Pollution and Erosion Control Details

17. Pumphouse Layouts

18. Pumphouse Details

19. Pumphouse Standard Details

20. Bridge Layouts/Profile/Typical Sections*

21. Bridge Details*
    a. Summary of Bridge Quantities
    b. Abutments
    c. Interior Bents
    d. Spans
    e. Special details for the specific bridge

22. Bridge Standard Details*

23. Bridge Railing Standards

24. Retaining Wall Layouts/Profiles**

25. Retaining Wall Details**

26. Retaining Wall Standard Details**

27. Guard Fence/Standards and Signal Pole Standards

28. Signal/Electrical Details/Standards and Signal Pole Standards

29. Signing/Markers/Striping Details/Standards

30. Barricade/Construction/Beacon Standards

31. Miscellaneous Standards
    a. Chain Link Fence Standards
    b. Bridge End Detail/Standards
    c. Roadway Clearance Details/Standards
    e. Attenuator Standards

NOTE: Variations of these plan sheet sequence guidelines may be permitted if approved in writing by the LPA.

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

APPENDIX B - PLAN PREPARATION PROCEDURES

1. Title Sheet
   The ENGINEER shall be responsible for completing the title sheet as required and formatted by the STATE and as discussed in Part V of the Highway Design, Operations and Procedures Manual. Refer to Section K - Plans, 1 - Title Sheets, page 5-24, for the procedure to be used regarding all plans prepared by the ENGINEER.

2. Project Layout
   The project layout shall clearly depict the entire project as it is proposed and will usually be drawn at a scale of 1 inch=100 feet or 1 inch=200 feet, depending on the size of the project.

3. Typical Sections
   See Part IV of the Highway Design, Operations and Procedures Manual.

4. Sequence of Work Sheets (Traffic Control Plan)
   Clarity and completeness should be the rule to follow in preparing these sheets, with particular attention given to location of construction signs and barricades, lane widths, protection of drop offs, etc. For a reference guide use the Texas Department of Transportation, Texas Manual on Uniform Traffic Control Devices. Usual scale of 1 inch=100 feet and/or 1 inch=50 feet for special locations. A narrative sequence shall be included in the special provisions for the project. Staging of structural elements shall be considered. Provisions for drainage shall be considered, included and indicated during all stages of construction operations.

5. Removal Item Sheets
   These sheets indicate removal of existing facilities necessary to the proposed construction. (1 inch=40 feet) (use same scale as plan/profile sheets).

6. Summary Sheets
   Summary Sheets are required to indicate type, quantity and/or location of work for individual items of the proposed project.

7. Alignment Layout Sheets
   These sheets indicate the horizontal alignment with curve data and coordinates usually tabulated thereon. On some projects, depending on size, this information may be included on the plan profile sheets. Usual scale (1 inch=100 feet) or (1 inch=40 feet).

8. Plan Profile Sheet
   Clarity and completeness should be the rule to follow in preparation of these sheets. Usual scale (1 inch=40 feet or 1 inch=50 feet) or (1 inch=20 feet), depending on project complexity.

9. Drainage Area Maps
   Usual scale (1 inch=100 feet) and/or (1 inch=200 feet) supplemented by large scale area maps as necessary.

10. Drainage Plan Profile Sheets
    These sheets may be required on some projects to clearly depict location of inlets, storm sewer lines, and profile of storm sewer lines and laterals. Usual scale (1 inch=40 feet or 1 inch=50 feet) or (1 inch=20 feet). Storm sewer design does include redesign of storm sewers imposed by utility constraints developing after initial reviews by the STATE and consequential redesign and adjustments.

11. Runoff, Inlet, Storm Sewer and Culvert Sheets
    Use standard sheets.

APPENDIX B - PLAN PREPARATION PROCEDURES (Continued)

12. Culvert Cross Sections and Details
District standard reproducible sheets can be furnished (one each) to the ENGINEER for modification of special designs.

13. Manhole and Inlet Details
District standard reproducible sheets can be furnished (one each) to the ENGINEER.

14. Miscellaneous Detail
Curb, Sidewalk, Driveways, etc.

15. Intersection Details

16. Marking Layouts and/or Details
Layouts of the entire project with markings depicted thereon. Usual scale 1:500 (1 inch=40 feet or 1 inch=50 feet). On some projects typical details might suffice.

17. Structural Details
Bridge layout sheets shall have the same horizontal and vertical scale. Usually (1 inch = 10 feet) (1 inch = 20 feet). Sections of existing and proposed structures usually have a scale of (1 inch = 5 feet). Elements of the bridge (abutments, bents, slabs, etc.) shall be detailed to a (1/2 inch = 1 foot) or (1/4 inch equals 1 foot) architect scale to provide clear legible drawings when reduced. Letters shall be a minimum size of 4 millimeters (5/32 inch) height for hand lettering and 140 for lettering by computer-aided design and drafting (CADD).

18. Overhead Sign Bridge Layouts
A maximum of four structures may be shown on each layout sheet. The reference to the appropriate overhead sign bridge (OSB) standard and the following requirements shall be shown on the layout:
(1) Drilled shaft size and length
(2) Soil strength used for design {indicate basis and boring(s) used}
(3) Design height
(4) Tower height
(5) Leg spacings and
(6) Design wind speed.
The wind speed design map need not be included in the project plans. Designation of tower member size and anchor bolt size shall not be shown. For OSBs which require special design, the design shall be in accordance with the AASHTO sign specifications (see Item 22 of References on page 49) and to the same loading requirements as for normal standard structures. Structures (special or standard) which will have changeable message signs shall be analyzed by the ENGINEER.

APPENDIX C - GENERAL PLAN CHECKLIST

Services Provided By: ENGINEER	LPA	
N/A	___	Title Sheet
N/A	___	Project Layout
YES	___	Sequence of Work
N/A	___	Detour Layouts & Profiles
N/A	___	Construction Pavement Markings
YES	___	Signing & Barricades
N/A	___	Construction Sign & Beacons
YES	___	Typical Sections
N/A	___	Shaping & Finishing Sections
N/A	___	Slopes Adjacent to Shoulders
YES	___	Estimate & Quantities
YES	___	General Notes & Specification Data
N/A	___	Grading Summary
N/A	___	Miscellaneous Summaries (See following "SUMMARIES" heading)
N/A	___	Horizontal Curve Data & Alignment Layouts
YES	___	Drainage Summaries
N/A	___	Structure Summaries
YES	___	Erosion Control Summary & Details
N/A	___	Plan/Profile Sheets
N/A	___	Erosion Control Summary & Details
N/A	___	Pavement Contours
N/A	___	Superelevation Transition (If Required)
N/A	___	Grading Contours
N/A	___	Guard Fence Layouts
YES	___	Storm Water Pollution Prevention Plans (SW3P)
YES	___	Drainage Area Maps
YES	___	Hydraulic Data
YES	___	Drainage Sheets
N/A	___	Bridge Hydrology Sheets
YES	___	Inlet & Manhole Details
N/A	___	Utility Support Details
N/A	___	Culvert Cross Sections & Details
N/A	___	Special Culvert Designs
N/A	___	Special Drainage Details
N/A	___	Chain Link Fence Locations
N/A	___	Ramp Details Sheet
YES	___	Removal Item Sheet - Including detours (Shown in detour summary, No payment for removal; subsidiary to construction detours)
N/A	___	Pavement Details
N/A	___	Pavement Standard Modification for Concrete Shoulder
N/A	___	Concrete Pavement Continuously Reinforced (CPCR)
N/A	___	Concrete Pavement Contraction Design (CPCD)
N/A	___	Concrete Pavement Details - Jointed Reinforced (Steel Bars) (CPJR)
N/A	___	Bridge Approach Slab Details
N/A	___	Vehicle Attenuator Details
N/A	___	Miscellaneous Details
N/A	___	Wheelchair Ramps
N/A	___	Pavement Marking Details
N/A	___	Modified Standards
N/A	___	List of Standards
N/A	___	Permanent Signing Plans & Quantities

APPENDIX C - GENERAL PLAN CHECKLIST *(continued)*

Services Provided By: ENGINEER	LPA	
N/A	___	Permanent Lighting Plans, Quantities & Standards
N/A	___	Bridge Layout(s)
N/A	___	Bridge Details
N/A	___	Retaining Wall Layout(s)
N/A	___	Retaining Wall Details
N/A	___	Pumphouse Details
N/A	___	Underdrain Details (Retaining Walls)
N/A	___	Culvert Standards
N/A	___	Soil Profile
N/A	___	Temporary Traffic Signals
N/A	___	Design Cross Sections
YES	___	Estimate
N/A	___	List of Standard Specification, Special Provisions & Special Specifications
N/A	___	Detour Special Provisions (If Required)
N/A	___	Construction Time Estimate
N/A	___	Critical Path Method (CPM)
N/A	___	Unit Price Documentation
Miscellaneous		
N/A	___	Conduit Requirements
N/A	___	Traffic signal Requirements
Summaries		**(ALL BELOW YES FOR ENGINEER AND NO FOR COUNTY UNLESS NOTED OTHERWISE)**
N/A	___	Salvaging and Placing Topsoil
N/A	___	Prepare ROW
N/A	___	Remove Old Structures
N/A	___	Scarify Existing Pavement
N/A	___	Remove Old Concrete Curb of Curb and Gutter (C&G)
N/A	___	Remove Old Concrete Pavement
N/A	___	Remove Old Concrete Riprap
N/A	___	Remove Metal Beam Guard Fence
N/A	___	Galvanized steel Beam Guard Fence (12Ga) (GSBGF)
N/A	___	Temporary Guard Fence (TEMPGF)
N/A	___	Summary of Concrete Flumes
N/A	___	Curbs
N/A	___	Adjust Manholes & Inlets
N/A	___	Underdrains
N/A	___	Base and Pavement
N/A	___	Large Structure
N/A	___	Concrete Riprap (RR8 & RR9)
N/A	___	Temporary Portable Concrete Barrier (PCBR)
N/A	___	Concrete Traffic Barrier
N/A	___	Vehicle Attenuator
N/A	___	Guard Rail Energy Absorbing Terminal (Great System)
N/A	___	Pavement Markings & Blast Cleaning (Thermoplastic)
N/A	___	Retaining Walls
N/A	___	Large Structure Summaries
N/A	___	Small Structure Summaries

APPENDIX C - GENERAL PLAN CHECKLIST *(continued)*

Services Provided By: ENGINEER	LPA	**Summaries**	**(ALL BELOW YES FOR ENGINEER AND NO FOR COUNTY UNLESS NOTED OTHERWISE)**
N/A	___		Earthwork (Roadway & Channel) & Channel Details
N/A	___		Culverts
N/A	___		Detours
N/A	___		Seeding or Mulch Sod - Quantity Only
N/A	___		Inlet & Manholes
N/A	___		Sidewalks
N/A	___		Construction Pavement Markings
N/A	___		Driveways
N/A	___		Concrete Median
N/A	___		Storm Sewers
N/A	___		Head Walls & Safety End Treatments
N/A	___		Curb Openings
N/A	___		Manholes
N/A	___		Chain Link Fence, Remove & Replace Chain Link Fence
N/A	___		Remove & Relay Reinforced Concrete Pipe (RCP) or Pipe Sewer

Client: Hidalgo County Pct #3

Exhibit "C"
Work Schedule

Veterans Blvd. (SH 495)

From: La Homa Rd. (SH 364) To: IH-2 (US 83 Expressway)

TASK AND DESCRIPTION	FIRM	2015	2016	2017	2018 JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	2019 JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	2020 JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Phase I: EA, Public Involvement, Schematic																																							
Public Involvement																																							
Develop Alternatives & Matrix	L&G																																						
Advertise & Conduct Public Meeting	L&G																																						
Select TPA	L&G																																						
Advertise & Conduct Public Hearing	L&G																																						
Schematic																																							
Develop Schematic & Submit Schematic	L&G																																						
Hydrologic Map	L&G																																						
TxDOT Review & Revisions	TxDOT																																						
TxDOT Schematic Approval	TxDOT																																						
Environmental Document																																							
Draft Environmental Document (Process Technical Reports)	L&G																																						
Submit Final Draft Document (Administratively Comp. Doc.)	L&G																																						
Agency Review & Revisions	TxDOT																																						
Environmental Decision	TxDOT																																						
Phase II: PS&E & Construction Oversight																																							
PS&E																																							
Design Survey	L&G																																						
Permitted Utility Coordination	L&G																																						
Outfall Coordination with HCDD #1	L&G																																						
30% PS&E Completion	L&G																																						
60% PS&E Completion	L&G																																						
90% PS&E Completion	L&G																																						
95% PS&E Completion	L&G																																						
100% Final Submittal	L&G																																						
TxDOT Review & Revisions (30%,60%,90%,95%)	TxDOT																												60%				90%			95%				
TxDOT Plan Set Approval	TxDOT																																						
Const Oversight																																							
Let Project (FY 2022)	TxDOT																																						
Construction Duration (18 months)	TxDOT																																						
Construction Management (18 months)	L&G																																						
Phase III: ROW Map & Acquisition																																							
ROW Map																																							
Prepare ROW Map	L&G																																						
TxDOT/County Internal Review	TxDOT/County																																						
ROW Acquisition (Est. 84 Parcels)																																							
ROW Release (Dependent on Availability of Funds)	TxDOT																																						
Project Administration	L&G																																						
Compensable Utility Oversight	L&G																																						
Coordination with County & 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/County	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																																						
Consumation of Outstanding Cases	L&G																																						

L&G FUNCTION
ENVIRONMENTAL ASSESSMENT WORK
TXDOT FUNCTION
HIDALGO COUNTY FUNCTION

EXHIBIT D-1

ESTIMATED MAN-HOUR BREAKDOWN

VETERANS BOULEVARD PROJECT
(from IH2-US83 to La Homa Road (SH 364))

		MANHOURS										
		Senior Project Manager	Senior Engineer	Senior Environmental Scientist /Specialist	Project Engineer	Senior Engineer Tech	CADD Operator / GIS Analyst	Admin / Clerical	TOTAL HOURS	Sub-Contract Amounts	Right-of-Way Acquisition Cost	TOTAL LINE ITEM COST
CONTRACT RATE		211.40	175.16	147.98	129.86	96.64	66.44	60.40				
WORK AUTHORIZATION NO. 3												
PHASE III - ROW ACQUISITION, COMP. UTILITY MANAGEMENT, CONSTRUCTION MANAGEMENT												
1	Additional 3 Signal Designs, 3 Flashing Beacons and 5 Signal Warrants - SUB (See D-1 Page 3-4 of 5								-	$ (122,000.00)		$ (122,000.00)
2	Roadway Design	54.00	153.50		299.50	223.50	322.00	30.00	1,082.50			$ 122,000.45
SUB-TOTAL		**54**	**153.5**	**0**	**299.5**	**223.5**	**322**	**30**	**1082.5**	**$ (122,000.00)**	**$ -**	**$ 0.45**

Sub-Total Manhours Fee with Subconsultant Fee:	$ 0.45
*** TOTAL PROJECT FEE:**	**$ 0.00**

*Rounded Figure