Texas Department of Transportation

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May 22, 2013

A.C. Cuellar Jr.
Hidalgo County Commissioner, Pct. 1
1902 Joe Stephens Avenue
Weslaco, Texas 78596

District: Pharr
County: Hidalgo
Subject: Work Authorization Number Two (WA#2) Scope of Work and Fee Proposal
CSJ: 0921-02-168
Limits: Mile 9 North to Mile 11 North

Commissioner Cuellar:

We have finalized negotiations with TEDSI regarding Work Authorization (WA) #2 for the Mile 6 West Project. The work authorization addresses the change in scope of work from rural to urban for the section of Mile 6 West from Mile 9 to Mile 11. The two mile section will consist of an 82 foot face to face section that will match the adjacent Westgate section from US 83 to Mile 9. We concur with the negotiated fee of $407,281.98 for WA#2.

If you or your staff have any questions on this project, please contact our project manager Jesus Noriega, P.E., at (956)702-6264.

Sincerely,

Homero Bazan Jr., P.E.

Homero Bazan, Jr., P.E.
Director of Transportation Planning and Development
Pharr District

Cc:
Honorable Miguel D. Wise, Mayor City of Weslaco
Mr. Leonardo Olivares, City Manager, City of Weslaco
Mr. Sergio Cruz, Hidalgo County Budget Officer
Mario Jorge, P.E., Pharr District Engineer
File

WORK AUTHORIZATION NO. 2
MILE 6 WEST ROAD
MILE 11 NORTH to MILE 9 NORTH
ATTACHMENT "B"

Scope of Services to be Provided by the Engineer

CSJ:	0921-02-168
Highway:	Mile 6 West Road
County:	Hidalgo
Limits:	From Mile 11 North south to Mile 9 North
Project Length:	2.0 miles
Area Office:	Pharr Area Office

Project Description
Reconstruct and Widen Roadway

Existing Conditions
The existing 36-foot paved two-lane roadway with center turn lane

Proposed Improvements will consist of constructing a paved urban roadway consisting of an 82 foot face to face of curb. The roadway section will consist of four 12-foot travel lanes, one 14-continuous left turn lane, two 10- foot shoulders and 6-foot sidewalks on both sides. A storm sewer system will be provided for drainage within the above limits. In addition a temporary detour shall be constructed to provide continuous two way traffic at all times.

Work will be limited to the modifications of schematic, hydraulics report and preliminary engineering report previously developed for the rural section completed under Work Authorization No. 1 from SH-107 south to Mile 9 North. Additional topographic survey will be required to document changes within the proposed project area. No revisions to right of way will be required.

GENERAL MANAGEMENT/COORDINATION

1) The Engineer shall design, develop and prepare all documents in English units.
2) The Engineer shall develop/submit a work schedule with milestone activities and/or deliverables identified.
3) The Engineer shall utilize Microstation computer graphics system. Roadway design for the route study will be developed in GEOPAK.
4) The Engineer shall be required to meet with designated County's representatives, utility companies, adjacent and affected landowners as required for coordination during the development of the project.
5) The Engineer shall be required to prepare the minutes for any meeting as required for documentation purpose.
6) Right of Entry: It will be the responsibility of the Engineer to secure permission, short of litigation, to enter private property for purposes of survey, environmental and engineering investigations. The Engineer will, at all times, contact the property owner prior to any entry onto the owner's property.
7) The Engineer shall perform quality control and assurance (QC/QA) on all deliverables associated with this project.
8) The Project Manager will continually review the quality, progress and cost of the various tasks assigned to all firms within the team. Quality review will include technical requirements.

ROUTE AND DESIGN STUDIES

1) Develop and assemble Preliminary Construction Cost Estimates.
2) Develop Roadway Design Criteria; prepare the Design Summary Report.
3) Attend and participate in the Design Concept Conference.
4) Design Schematic
   a) Revise previously developed schematic to provide curb and gutter for a 82 foot face to face section.
   b) Revise schematic to incorporate TxDOT's comments
5) Revised previously developed Preliminary Engineering Report.
6) Use TxDOT provided traffic data, flexible pavement design report to be completed by Engineer.
7) Prepare exhibits for public meeting to be held to present the new curb and gutter typical section.

8) Identify existing right of way limits and locate all major utilities within the study limits.
9) Develop storm sewer system for the proposed typical section. Identify one new outfall between Mile 10 North and Mile 11 North to outfall to the west to the existing North Weslaco Lateral owned by HCDD#1.
10) The ENGINEER will provide an Engineering Summary Report outlining the various design alternatives considered with reasons for selection of the preferred alternative. All of the engineering analysis and methodology used in determining the preferred alternative will be documented in the report.
11) Development of level of service analysis, turning movement counts or traffic counts are not included in scope.

FIELD SURVEYING

1) Work shall assure compliance and adherence to all rules, regulations and policies as set forth by the Texas Board of Professional Land Surveyors.
2) The Engineer shall provide all traffic control, labor and equipment for the Traffic Control Plan (TCP) while performing services under this work authorization. The Engineer's Surveyor shall comply with the regulations of the most recent edition of the "Texas Manual on Uniform Traffic Control Devices".
3) Topographic Survey (All work will be to 10 foot outside of the proposed ROW)
   a) Update Inventory public access, commercial, and private driveways by type (dirt, caliche, gravel, concrete or paved).
   b) Update Side Drains
      i) Obtain approximate roadway centerline station.
      ii) Obtain size, length, description of structure, and conditions.
      iii) Obtain F.L. elevations at both ends and offsets to driveway or turnout centerline.
      iv) Label descriptions (size and length) on each side drain.
4) Update Fence, Mailboxes, and Sign Inventory:
   a) Locate and obtain mailboxes inventory (type-identify as single, double or multiple) for all mailboxes within R.O.W. and at all intersection locations. Include photographs.
   b) Locate and obtain sign inventory (type) for all signs within R.O.W. and at all intersection locations Include pictures.
5) Miscellaneous
   a) This item requires the surveyor to pick up any items that may be an obstruction for the proposed construction or may require special attention during the development of construction plans (ex: oil and gas on proposed right of way, etc.)
   b) ASCII files shall be provided to the State. These files shall be retrieved from GPS/Data Collector and shall be compatible with Microstation.
   c) Field books, containing all information gathered in the field, this information shall be to the surveyor's best knowledge, accurate and complete.
   d) Survey in miscellaneous items not indicated above that are within the existing and proposed right of way.

RIGHT OF WAY SURVEY

1) Update Utility (All work will be to 10 foot outside of the proposed ROW)
   a) The Engineer shall update information of utility work completed since 2009. If it is determined that modification to existing or new utility facilities has been completed since 2009 a supplemental agreement will be issued to cover the additional survey work.
   b) Subsurface Utility Engineering is not included in the scope of work.
2) Right of Way
   a) Review and updating of existing adjoining property and ownership information using Hidalgo County Clerks current publicly available records.
   b) Update current right of way Microstation file with
      i) Update adjoining property parcel lines
      ii) Update ownership information and mailing list
   c) Review and update parcel information
      i) Update parcel number based on changes from above
      ii) Update area of parcel based on changes from above
      iii) Update spreadsheets and schematic

ENVIRONMENTAL ASSESSMENT

1) Project Management and Coordination
   a) The Engineer will set up the project, direct and coordinate the various elements and activities associated with the updates of EA.
   b) The Engineer will provide ongoing quality assurance and quality control to ensure completeness of product and compliance with TxDOT procedures.
2) Update EA and Perform New Survey for Drainage Easements
   a) Environmental Investigations and Assessments - The EA report will document the economic, social, and environmental conditions and potential impacts of the proposed drainage easements for the project. These easements have not been environmentally cleared and warrant an assessment.
   b) Archeological Survey

   An archeological survey of the proposed drainage improvements will be performed to ensure compliance with the Antiquities Code of Texas and Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended. The investigation will be conducted to address the requirements of Section 106 of the National Historic Preservation Act of 1966, as amended, and the Antiquities Code of Texas. The scope of work and consultation for this project will follow the process of the First Amended Programmatic Agreement (PA 2005) among the Federal Highway Administration, TxDOT ENV, THC and the Advisory Council on Historic Preservation and the Memorandum of Understanding (MOU) between TxDOT ENV and the Texas Historical Commission (THC). The work will determine whether cultural resources are located within existing 350-foot wide ROW of the proposed roadway project, and, if so, assess the significance and eligibility for designation as State Archeological Landmarks (SALs) and/or inclusion in the National Register of Historic Places (NRHP).

   For archeological resources, the area of potential effect (APE) is the proposed drainage ditches. The archival and historic background study entails a review of the THC's Historic and Archeological Sites Atlas as well as available sources at the Texas Archeological Research Laboratory (TARL) in Austin, Texas. These sources among others such as soil surveys, historic and geologic maps etc., will be examined to identify any previously recorded sites and past investigations within the vicinity of the project area and to determine the likelihood of the project to impact archeological resources.

   An intensive cultural resources survey that includes a 100 percent pedestrian survey with visual inspection of the surface for cultural materials coupled with shovel testing will be performed within the APE. A production of a report suitable for review by the Texas Historical Commission (THC) in accordance with the THC's Rules of Practice and Procedure, Chapter 26, Section 27, and the Council of Texas Archeologists (CTA) Guidelines for Cultural Resources Management Reports will be produced.

   This report will detail the background research, methodology, and results of the survey. A copy of the report will be submitted to TxDOT Pharr District for review. Upon approval, the draft will be submitted to TxDOT ENV for their 30-day review. Once approved, one hard copy and one electronic copy burned as a tagged PDF on a CD including a completed Abstract Form will be provided to the TxDOT Pharr District, TxDOT ENV, and THC for final submission. This scope also includes compilation of the revised cultural resources section of the EA.

   The key tasks of the investigation are outlined below:

   i) Perform archival and historic background research;
   ii) Perform intensive cultural resources survey (pedestrian survey with shovel testing) of APE;
   iii) Document and assess SAL status and NRHP-eligibility of potential cultural resources;
   iv) Provide TxDOT Pharr District with formal report of findings and recommendations. Upon approval from TxDOT Pharr District submit draft copies to the TxDOT ENV for the 30-day review period. Make any revisions and submit final copies to the TxDOT Pharr District, TxDOT ENV, and THC;
   v) Summarize Work and Findings to include in the Archeological Sections of the EA including any language following the Standards of Uniformity.

   Should archeological sites be discovered that require additional investigations such as NRHP eligibility testing, a new scope and fee will need to be prepared.

3) Supplement 2009 Historic Resources Reconnaissance Survey
   This scope will re-evaluate the Historic Resource Reconnaissance Survey (dated September 2009) by Ecological

Communications Corporation and cleared by TxDOT Environmental Affairs Division (ENV) on January 26, 2011. The new letting date has been extended from a previous letting date of 2011 to ~2017, therefore, the historic period has been extended from 1966 to 1972 and a re-evaluation is required.

The Historian will prepare a Historic Resource Reconnaissance Survey report, including identification, evaluation, and documentation tasks in accordance with the provisions of the Secretary of the Interior's Standards for the Identification, Evaluation, and Documentation (48 FR Parts 44716- 42). The purpose of this project is to revise and update the existing 2009 report. This scope includes surveys, research, and documentation efforts carried out in accordance with the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (Volume 48 of the Federal Register, 44716) to comply with Section 106 (Title 16, United States Code §470f) of the National Historic Preservation Act of 1966, as amended, and other state and federal historic preservation related laws and regulations. Identification, evaluation and documentation tasks will be performed by the Historian in accordance with the provisions of the Secretary of the Interior's Standards for the Identification, Evaluation and Documentation (48 FR Parts 44716-42).

Associated activities include: preparation of a re-evaluation research design, delineation of the area of potential effects for projects with the potential to affect historic properties; field surveys and photographic and written documentation on historic properties located within a project's area of potential effects; revise the of historic contexts from the 2009 report (Eisenhour) that was approved by TxDOT in 2011; preliminary recommendations of National Register eligibility for identified historic properties; evaluation of the effect of projects on significant properties; and the development of management and preservation plans for historic properties if identified and documented.

The survey will be performed and documented at sufficient levels to satisfy the State (TxDOT District and Environmental Affairs Division (ENV) requirements for determining the presence of historically significant properties in the APE in accordance with 36 CFR 60 and 13 ACT 26. Performance of historic studies by the Engineer's technical expert will include the following tasks:

a) Determine the APE and the limits of the survey area in consultation with the State. While the Area of Potential Effect (APE) to be surveyed will be determined in consultation with the State, this scope of work anticipates the APE to extend 150 feet beyond the proposed acquisition or the current ROW on existing roadway.

b) Conduct a literature review to revise the 2009 historical and cultural contexts for the project area, determine information requirements and direct the survey effort. Report includes discussion of previously designated historic properties within 1,300 feet of the project area to foster development of appropriate contextual analysis. Explicit reference to THC survey files and Historic Sites Atlas, the NRHP, the list of State Archeological Landmarks, and the list of Recorded Texas Historic Landmarks will be included.

c) Preparation of a research design in consultation with the State. The research design will provide a succinct summary of the literature review results, clear descriptions of identification, evaluation, and documentation tasks required, and associated production schedules. The research design will follow the TxDOT SOU for reconnaissance survey research designs and submit copies of the research design to the District. Revise research design upon receipt of the District's and regulatory comments.

d) Conduct a reconnaissance survey of each historic-age resource (defined in accordance with 36 CFR 60 as a building, structure, object, historic district, or non-archeological site at least 45 years old at the time of letting) in the APE. Each resource will be documented in the following manner:

    i) Provide photographic documentation for each historic resource. At a minimum this will include an oblique view of the primary façade and a side elevation for each resource, with the subject filling the frame. All photographs will be 3.5"x5" color representations printed on matte finish photographic paper or comparable digital images produced with resolution that is equal to or greater than 1200 by 1600 pixel resolution quality with high resolution techniques. All photographs will be well focused and clearly depict architectural and other details relevant to an evaluation of the resource's character-defining features. One original and one electronic copy of each image will be provided. Photographs will be attached to separately labeled pages that clearly identify project name, address of resource (or UTM coordinates), direction of the photograph, style and type of resource, NRHP criteria eligibility, resource integrity issues, a project ID number keyed to the

project map, and any photography limitations.

ii) Photographs will be attached to separately labeled pages that clearly identify project name, address of resource (or UTM coordinates), direction of the photograph, style and type of resource, NRHP criteria eligibility, resource integrity issues, a project ID number keyed to the project map, and any photography limitations.

iii) The Historian will produce an inventory of all resources, provided in a table form that details project identification numbers, locations, property type and subtype classifications, stylistic influences, construction dates, integrity issues and preliminary eligibility recommendations.

iv) The report will include preliminary assessment of whether any resources meet standards for inclusion in the National Register of Historic Places (NRHP), either individually or as part of a potential historic district.

v) The Historian will summarize the results of the reconnaissance survey in the environmental document. In addition, the technical expert will produce a letter report summarizing the findings of the reconnaissance survey for attachment as an appendix to the environmental document. This letter report will include a comprehensive inventory of historic-age properties identified in the project APE and study area, photographs and mapped locations of these historic-age properties and other documentation of sufficient detail and clarity to provide the State with a basis for making determinations of National Register of Historic Places (NRHP) eligibility without requiring submission of additional documentation, or alternatively, make recommendations concerning the scope of the intensive survey necessary to finalize NRHP determinations. It is estimated that up to 20 historic-age resources dating from 1967 to 1972 will be investigated. At a minimum, the letter report will include the following information:

(1) A brief overview of the results of the reconnaissance survey, including a summary of the background history of the project area and observations on patterns of settlement, development trends, resource distribution, analysis of survey data and methods of analysis used, including historic contexts relevant to the time period associated with the historic-age resources sufficient to evaluate significance of resources for NRHP eligibility in accordance with 36 CFR 60.

(2) An inventory of all historic-age resources with proposed determinations of NRHP eligibility addressing all NRHP criteria for significance, integrity in accordance with 36 CFR 60, and effects of the proposed action.

(3) Maps showing the location of each historic resource labeled with its appropriate project ID number, running as consecutively as possible from the top left hand corner to the bottom right hand corner of the map. Outbuildings and landscape features will be reported as subsets of the main project ID number for a property, for example, a garage associated with Site No. 100 could be labeled Site No. 100a. The APE will be clearly indicated on the map. Major street names, parcel lines, and other directional landmarks will be clearly indicated on the map. Maps will be based on aerial photographs or USGS 7.5' topographic maps.

(4) Photographic documentation for each historic-age resource. At a minimum this will include an oblique view of the primary façade and a side elevation for each resource, with the subject filling the frame. All photographs will be 3.5"x5" color representations printed on matte finish photographic paper or comparable digital images produced with resolution that is equal to or greater than 1200 by 1600 pixel resolution quality with high resolution techniques. All photographs will be well focused and clearly depict architectural and other details relevant to an evaluation of the resource's character-defining features. One original and one electronic copy of each image will be provided. Photographs will be attached to separately labeled pages that clearly identify project name, address of resource and project ID number keyed to the project map.

(5) Proposed changes to the research design arising from the results of the reconnaissance survey, including contextual issues, comparative property information needs, data gaps and other items necessary to finalize the evaluation and documentation phases of the project in accordance with 48 FR Parts 44716-42.

Additional work associated with an intensive survey or intensive historical research would require a supplemental agreement to this work authorization.

Assumptions:
1. The historian estimates the identification and documentation of 20 additional historic-age resources within the project APE dating from 1966 to 1972.
2. One historian and one associate will perform the fieldwork.
3. Hidalgo County Historical Commission will be consulted, if necessary.

4) Public Meeting

The Consultant will plan, coordinate, and conduct one Public Meeting in the proposed project area. The draft EA will be available only at the Public Hearing (if requested) for the public to review and comment. The beginning portion of the Public Meeting will be in an open house format to view project exhibits, followed by a formal presentation and oral comment period. The Consultant's staff will be present at the Public Meeting to receive comments from the public and other attendees. The Consultant will locate and arrange facilities for the Public Meeting.

The Consultant will update and maintain the project mailing list and prepare a Public Meeting notice to inform adjacent property owners and other interested persons of the Public Meeting. The Consultant will also prepare other Public Meeting materials to facilitate the meeting. The tasks to be performed will include the following:

- Identify and secure the venue for the Public Meeting and coordinate the logistics in support of the meeting.
- Update and maintain a mailing list that includes, but is not limited to adjacent property owners, special interest groups, and others identified by TxDOT Pharr District to be used for the Public Meeting notice.
- Prepare, publish, and distribute meeting notices and obtain affidavits of publication, in accordance with TxDOT and FHWA requirements. Notices will be published in the local English and Spanish newspapers at 30 days and 10 days prior to the Public Meeting to notify the public in advance of the meeting.
- Prepare sign-in sheets, comment forms, handouts, and pre-printed nametags for staff.
- Identify and make arrangements for equipment needs (e.g., easels, chairs, tables, and audio-visual) including transportation, set-up, and break down.
- Provide and coordinate Public Meeting informational and directional signs (registration/sign-in, written comment station, and directional arrows for traffic flow).
- Provide two personnel to conduct the Public Meeting.
- Prepare informational displays/exhibits for display at the Public Meeting.
- Prepare graphics related to the environmental study, if necessary.
- Provide a Public Meeting Summary Report that will include copies of notices, photographs, handouts, sign-in sheets, comment forms, letters, and a transcript of comments made during the Public Meeting where comments and responses will be compiled to properly record the Public Meeting. There will be one Public Meeting summary report. Four bound copies and one electronic copy in PDF format of the summary report will be prepared.

The Consultant will provide the following:

- Court Reporter
- English-Spanish translator at the Public Meeting, if requested.
- English to Spanish translated materials such as legal notice, comment forms and handouts.

5) Afford a Public Hearing

The Consultant will prepare a bilingual public hearing notice for publication in the English and Spanish newspapers. The Consultant will publish and distribute hearing notices and obtain affidavits of publication, in accordance with TxDOT and FHWA requirements. Notices will be published in the local English and Spanish newspapers at 30 days and 10 days prior to the Public Hearing to notify the public in advance of the hearing. Should it be determined that a Public Hearing is to be held, all required task will be added by supplemental agreement.

DRAINAGE

1) Hydraulic Drainage Study and Documentation will be updated to include the revised typical section from Mile 9 North to Mile 11 North.
   a) Gather information regarding existing drainage features, facilities and watersheds.
   b) Evaluate existing drainage conditions.
   c) Develop drainage area map and discharge rates.
   d) Hydraulic computations
      i) Cross Drain Culverts
      ii) Channels
      iii) Storm drainage/inlets
      iv) Drainage analysis of waterways
      v) Surface Channels/Ditches
2) Layout, Structural Design and Detailing of Drainage Features
   a) Culverts replacements and or extensions
   b) Storm drains
      i) New storm drainage
      ii) Modify existing storm drains
      iii) Inlets
      iv) Manholes
      v) Trunk lines
3) Outfall – Determine the location of one additional outfall to North Weslaco Lateral between Mile 10 North and Mile 11 North.
   a) Determination of typical section required
   b) Coordination with HCDD #1 for location of proposed outfall
   c) Develop HEC-RAS for determination of typical section required
   d) Determine amount of right of way required for new outfall
   e) Develop of preliminary details and probable estimate of construction cost.
4) Revised H&H report previously developed for new typical sections and modifications to HCDD #1 systems.

PAVEMENT DESIGN

FIELD STUDY

1) On the basis of geologic evidence and our past experience with subsurface conditions in the vicinity of this site, we propose to conduct the following drilling scheme along the subject road alignment:

Westgate Drive (Mile 6 West Road) Pavement Segment	Boring Spacings	Number of Borings	Depth, ft. *
Urban Pavement Reconstruction – Between Sugar Cane Road (Mile 9 North Road) and Mile 11 North Road (About 2 Miles)	0.5 Miles	5	7
Rural Pavement Reconstruction – Between Mile 11 North Road and SH 107 (about 4.0 miles)	0.5 Miles	8	
Rural Pavement Reconstruction – Between Mile 11 North Road and SH 107 (about 1.5 miles) **	1,000 feet	8	

* Below the existing pavement surface elevation, or auger refusal, whichever occurs first.

** Based on a cursory review of the Soil Survey of Hidalgo County, Texas, published by the United States Department of Agriculture - Soil Conservation Service, an approximately 1.5-mile long stretch of Westgate Drive, starting approximately 1,250 ft north of its intersection with West Mile 14 North Road (Roosevelt Road) and ending approximately 1,300 ft south of its intersection with Mile 16 North Road, appears to exhibit highly

variable soil conditions. Thus, it is recommended to drill one boring every 1,000 linear feet within this segment of the subject road alignment.

2) Borings will be located in the field utilizing tape and right angle measurements from existing benchmarks. Our scope of services does not include surveying of the boring locations. However, RKCI recommends that the final boring locations be surveyed in the field by the CLIENT.

3) Samples will be taken using conventional split-spoon and/or Shelby tube sampling techniques in general accordance with applicable American Society for Testing and Materials (ASTM) standards. Representative portions of the samples will be sealed, identified, packaged, and transported to our laboratory for subsequent testing and classification.

4) Upon completion of drilling activities, water level readings, if applicable, will be recorded in the open boreholes and the boreholes will be backfilled using the auger cuttings generated during the drilling operations. The upper six inches of each boring will be patched with cold-mix asphalt and flushed with the adjacent pavement surface elevation.

LABORATORY STUDY

1) Upon completion of the subsurface exploration, a general testing program will be designed to define the classification and shrink/swell characteristics of the subsurface conditions. The testing program is anticipated to include water content determinations, Atterberg limits (plasticity) tests, lime series determinations, sulfate content determinations, and grain size analyses. The laboratory testing will be performed in general accordance with applicable American Society for Testing and Materials (ASTM) standards.

2) In addition to the above-described testing program, representative surficial specimens will be obtained from the pavement borings and will be subjected to California Bearing Ratio (CBR) tests. The CBR testing will provide information regarding inundated strength and swell characteristics of the surficial subgrade soils for direct use in pavement design analyses, which will be conducted in accordance with the 1993 American Association of State Highway and Transportation Officials (AASHTO) pavement design method. We anticipate that eight CBR tests will be required for this project. The collection of falling weight deflectometer data is not included in the scope of this proposal.

ENGINEERING ANALYSIS AND REPORT

1) The results of the field and laboratory phases of the study will be reviewed by our staff of engineers. The results of our review, together with the supporting field and laboratory data, will be presented in a written, engineering report. Included therein will be pavement section recommendations for the reconstruction of the pavement systems within the proposed road alignment. We anticipate that at least three pavement section alternatives for both flexible (asphalt) and rigid pavements will be included in our report. The Geotechnical Engineering Report may also include the following information and recommendations:
   a) A summary of the field and laboratory sampling and testing program;
   b) Boring logs and laboratory testing results;
   c) A review of the general site conditions including a description of the site, the subsurface stratigraphy, groundwater conditions, and the presence and condition of fill materials, if encountered.

2) Included in the report will be general guidelines for the reconstruction of pavements for the proposed road alignment. These guidelines will be based on the results of the classification testing and the CBR tests and will be based utilizing the 1993 AASHTO pavement design method.

3) Since site grading plans can result in changes in the foundation and pavement subgrade conditions, final site grading plans will be helpful information in the preparation of engineering recommendations. In the absence of final site grading information, we will prepare recommendations based on the existing ground surface elevations. Also, specific information concerning anticipated traffic loadings and frequencies to be provided by the CLIENT for the pavement areas will be critical in the computation of the pavement sections.

FINAL

TEDSI INFRASTRUCTURE GROUP

WORK AUTHORIZATION NO. 2
ATTACHMENT "D"
MILE 6W

May 20, 2013

General Management/Coordination

Descripton	Sr. Project Manager	Senior Engineer	Project Engineer	EIT	Sr. Eng. Tech	Eng. Tech	Admin	Total Hours		Fee
Project Meetings (2 per month for 18 months)	72		72				36	180	$	30,869.64
Preliminary Estimate	0	4	16			16		36	$	4,715.76
Project Administration/Coordination	18						24	42	$	6,040.62
Subconsultant Management and Coordination	96							96	$	24,248.64
Total	186	4	88	0	0	16	60	258	$	65,874.66

ROW Update

Descripton	Sr. Project Manager	Senior Engineer	Project Engineer	EIT	Sr. Eng. Tech	Eng. Tech	Admin	Total Hours		
Review and update existing adjoining property information	4	8		24		60		96	$	11,468.40
Review and update existing Microstation Right of Way file		2		16		40		58	$	6,429.16
Review and update of Parcel Information	2	4		8	12			26	$	3,520.50
Total	6	14	0	48	12	100	0	180	$	21,418.06

Topographic Survey

Descripton	Sr. Project Manager	Senior Engineer	Project Engineer	EIT	Sr. Eng. Tech	Eng. Tech	Admin	Total Hours		
QA/QC Survey		4			12			16	$	2,143.40
Total	0	4	0	0	12	0	0	16	$	2,143.40

Utility Coordination

Descripton	Sr. Project Manager	Senior Engineer	Project Engineer	EIT	Sr. Eng. Tech	Eng. Tech	Admin	Total Hours		
Utility coordination/meeting	8		8	24		40		80	$	10,156.32
Prepare and send utility submittals	1			16		16	8	41	$	4,238.27
Determine/resolve utility conflicts	2		8	24		24		58	$	6,896.94
Maintain communication documentation	4			24			24	52	$	5,120.12
Total	15	0	16	88	0	80	32	231	$	26,411.65

Schematic, EA and Public Involvement

Descripton	Sr. Project Manager	Senior Engineer	Project Engineer	EIT	Sr. Eng. Tech	Eng. Tech	Admin	Total Hours		
Revised Schematic Document Mile 9 North to Mile 11 North	4	16	30	60	80	100	0	290	$	35,351.82
Submit schematic document to TxDOT for review, Mile 9 North to SH-107			8			16		24	$	2,904.08
Revised schematic based on comments received from TxDOT		6	8	16	16	30		76	$	9,140.22
Revised PER	2	6	16		16	24		64	$	8,407.86
Review Meetings during schematic development	4	10	16					30	$	4,959.44
Development of DSR		1	4					5	$	742.98
Organize, Manage and Conduct Public Meeting (Meeting)	4	4		8		8	2	26	$	3,530.14
Organize and Manage process for affording opportuinty for Public Hearing	8	8				8		24	$	4,195.52
Document 1 Public Meeting	4			8		8	8	28	$	3,252.20
Total	26	51	82	92	112	194	10	567	$	72,484.26

Drainage Details	Sr. Project Manager	Senior Engineer	Project Engineer	EIT	Sr. Eng. Tech	Eng. Tech	Admin	Total Hours		
Revise Drainage Area Maps	1	4	8	16		16		45	$	5,551.95
Revise Hydrology Calculations	1	4	6	12				23	$	3,082.09
Revise Hydraulic Calculations	1	4	16	24			4	49	$	6,089.27
Revise Culvert Layouts	1	4	8	8	24	32		77	$	9,407.79
Develop preliminary storm sewer system	1	4	8	24				37	$	4,680.03
Develop HEC-RAS for propose new outfall	4	8	24	40				76	$	10,153.56
Coordinate with HCDD #1 for approval of new outfall connection to North Weslaco Lateral	4	16	16					36	$	5,936.60
Determine location of and amount of right of way for new outfall	1	4	8	16	16			45	$	5,797.39
Develop preliminary typical section and plan view layout.		4	8	8	24	24		68	$	8,283.28
Revised H & H Report	4	16	16	16	24	32	24	132	$	15,646.04
Total	18	68	118	164	88	104	28	588	$	74,628.00
Total Hours	251	141	304	392	224	494	130	1840	$	262,960.03
	$ 252.59	$ 162.86	$ 145.03	$ 108.99	$ 124.33	$ 108.99	$ 62.25			
	$ 63,400.09	**$ 22,963.26**	**$ 44,089.12**	**$ 42,724.08**	**$ 27,849.92**	**$ 53,841.06**	**$ 8,092.50**	**$ 262,960.03**		

Project DirectCosts

Copies, Bond Plots, Mylar Plots & Mileage	$ 13,148.00

Sub-Total Basic Fee **$ 276,108.03**

Additional Services

Update Topographic Survey $5.00/ft	2.0 Mile X $15,000/Mile	=	$30,000.00
Update Environmental and Public Involvement		=	$72,996.00
Pavement Design		=	$28,177.95
	Sub-Total Additional Services	=	**$131,173.95**

Total Lump Sum Fee (Basic +Additional) = **$ 407,281.98**

PROJECT NAME: WESTGATE DRIVE (MILE 6 W. RD.) PAVEMENT RECONSTRUCTION
DATE: May 20, 2013

CLIENT: TEDSI INFRASTRUCTURE GROUP
1201 E. EXPRESSWAY 83
MISSION, TEXAS 78572

ATTN: MR. CRAIG STONG, P.E.,

PROPOSAL NO.: PMA13-042-00 (REVISED)

Structure	Number	Depth	Soil	Rock	Total
MILE 6 WEST RD	21	7	7	--	*147*
					0
					0
					0
					0
					0
Totals	21	7	7	0	*147*

FIELD DRILLING OPERATIONS	QUANTITY		UNIT PRICE	TOTAL
Auger Drilling (soil)	147	ft	$13.85	$2,035.95
Engineering Technician (logging)	19	hr	$60.00	$1,140.00
Field Coordination	3	hr	$135.00	$405.00
Flagman	19	hr	$50.00	$950.00
Mobilization of truck-mounted rig	225	mile	$4.23	$951.75
Standard Penetration Test	63	test	$35.54	$2,239.02
Mileage Non-Drilling Equipment	225	state rate	$0.565	$127.13
Concrete/AC Patch	21	ea	$58.49	$1,228.29
Traffic Control with Lane Closure (+Coord. Time)	1	ls	$1,802.50	$1,802.50
Traffic Control without Lane Closure (+Coord. Time)	1	ls	$515.00	$515.00
			Field Drilling Operations Subtotal:	$11,394.64

LABORATORY TESTS	QUANTITY		UNIT PRICE	TOTAL
Lime Series Curve (with 5 PI's)	8	ea.	$300.79	$2,406.32
California Bearing Ratio (3 test specimens)	8	ea.	$836.37	$6,690.96
Sulfate Content	8	ea.	$75.00	$600.00
Moisture Content Determination	63	ea.	$12.81	$807.03
Plasticity Index (Atterberg Limits)	21	ea.	$75.00	$1,575.00
Amount Minus 200 Sieve	21	ea.	$44.00	$924.00
			Laboratory Testing Subtotal:	$13,003.31

ENGINEERING AND REPORT	QUANTITY		UNIT PRICE	TOTAL
Project Manager (VIII)	5	hrs.	$185.00	$925.00
Project Engineer (III)	5	hrs.	$165.00	$825.00
Engineer in Training (EIT)	15	hrs.	$105.00	$1,575.00
Project Adminstrator	7	hrs.	$65.00	$455.00
			Engineering and Report Writing Subtotal:	$3,780.00
			TOTAL:	$28,177.95

Description of Tasks	Historian	Sr. Engineer/Sr. Env Planner	Env. Scientist (Planner)	Env Scientist (Biologist)	Principal Archeologist	GIS	Admin	Total Hours	Total Labor
	$110.00	$175.00	$110.00	$100.00	$110.00	$80.00	$60.00		
PROJECT MANAGEMENT									
Project set-up for additional work; coordinate with Environmental Team	0	8	0	0	0	0	4	12	$1,640.00
QA/QC Archeology and Updated EA	0	24	0	0	0	0	0	24	$4,200.00
Subtotal	0	32	0	0	0	0	4	36	$5,840.00
EA UPDATE AND ARCHEOLOGICAL SURVEY									
Field Visit to assess additional drainage easements	0	16	16	0	0	0	0	32	$4,560.00
Update EA for additional drainage easements	0	8	24	0	0	8	0	40	$4,680.00
Additional archeology report (scope of work, permit, field survey and report) for additional easements									
Permit Application (Background and Scope of Work)	0	0	0	0	12	2	2	16	$1,600.00
Field Survey	0	0	16	0	16	0	0	32	$3,520.00
Prepare Report and coordinate with TxDOT	0	0	0	0	32	8	6	46	$4,520.00
Subtotal	0	24	56	0	60	18	8	166	$18,880.00
UPDATE 2009 HISTORIC RESOURCES RECONNAISSANCE SURVEY									
Revise Research Design	16	0	0	0	0	0	0	16	$1,760.00
Field Maps	0	0	0	0	0	3	0	3	$240.00
Fieldwork (historian and associate)	20	0	0	20	0	0	0	40	$4,200.00
Report Preparation including revisions	24	3	0	0	0	8	4	39	$4,045.00
Subtotal	60	3	0	20	0	11	4	98	$10,245.00
PUBLIC MEETING									
Develop Invitation list; create database - local officials, adjacent property owners	0	2	0	0	0	12	16	30	$2,270.00
Develop, produce and mail a bilingual notice for adjacent property owners & coordinate with written translator	0	2	8	0	0	0	4	14	$1,470.00
Prepare bilingual public meeting notice for newspaper - coordinate with TxDOT & Written Translator	0	2	0	0	0	0	2	4	$470.00
Coordinate logistics and find court reporter and interpreter	0	1	2	0	0	0	6	9	$755.00
Prepare for Public Meeting (exhibits, name tags, handouts, agenda, signs, presentation, directional signs, etc.)	0	4	2	0	0	6	16	28	$2,360.00
Prepare meeting exhibits and powerpoint presentation	0	4	16	0	0	0	8	28	$2,940.00
Travel to and Attend Public Meeting	0	16	16	0	0	0	0	32	$4,560.00
Prepare Summary and Analysis of Public Meeting and address District comments	0	16	24	0	0	8	16	64	$7,040.00
Subtotal	0	47	68	0	0	26	68	209	$21,865.00
AFFORD AN OPPORTUNITY FOR A PUBLIC HEARING									
Develop bilingual public hearing notice for newspaper - coordinate with TxDOT and written Translator	0	2	6	0	0	0	4	12	$1,250.00
Update property owners, mail merge and send notices to adjacent property owners	0	2	8	0	0	0	12	22	$1,950.00
Coordinate with newspaper for advertisement	0	2	6	0	0	0	4	12	$1,250.00
Subtotal	0	6	20	0	0	0	20	46	$4,450.00
Subtotal Labor	60	112	144	20	60	55	104	555	$61,280.00

DIRECT EXPENSES

	Quantity	$$	Cost
English-Spanish Translation for notice to adjacent property owners ($200/page)	2	$200.00	$400.00
English-Spanish Translation for legal notice (meeting and hearing)($200/page)	2	$200.00	$400.00
English-Spanish Translation for handouts at meeting and hearing ($100/page)	2	$100.00	$200.00
English-Spanish Translator for public meeting and hearing ($150/hour for 3 hours)	6	$150.00	$900.00
Court Reporter (meeting and hearing) ($200/hr for 3 hours)	6	$200.00	$1,200.00
Facility Rental (meeting and hearing)	2	$100.00	$200.00
Custodial fee (meeting and hearing)	2	$50.00	$100.00
Supplies	2	$50.00	$100.00
Legal ad (English Newspaper) (2 times afford public hearing)	2	$800.00	$1,600.00
Legal ad (Spanish newspaper - 2 times afford public hearing)	2	$400.00	$800.00
Legal ad (English Newspaper) (2 times each for meeting and hearing)	2	$800.00	$1,600.00
Legal ad (Spanish newspaper) - (2 times each for meeting and hearing)	2	$400.00	$800.00
Meals ($35/ea. Assume 2 days 2 persons)(meeting, hearing, arch survey, historic survey)	16	$35.00	$560.00
Hotel ($85/night) - 2 persons for 1 night each Arch and Historic Survey	4	$85.00	$340.00
Hotel ($85/night) - 2 persons for 1 night for Public Meeting	2	$85.00	$170.00
Hotel ($85/night) - 2 persons for 1 night for Public Hearing	2	$85.00	$170.00
Lodging Taxes (15% of lodging cost)(historic and arch survey)	4		$51.00
Lodging Taxes (15% of lodging cost)(meeting)	1		$25.50
Lodging Taxes (15% of lodging cost)(hearing)	1		$25.50
Mileage (meeting, hearing, arch survey and historic survey)	2700	$0.55	$1,485.00
Copies (8.5" x 11" B&W - $0.10)	1500	$0.10	$150.00
Copies (8.5" x 11" Color - $0.50)	500	$0.50	$250.00
Overnight mail delivery ($30 per charge)	4	$30.00	$120.00
Postage ($0.46) (meeting and hearing notices to adjacent property owners)	150	$0.46	$69.00
SUBTOTAL (DIRECT EXPENSES)			$11,716.00
GRAND TOTAL (LABOR + DIRECT)			$72,996.00