



**ARTICLE 2. Character and Extent of Services.** This Agreement will provide for the development of the **Project** with the following:

**2.1 Scope of Work.** The **Owner** will furnish items and provide those services for the development of the **Project** and fulfillment of this Agreement, as identified in **EXHIBIT "A" *Services to be Provided by the Owner***, attached hereto and made a part of this Agreement as identified in **EXHIBIT "B"- *Services to Provided by the Engineer***, attached hereto and made a part of this agreement.

**2.2 Classification of Services** For this Agreement, the professional services to be provided by the **Engineer**, as more particularly identified in **EXHIBIT "B"**, attached hereto.

**2.3 Schedule of Work.** The **Engineer** shall prepare a schedule of work (hereinafter referred to as "**Work Schedule**") in accordance with the terms identified in **EXHIBIT "C" - *Work Schedule***, attached hereto and made a part of this Agreement.

**2.4 Non-Exclusive Services of Engineer** Hidalgo County reserves the right to request these services from other sources other than the engineer and shall not be in violation of any terms or conditions of this Agreement.

**ARTICLE 3. Period of Service.** Upon execution of this Agreement, the **Engineer** shall proceed with the work outlined under Article 2 hereof.

**3.1 Termination Date.** This Agreement will terminate on at the completion of services as defined in **EXHIBIT "B"**, attached hereto. The **Owner** assumes no liability or obligation for payment to the **Engineer** for work performed or costs incurred by the **Engineer** prior to the date authorized by the **Owner** for the **Engineer** to begin work, during periods when work is suspended, or subsequent to the **Termination Date**.

**3.3 Suspension of Work.** Should the **Owner** desire to suspend the work under this Agreement, but not terminate this Agreement, the **Owner** shall provide thirty (30) calendar days verbal notification to the **Engineer**, followed by written confirmation from the **Owner** to the **Engineer** to that effect. The thirty-day

notice may be waived as agreed in writing by both the **Owner** and the **Engineer**. The work under this Agreement may be reinstated and resumed in full force and effect within sixty (60) days of receipt of written notice from the **Owner** to the **Engineer**. The sixty-day notice may be waived as agreed in writing by both the **Owner** and the **Engineer**.

If the **Owner** suspends the work, the **Termination Date** as identified above is not affected, and this Agreement will terminate on the date specified, unless extended by written supplemental agreement, as provided in Article 8 hereof, duly executed by the **Engineer** and the **Owner** prior to the **Termination Date**.

**3.4 Termination of Agreement.** This Agreement may be terminated before the stated **Termination Date** identified in Article 3.1 herein by any of the following conditions:

- (1) **Commitment of Current Revenues.** In the event that, during any term hereof, the **Owner** does not appropriate sufficient funds to meet to the obligations of this Agreement, the **Owner** may terminate this Agreement upon thirty (30) days written notice to the **Engineer**. The **Owner** agrees, however, to use reasonable efforts to secure funds necessary for the continued performance of this Agreement. The parties intend this provision to be a continuing right to terminate this Agreement at the expiration of each budget period of the **Owner** pursuant to the provisions of Tex. Loc. Govt. Code Ann. §271.903 (Vernon Supp. 1995).
- (2) By mutual agreement and consent, in writing, of both the **Engineer** and the **Owner**.
- (3) By the **Owner**, upon failure of the **Engineer** to fulfill the **Engineer's** obligations set forth herein in a satisfactory manner as determined by the **Owner** and in sole opinion of the **Owner**, after the **Owner** provides written notice to the **Engineer** of such failure and the **Engineer** has not corrected such failure within (30) days of such written notice by the **Owner**.

- (4) By the **Engineer**, upon failure of the **Owner** to fulfill the **Owner's** obligations set forth herein, after the **Engineer** provides written notice to the **Owner** of such failure and the **Owner** has not corrected such failure within thirty (30) days of such written notice by the **Engineer**.
- (5) By the **Owner** without cause upon thirty (30) days written notice to the **Engineer**.
- (6) By satisfactory completion of all services and obligations described herein.

Should the **Owner** terminate this Agreement as herein provided, no fees other than fees due and payable at the time of termination shall thereafter be paid to the **Engineer** notwithstanding anything herein to the contrary. In determining the value of the work performed by the **Engineer** prior to termination, the **Owner** shall be the sole judge of the value of such work performed. Compensation for work at termination will be based on a percentage of the work completed at that time. Should the **Owner** terminate this Agreement under (5) of the paragraph above, the amount charged during the thirty (30) day notice period shall not exceed the amount charged during the preceding ninety (90) days.

If the termination of this Agreement is due to the failure of the **Engineer** to fulfill the **Engineer's** obligations under this Agreement, the **Owner** may take over the Project and prosecute the work to completion. In such case, the **Engineer** shall be liable to the **Owner** for any additional cost occasioned by the **Owner**.

If the **Engineer** defaults in the performance of this Agreement or if the **Owner** terminates this Agreement for fault on the part of the **Engineer**, the **Owner** will give consideration to payment of an amount in settlement to include: the actual costs incurred by the **Engineer** in performing the work to the date of default, the amount of work required which was satisfactorily completed to date of default, the value

of the work which is usable to the **Owner**, the cost to the **Owner** of employing another consultant and/or firm to complete the work required and the time required to do so, and other factors which affect the value to the **Owner** of the work performed at the time of default. This Agreement shall not be considered as specifying the exclusive remedy for any default by the **Engineer**, but all remedies existing at law and in equity may be availed of by either party and shall be cumulative.

The termination of the Agreement and payment of an amount in settlement as prescribed above shall extinguish all rights, duties, and obligations of the **Owner** and the **Engineer** under this Agreement, except the obligations set forth in Articles 11.2, 12, 13, 15, 16, 17, 18.3, 19, 22 and 26 hereto.

**ARTICLE 4. Progress and Coordination.** The **Engineer** shall, from time to time during the progress of the work, confer with the **Owner**. The **Engineer** shall prepare and present such information as may be pertinent and necessary, or as may be requested by the **Owner**, in order to evaluate features of the **Engineer's** services and work.

At the request of the **Owner** or the **Engineer**, conferences shall be provided at the **Engineer's** office, the office of the **Owner**, or at other locations designated by the **Owner**. These conferences shall also include evaluation of the **Engineer's** services and work when requested by the **Owner**.

All applicable study reports shall be submitted in preliminary form for approval by the **Owner** before the final report is issued. The **Owner's** comments regarding the **Engineer's** preliminary report will be addressed by the **Engineer** in the final report.

If funds by other agencies or entities are to be used for the development of the project under this Agreement, the **Engineer's** services and work will be subject to periodic review and approval by other agencies or entities, including those of the city, county, state and/or federal agencies.

Should it be determined that the progress in the production of the **Engineer's** services and work does not satisfy the requirements of the approved **Work Schedule** as provided by **Exhibit "C"**, attached

hereto, the **Owner** shall review the approved **Work Schedule** with the **Engineer** to determine the corrective action needed by either the **Owner** or the **Engineer**.

The **Engineer** shall promptly advise the **Owner** in writing of events which have a significant impact upon the progress of the **Engineer's** services and work and the approved **Work Schedule**, including:

- (1) problems, delays, adverse conditions which will materially affect the ability to attain contract objectives, prevent the meeting of time schedules and goals, or preclude the timely completion and submittal of **Project** deliverables by the **Engineer** within established time periods; this disclosure will be accompanied by a statement by the **Engineer** of recommended or immediate action taken, or contemplated, and any **Owner** or other agency or entity assistance needed to resolve the situation: and
- (2) favorable developments or events which enable meeting the **Work Schedule** goals sooner than anticipated.

**ARTICLE 5. Compensation and Fees.** For and in consideration of the services to be rendered by the **Engineer**, the **Owner** shall compensate the **Engineer** as follows:

**5.1 Basic Services.** For and in consideration of the *Services* to be rendered by the **Engineer**, as identified in Article 2 and more particularly identified in **EXHIBIT "B"**, attached hereto, the maximum amount payable by the **Owner** to the **Engineer** for *Services*, subject to adjustment in accordance with Article 6.1 herein, will be provided in each work authorization issued. Payments to the **Engineer** for *Services* shall be made by the **Owner**, upon presentation by the **Engineer** of the monthly **Request for Payment**, in accordance with the terms and provisions of Article 6 herein.

**5.2 Special Services.** Those services that may be required to provided by the **Engineer** as *Special Services* are set forth below and more particularly described in **EXHIBIT "B"**, attached hereto. For and in consideration of these *Special Services* rendered as required by the **Engineer**, the **Owner** shall pay the

**Engineer** a negotiated lump sum fee (hereafter referred to as “**Special Services Fee**”) at the hourly labor rates and non-labor rates (hereinafter referred to as “**Contract Rates**”) specified in **EXHIBIT “D” - Contract Rates**, attached hereto and made a part of this Agreement, and as follows:

1. **RESIDENT OR SITE ENGINEER, INSPECTOR** Actual performance of services of project site engineer, resident engineer and/or inspector, if required by **Owner**.
2. **DOCUMENT COPIES** Actual performance and/or providing of additional copies (over 10) of report; additional copies (over 10) of plans (contract drawings), specifications and estimates (PS&E); additional copies (over 10) of bidding documents; additional copies (over 10) of as-built drawings.
3. **EXTRA TRAVEL** Extra travel required of **Engineer** and authorized by **Owner** to points outside of Hidalgo County.
4. **EXPERT WITNESS** Assistance to the **Owner** as expert witness in any litigation with third parties, arising from the development or construction of the **Project**.
5. **MISCELLANEOUS**. Investigations involving detailed consideration of operation, maintenance and overhead expenses and (unless otherwise agreed) the preparation of rate schedules, earning and expense statements; preparation of feasibility studies; environmental document preparation; appraisals, valuations, and material audits; or inventories required for certification of force account construction performed by the **Owner**; preparation of change orders for extra work done by the **Contractor**.

#### **ARTICLE 6. Method of Payment.**

**6.1 Request for Payment.** Payments to the **Engineer** for services rendered will be made while work is in progress as executed through a lump sum fee assigned to each work authorization (hereinafter referred to as “**Work Authorization**”) in accordance with **Article 7** herein. For each **Work Authorization**, the **Engineer** shall prepare and submit to the **Owner** monthly progress reports in sufficient detail to support the progress of the work and in support of a request for payment (hereinafter referred to as “**Request for Payment**”). The progress report shall indicate the percent completion of the work accomplished by the **Engineer** during the billing period and to the date of the **Request for Payment**. On or before noon of the first Monday of each month during the performance of the services, the **Engineer** shall submit to the **Owner** for approval a **Request for Payment**. Payment of the lump sum fee for each **Work Authorization** identified in the **Request for Payment** will be in proportion to the percent completion of the

work tasks identified in such **Work Authorizations** together with a detailed breakdown of the amount and the sum of all prior payments. The **Owner** shall review each such **Request for Payment** and may make such exceptions as the **Owner** reasonably deems necessary or appropriate under the circumstances then existing. About ten (10) working days after the Commissioners Court of the **Owner** meets approving such payment, the **Owner** shall make payment to the **Engineer** in the amount approved as aforesaid subject to Article 6.4 herein and below.

If the **Project**, or any portion(s) thereof, are deleted or otherwise not constructed, compensation to the **Engineer** by the **Owner** for the **Project** or such portions of the project shall be only the amounts paid the **Engineer** for actual work performed in accordance with the **Work Authorization(s)** approved by the **Owner**.

**6.2 Final Payment.** After final completion of the work and acceptance thereof by the **Owner**, the **Engineer** shall submit a final request for payment ("**Final Request for Payment**") which shall set forth all amounts due and remaining unpaid to the **Engineer** and upon approval thereof by the **Owner**, the **Owner** shall pay to the **Engineer** the amount due ("**Final Payment**") under such **Final Request for Payment** in accordance with the provisions of Article 6.1 hereof. The **Final Payment** shall not be made until the **Engineer** delivers to the **Owner** an affidavit that so far as the **Engineer** has knowledge or information any and all amounts due for materials and services over which the **Engineer** has control have been paid.

**6.3 Qualification on Obligations to Pay.** Any provision hereof to the contrary notwithstanding, the **Owner** shall not be obligated to make any payment (whether a payment under Article 6.1 hereof or **Final Payment**) to the **Engineer** hereunder if any one or more of the following conditions precedent exist:

- (1) The **Engineer** is in default of any of its obligations hereunder or otherwise is in default under this Agreement or under any contract documents related to this Agreement;
- (2) Any part of such payment is attributable to the **Engineer's** services which are not performed in accordance with this Agreement; provided, however, such payment shall be made as to the part thereof attributable to the **Engineer's** services which were performed in accordance with this Agreement.

- (3) The **Engineer** has failed to make payments promptly to consultants or other third parties used in connection with the **Project** for which the **Owner** has made payment to the **Engineer**;
- (4) If the **Owner**, in good faith judgment, determines that the portion of the compensation then remaining unpaid will not be sufficient to complete the **Engineer's** services in accordance with this Agreement, no additional payments will be due the **Engineer** hereunder unless and until the **Engineer**, at its sole cost, performs a sufficient portion of the **Engineer's** services so that such portion of the compensation then remaining unpaid is determined by the **Owner** to be sufficient to so complete the **Engineer's** services.

6.4 No partial payment made hereunder shall be or construed to be final acceptance or approval of that part of the **Engineer's** services to which such partial payment related or relieves the **Engineer** of any of its obligations hereunder with respect thereto.

6.5 The **Engineer** shall promptly pay all bills for labor and material performed and furnished by others in connection with the performance of the **Engineer's** services.

6.6 **Waiver.** The making of the **Final Payment** shall constitute a waiver of all claims by the **Owner** except those arising from (1) faulty or defective services of the **Engineer** appearing after completion of the **Project**. (2) failure of the **Engineer's** services to comply with the requirements of this Agreement or any contracts or Agreements related to the **Project**, or (3) terms of any special warranties required by this Agreement or provided at law or in equity. The acceptance of **Final Payment** shall constitute a waiver of all claims by the **Engineer** except those previously made in writing and identified by the **Engineer** as unsettled at the time of the **Final Request for Payment**.

**ARTICLE 7. Work Authorization.** After execution of this Agreement, the **Engineer** shall proceed with the work outlined under Article 2 hereof, only as authorized by the **Owner** through an agreed **Work Authorization** document in the form identified in **EXHIBIT "E"- Work Authorization Form**, attached hereto and made a part of this Agreement. The **Engineer** will identify, as approved by the **Owner**, the needed services for the **Project**, as required through the course of the development to the **Project**. The **Owner** shall authorize the **Engineer** to perform one or more of the agreed tasks identified in **EXHIBIT "B"**, attached hereto, in the form of individual work authorizations. Upon authorization from the **Owner**,

the **Engineer** will prepare a **Work Authorization** document, which will include a description of the work to be performed, including a description of the tasks and milestones, a work schedule, and an estimated cost proposal agreed upon by the **Owner** and the **Engineer**. The estimated cost proposal shall set forth in detail the computation of the cost of each work task, at the hourly rates established and identified in **EXHIBIT "D"**, attached hereto. The **Work Authorizations** shall not waive the **Owner's** and the **Engineer's** responsibilities and obligations established in this Agreement.

The estimated cost proposal for each **Work Authorization**, developed by the **Engineer** and approved by the **Owner** shall be used by the **Owner** to appropriate a purchase order for the **Work Authorization**. Each executed **Work Authorization** shall become a part of this Agreement. Upon satisfactory completion of the **Work Authorization**, the **Engineer** shall submit the **Project's** deliverables as specified in the executed **Work Authorization** to the **Owner** for review and acceptance.

Work included in a **Work Authorization** shall not begin until the **Owner** and the **Engineer** have signed the **Work Authorization**. All work must be completed on or before the completion date specified in the **Work Authorization**, unless extended by written agreement by the **Engineer** and the **Owner**. The **Engineer** shall promptly notify the **Owner** of any event that will affect completion of the **Work Authorization**. All **Work Authorizations** must be executed and completed by both the **Engineer** and the **Owner** within the period established for this Agreement as specified in Article 3 hereof.

The final acceptance by the **Owner** of each **Work Authorization** for the **Project** shall serve as evidence of completion, on the part of the **Engineer**, of all services under this Agreement insofar as they pertain to that portion of work on the **Project** identified in the applicable work authorization.

**ARTICLE 8. Supplemental Agreements.** The terms of this Agreement may be amended by supplemental agreement if the **Owner** determines that (1) there is a need to extend the **Termination Date** identified in Article 3.1 hereof, (2) there has been a significant change in the scope, complexity or character of the services to be performed by the **Engineer**, and/or (3) for any other reason agreeable to the **Owner**

and the Engineer. All supplemental agreements will be developed in the form identified in **EXHIBIT “F” - Supplemental Agreement Form**, attached hereto and made a part of this Agreement, and incorporated herein by reference as “**Supplemental Agreement**”.

If determined appropriate by the **Owner**, additional compensation to the **Engineer** for (1), (2) and/or (3) above shall be paid as a negotiated lump sum fee at the **Contract Rates** specified in **EXHIBIT “D”**, attached hereto. The negotiated lump sum fee shall be incorporated into the **Supplemental Agreement**.

Any **Supplemental Agreement** must be executed by both the **Engineer** and the **Owner** prior to the **Termination Date** specified in Article 3 hereof.

It is distinctly understood and agreed that no claim by the **Engineer** for additional work, as identified in Article 9 hereof, or changes or revisions in work, as identified in Article 10 hereof, shall be made by the **Engineer** until full execution of the **Supplemental Agreement** and authorization to proceed is granted by the **Owner**. The **Owner** reserves the right to withhold payment to the **Engineer** pending verification of satisfactory work performed by the **Engineer**.

**ARTICLE 9. Additional Work.** If the **Engineer** is of the opinion that any work it has been directed to perform is beyond the scope of this Agreement and constitutes extra work, the **Engineer** shall promptly notify the **Owner** in writing. In the event the **Owner** finds that such work does constitute extra work, the **Owner** shall so advise the **Engineer** and a written supplemental agreement will be executed between the **Owner** and the **Engineer** as provided herein. The **Engineer** shall not perform any proposed additional work or incur any additional cost prior to the execution by both the **Engineer** and the **Owner** of a supplemental agreement. Additional compensation from the **Owner** to the **Engineer** shall be paid as a negotiated lump sum fee at the **Contract Rates** specified in **EXHIBIT “D”** attached hereto. The negotiated lump sum fee shall be incorporated into the supplemental agreement as specified in Article 8 hereof. The **Owner** shall not be liable or under any obligation to compensate the **Engineer** for work performed or costs

incurred by the **Engineer** relating to additional work not directly associated with the performance of the work authorized in this Agreement or as amended through supplemental agreement.

**ARTICLE 10. Changes or Revisions in Work.** If the **Owner** finds it necessary to request changes to the work, and the changes are within the applications of sound engineering principles, the **Engineer** shall make such revisions if requested and directed by the **Owner**.

**10.1 Preliminary Work.** The **Engineer** will make, without expense to the **Owner**, such revisions of any preliminary reports or drawings as may be required to meet the needs of the **Owner** and the applications of sound engineering principles.

**10.2 Previously Approved or Satisfactorily Completed Work.** If the **Owner** finds it necessary to request the **Engineer** to make changes to work previously approved by the **Owner** or work satisfactorily completed for which the **Owner** approves or, after a definite plan has been approved by the **Owner**, if a decision is subsequently made by the **Owner**, which for proper execution involves extra services and expenses for changes in or additions to the drawings specifications or other documents, this will be considered as additional work, and compensation from the **Owner** to the **Engineer** will be in accordance with Article 9 hereof.

**10.3 Project Delays.** If the **Engineer** is required to perform additional work due to delays by the imposition of causes not within the **Engineer's** control, such as by the re-advertisement of bids or by the delinquency or insolvency of contractors, such work associated with these delays shall be considered additional work, and the **Engineer** shall be compensated by the **Owner** for such extra services and expense in accordance with Article 9 hereof.

**10.4 Reduction of Project Cost.** The **Engineer** shall use TxDOT unit prices to develop the estimate of probable construction cost. **Engineer** cannot and does not guarantee that proposals, bids or the construction cost will not vary from opinions of probable estimate of construction cost prepared by **Engineer**. The **Owner** shall allow the **Engineer** to review the estimate of probable construction cost

immediately prior to advertising the **Project** for bids. The **Engineer** shall add to the estimate of probable construction cost a contingency amount agreed to by the **Owner** to update the estimate of probable construction cost. Notwithstanding any provision herein to the contrary, after the proposals, bids or construction cost are received from qualified bidders on the **Project**, the **Owner** may require changes in the final approved plans of the **Project** to enable the **Owner** to reduce the **Project** construction cost. Upon request by the **Owner**, the **Engineer** shall determine the required revisions to the final approved plans that will reduce the **Project's** estimate of probable construction cost. Revisions that are determined to be major design changes to the previously approved final plans will be considered additional work by the **Engineer**. Minor revisions to the previously approved final plans will not be considered additional work. Payment for this additional work will then be made to the **Engineer** in accordance with Article 9 hereof. The reprinting, bidding and advertising for request for proposals of the modified final plans will be at the **Owner's** expense

#### **ARTICLE 11. Ownership and Release of Documents.**

**11.1 Ownership of Documents.** Original drawings and specifications are the property of the **Engineer** however the **Project** is the property of the **Owner**, and the **Engineer** may not use the drawings and specifications thereof for any purpose not relating to the **Project** with the **Owner's** consent. The **Owner** shall be furnished with such reproductions of drawings and specifications as the **Owner** may reasonably require. Upon completion of the work or any earlier termination of this Agreement under Article 3.4 hereof, the **Engineer** will revise drawings to reflect changes made during construction and will promptly furnish the **Owner** with one complete set of reproducible record prints. Prints shall be furnished by the **Engineer**, as an additional service, at any other time requested by **Owner**. All such reproductions shall be the property of the **Owner** who may use them without the **Engineer's** permission for any proper purpose relating to the **Project**, including but not limited to additions to or completion of the **Project**. Any additions or revisions by the **Owner** to a drawing signed, sealed, and dated by a registered professional engineer, shall be made in

accordance with the Texas Engineering practice Act and the Rules of the State Board of Registration for Professional Engineers.

All documents furnished to the **Engineer** by the **Owner** shall be delivered to the **Owner** upon completion or termination of this Agreement. The **Engineer**, at the **Engineer's** own expense, may retain copies of such documents or any other data under this Agreement.

**11.2 Release of Documents or Information.** Release of information to the public or others regarding the **Project** will be accordance with the Texas Public Information Act.

**ARTICLE 12 Discounts, Rebates, Refunds.** In connection with procurement services rendered by the **Engineer**, if procurement services are required of the **Engineer** hereunder, all discounts, rebates and refunds shall accrue to the **Owner**. For some purchases, the **Engineer** may deem that payment within the discount period is not safe; and/or inspection, guarantees, or other considerations may dictate delay. In such cases, the **Engineer** shall promptly notify the **Owner** so that a course of action may be mutually agreed upon by the **Owner** and the **Engineer**.

**ARTICLE 13. Records, Accounting, Inspection.** The **Engineer** shall keep full and detailed records and accounts in a manner approved by the **Owner**. The **Engineer** shall afford the **Owner's** authorized personnel and independent auditors, if any, full access to the work performed by the **Engineer** regarding the **Project** and to all of the **Engineer's** books, records, correspondence, instructions, drawings, receipts, vouchers and other documents relating to such work under this Agreement and the **Engineer** shall preserve all such records for three (3) years after final payment. The **Engineer** shall deliver to the **Owner** upon completion of such work, a statement of the cost of such work detailed according to the accounting procedure and requirements of the **Owner**.

**ARTICLE 14. Subcontracting and Assignment.** The **Engineer** shall not assign, subcontract or transfer the **Engineer's** interest in this Agreement without the prior written consent of the **Owner**. The **Engineer** shall bind every subconsultant by written subcontract to observe all the terms of this Agreement to

the extent that they may be applicable to each subconsultant. No subcontract relieves the **Engineer** of any responsibilities under this Agreement.

The **Engineer**, and the **Owner**, do hereby bind themselves, their successors, executors, administrators and assigns to each other party of this Agreement and to the successors, executors, administrators, and assigns of such other party in respect to all covenants of this contract.

**ARTICLE 15. Patents.** The **Engineer** shall indemnify and save the **Owner** harmless from all liability for alleged or actual infringement of any patent resulting from the use of apparatus or equipment furnished or designed by the **Engineer** or from the use of any process designed by the **Engineer** or effected by said apparatus or equipment, and the **Engineer** shall indemnify and save the **Owner** harmless from and against all costs, legal fees, expenses and liabilities incurred in or about any claim of or action for such infringement: provided, however, that the **Owner** shall promptly transmit to the **Engineer** all papers served on the **Owner** in any suit involving such claim of infringement, and provided further, that the **Owner** permits the **Engineer** to have entire charge and control of the defense of any such suit. If because of actual infringement the use of such apparatus, equipment, or process is enjoined, the **Engineer** shall refund the purchase price thereof in proportion to the length of service uncompleted, the life of such apparatus or equipment being assumed as five years. The **Engineer** hereby grants to the **Owner** a non-exclusive, royalty-free license under patents now or hereafter owned by the **Engineer** covering any machines, apparatus, processes, articles, or products included in the **Engineer's** work hereunder.

**ARTICLE 16. Confidential Information, Inventions and Other Restrictions.**

**16.1 Confidential Information.** The **Engineer** shall not use in any way, commercial or otherwise, except to the extent required by the proper performance of this Agreement; and shall hold in confidence and not disclose to any person, for any reason or at any time, any information relating to the secret processes, products, compositions, machinery, apparatus or trade secrets of the **Owner**, or any other confidential information given to the **Engineer** by any of the **Owner's** commissioners, elected officials,

employees, or representatives or acquired by the **Engineer** during the term of or as a result of this Agreement. Any information not generally available to the public shall be considered secret and confidential for the foregoing purposes; provided, however, that any technical information which was lawfully in the **Engineer's** possession prior to such disclosure to the **Engineer** by the **Owner** or which is or shall lawfully be published or become part of general knowledge from sources other than the **Engineer** or which otherwise shall lawfully become available to the **Engineer** from a source other than the **Owner**, shall not be subject to these provisions. All the foregoing stipulations shall apply to such information and work hereunder as well as to any information and ideas originated or developed by the **Engineer** in performing such work. Such information may, of course, be disclosed to the proper officials or employees of the **Owner** if necessary to perform the work hereunder. The **Engineer** shall, however, inform each of its employees who receive such information of these restrictions and the **Engineer** shall take all reasonable precautions and exert all reasonable efforts to assure conformance with such restrictions by all of its officers, employees, and agents, obtaining from them if necessary, agreements satisfactory to the **Owner**, effectuating the purposes of this Article.

**16.2 Inventions.** The **Engineer** shall communicate to the **Owner** at once, and require the **Engineer's** employees assigned to this **Project** to communicate to the **Owner** all inventions and improvements which any of the **Engineer's** employees, either alone or in conjunction with any of the **Owner's** employees may conceive, make or discover during the course of or as a result of work on this **Project** under this or any ensuing agreement with the **Owner** that relates to the processes, products, compositions, machinery or plants of the **Owner**, or relating in any way to any of the operations in which the **Owner** may be obligated to pay to the **Engineer** as compensation for services rendered by the **Engineer** under contract with the **Owner**. The **Engineer** shall require its employees to execute patent applications and assignments thereof to the **Owner** or its nominees, and powers of attorney relating thereto for any country the **Owner** may designate, and shall take all other actions as the **Owner** may request to maintain and protect

such inventions and improvements. The **Owner** shall pay all costs or charges incurred in protecting such inventions and improvements if the **Owner** desires to protect them. Before assigning any of the **Engineer's** employees to work under any contract with the **Owner** concerning this **Project**, the **Engineer** shall obtain from them agreements satisfactory to **Owner** complying in all respects with the terms and provisions of this Article.

16.3 The rights and obligations set forth in Article 16 shall survive the performance of this Agreement, or any termination, discharge or cancellation thereof

#### **ARTICLE 17. Engineer's Seal, Responsibility and Warranties.**

17.1 **Engineer's Seal.** The **Engineer** shall assign a responsible engineer or engineers licensed to practice in the State of Texas, who shall sign, seal and date all appropriate engineering submissions to the **Owner** in accordance with the Texas Engineering Practice Act and the Rules of the State Board of Registration for Professional Engineers.

17.2 **Engineer's Responsibility.** The **Engineer** shall be responsible for the accuracy of the work for the **Project** and shall promptly make necessary revisions or corrections resulting from errors, omissions, or negligent acts by the **Engineer**. No additional compensation will be made to the **Engineer** for any necessary revisions or corrections resulting from errors, omissions, or negligent acts by the **Engineer**.

The **Engineer's** responsibility for all questions arising from design errors and/or omissions will be determined by the **Owner** or a designee appointed by the **Owner**. The **Engineer** will not be relieved of the responsibility for subsequent correction of any such errors or omissions or for clarification of any ambiguities until after the construction phase of the **Project** has been completed.

#### **17.3 Warranties.**

(a) The **Engineer** warrants that engineering design work performed by the **Engineer** hereunder shall be in accordance with sound engineering design practices and in conformance with applicable code and standards established for such work.

(b) Notwithstanding anything to the contrary contained in this Agreement, the **Owner** and the **Engineer** agree and acknowledge that the **Owner** is entering into this Agreement in reliance on the **Engineer's** experience and abilities with respect to performing the **Engineer's** services hereunder. The **Engineer** accepts the relationship of trust and confidence established between it and the **Owner** by this Agreement. The **Engineer** covenants with the **Owner** to use the **Engineer's** best efforts, skill, judgement and abilities to design the **Project** and to further the interests of the **Owner** in accordance with the **Owner's** requirements and procedures, in accordance with all professional standards, and in compliance with all applicable national, federal, state, county and municipal laws, regulations, codes, ordinances, orders and with those of any other body having jurisdiction. If the development of plans, specifications and estimates (hereinafter referred to as "PS&E") are identified in this Agreement under Article 2 hereof or **EXHIBIT "B"**, attached hereto, as part of the services to be provided by the **Engineer** for the **Project**, prior to the commencement of construction, the **Engineer** shall certify in writing to the **Owner** that the **PS&E** for the **Project**, and the improvements when built in accordance therewith, conform to all applicable governmental regulations, statutes and ordinances then in effect. The **Engineer** represents, covenants and agrees that there are no obligations, commitments or impediments of any kind that will limit or prevent performance of the **Engineer's** services.

(c) The **Engineer** represents, covenants and agrees that all of **Engineer's** services to be furnished by the **Engineer** under or pursuant to this Agreement from the inception of the Agreement until the **Project** has been fully completed, shall be of the standard and quality which prevail among engineers of similar experience, knowledge, skill and ability engaged in engineering practice throughout Texas under the same or similar circumstances involving the design and construction of **Project**.

(d) The **Engineer** represents, covenants and agrees that the **Engineer's** special talent, training and experience cause the **Engineer** to be the prime professional on the **Project**; that because of such talent and training, the **Engineer** envisions the construction of the **Project** in its entirety and possesses the

special skills which enable the **Engineer** to recognize dangerous conditions that a reasonable, prudent engineer having such special skills could anticipate may arise from the proper use of the **Project** after acceptance by **Owner**; and that the **Engineer** recognizes that any commissioners, elected officials, employees and agents of the **Owner**, plus residents and owners of property within the area affected by the **Project** are within a class of foreseeable persons who will be relying on the project being designed in a professional and safe manner.

(e) If the development of **PS&E** is identified in this Agreement under Article 2 hereof or **EXHIBIT "B"**, attached hereto, as part of the services to be provided by the **Engineer** for the **Project**, the **Engineer** represents, covenants and agrees that the **PS&E** of the **Project** will be accurate and free from any material errors. The **Engineer** additionally represents, covenants and agrees to the following: that the design of the **Project** will conform to its foreseeable use as a **Project** with all the amenities as set forth in any **PS&E** developed by the **Engineer** for the **Project**; that the result of such **PS&E**, if built in accordance therewith, will be suitable for purposes for which the **Project** is designed; and the **Project** will be inspected in a workmanlike, professional manner and will be suitable for the **Project's** intended purpose. The **Engineer's** responsibilities as set forth herein shall at no time be in any way diminished by reason of any approval by the **Owner** of any **PS&E** developed by the **Engineer** for the **Project**, nor shall the **Engineer** be released from any liability by reason of such approval by the **Owner**, it being understood that the **Owner** at all times is ultimately relying upon the **Engineer's** skill and knowledge in preparing such **PS&E**.

(f) In connection with the **Engineer's** performance of procurement services hereunder, if any, the **Engineer** use its best efforts to obtain from all vendors of equipment and materials, fullest possible warranties against defective materials and workmanship for the benefit of the **Owner**.

**ARTICLE 18. Engineer's Resources.** The **Engineer** shall furnish and maintain, at the **Engineer's** own expense, office space for the performance of all services, skilled and sufficient personnel, as well as adequate and sufficient equipment to perform the services as required under this Agreement.

**18.1 Project Manager.** The **Engineer** shall provide a manager (**Project Manager**) for the **Project** that is a registered professional engineer in the State of Texas. The **Project manager** shall have such knowledge and experience as will enable that **Project Manager** during the course of the **Project** without prior consent of the **Owner**. If, due to situations beyond the control of the **Engineer**, the **Engineer** must change the **Project Manager** prior to the completion and acceptance of the **Project**, the **Engineer** will submit a request to change the **Project Manager** to the **Owner** for approval.

**18.2 Employees of the Engineer.** All employees of the **Engineer** shall have such knowledge and experience as will enable them to perform the duties assigned to them and required for the services under this Agreement. Any employee of the **Engineer** who, in the opinion of the **Owner**, is incompetent, or whose conduct becomes detrimental to the work required under this Agreement, shall immediately be removed from association with the **Project** when so instructed by the **Owner**. The **Engineer** certifies that the **Engineer** presently has employed sufficient and qualified personnel, and will maintain sufficient and qualified personnel for performance of the services under this Agreement.

**18.3 Documents/Information Exchange** The purpose of this Article is to define the required automated resources, format for graphics files, and information exchange pertaining to the **Project**. Taking into consideration that the **Owner** has a significant investment in the development of the **Project**, there is a need for the **Engineer** to provide consistency in document development for information exchange. Consistency in document development for information exchange and production will help facilitate an economically efficient **Project**. Therefore, the **Engineer** shall provide the **Owner** with documents and information in accordance with the special requirement outlined in **EXHIBIT "B"** attached hereto.

**ARTICLE 19. Indemnification.** To the fullest extent permitted by applicable law, the **Engineer** and its agents, partners, subcontractors, and consultants (collectively "**Indemnitors**") shall and do agree to indemnify, and hold harmless the **Owner**, the **Owner's** respective directors, elected officials, employees and agents (collectively "**Indemnitees**") from and against all claims, damages, losses, liens, causes of action,

suits, judgments and expenses, including attorney fees, of any nature, kind or description (collectively "Liabilities") of any person or entity whomsoever arising out of, caused by or resulting from the negligent performance of the **Engineer's** services through activities of the **Engineer**, its agents, partners, subcontractors and/or consultants performed under this Agreement, and which are caused by or result from error, omission, or negligent act of the **Engineer** or of any person employed or contracted by the **Engineer** provided that any such **Liabilities** (1) are attributable to bodily injury, personal injury, sickness, disease or death of any person, or to the injury to or destruction of tangible personal property including the loss of use and consequential damages resulting there from and (2) are caused in whole or in part by any negligent act or omission of the **Engineer**, anyone directly or indirectly employed by the **Engineer** or anyone for whose acts the **Engineer** may be legally liable. The **Engineer** shall also save harmless the **Owner** from any and all expense, including but not limited to, attorney fees which may be incurred by the **Owner** in litigation or otherwise resisting said claim or liabilities which may be imposed on the **Owner** as a result of such activities by the **Engineer**, its agents partners, subcontractors and/or consultants. In this connection, it is agreed and understood that the **Engineer** shall not be responsible for any portion of the liability proximately caused by the **Owner's** negligence.

**ARTICLE 20. Joint and Several Liability.** In the event more than one of the **Indemnitors** are connected with an accident or occurrence covered by the indemnification in Article 19 hereof, then each of such **Indemnitors** shall be jointly and severally responsible to the **Indemnitees** for indemnification and the ultimate responsibility among such **Indemnitors** for the loss and expense of any such indemnification shall be settled by separate proceedings and without jeopardy to any **Indemnitee**. The provisions of this Article shall not be construed to eliminate or reduce any other indemnification or right which the **Owner** or any of the **Indemnitees** has by law.

**ARTICLE 21 Insurance.** The **Engineer** shall obtain and maintain insurance in the limits of liability for each of the types of insurance coverage identified as follows.

- (1) **Workers' Compensation**, endorsed with a waiver of subrogation in favor of the **Owner** in accordance with the statutory obligations imposed by Worker's Compensation or Occupational Disease laws under the Texas Workers' Compensation Law ("**Statutory Texas**")
- (2) **Commercial General Liability**, endorsed with the **Owner** as an additional insured and endorsed with a waiver of subrogation in favor of the **Owner** *all to the extent of the liabilities assumed by the Engineer under Article 19 and Article 20* herein, in limits of liability not less than one million dollars (**\$1,000,000**) combined single limit each occurrence and in the aggregate for bodily injury and property damage.
- (3) **Texas Business Automobile Policy**, endorsed with the **Owner** as an additional insured and endorsed with a waiver of subrogation in favor of the **Owner** *all to the extent of the liabilities assumed by the Engineer under Article 19 and Article 20 herein*, in limits of liability not less than two hundred fifty thousand dollars (**\$250,000**) each person for bodily injury, five hundred thousand dollars (**\$500,000**) each occurrence for bodily injury, and one hundred thousand dollars (**\$100,000**) each occurrence for property damage.
- (4) **Professional Liability** in limits of **\$1,000,000** each claim and aggregate.

The **Engineer** covenants and agrees to maintain an insurance policy in the minimum limits of liability for each of the types of insurance coverage identified above. The **Engineer** shall furnish the **Owner** with a certificate of insurance (**Hidalgo County Certificate of Insurance**) showing the said policy to be in full force and effect during the period of service, identified in Article 3 hereto, for this Agreement. The completed Hidalgo County Certificate of Insurance shall be attached hereto and identified as **EXHIBIT "G"**- *Hidalgo County Certificate of Insurance*. The **Engineer** will be considered in breach of contract should the **Engineer** fail to maintain an insurance policy in the minimum limits of liability and requirements

identified above while performing services for and under this Agreement, and will be subject to default and termination of the Agreement as outlined in Article 3.4 hereto. Additionally, the **Engineer** covenants and agrees to use its best efforts to maintain an insurance policy in the minimum limits of liability and requirements identified above until one year following the date of the acceptance of the **Project** by **Owner**.

**ARTICLE 22. Compliance with Laws.** The **Engineer** shall comply with all applicable Federal, State and local laws, statutes, codes, ordinances, rules and regulations and the orders and decrees of any court, or administrative bodies or tribunals in any manner affecting the performance of this Agreement including, without limitation, worker's compensation laws, minimum and maximum salary and wage statutes and regulations and licensing laws and regulations. When required the **Engineer** shall furnish the **Owner** with satisfactory proof of its compliance therewith.

**ARTICLE 23. Non-collusion.** The **Engineer** warrants that the **Engineer** has not employed or retained any company or persons, other than a bona fide employee working solely for the **Engineer**, to solicit or secure this Agreement, and that the **Engineer** has not paid or agreed to pay any company, engineer or any other person or entity any fee, commission, percentage, brokerage fee, gifts or any other consideration contingent upon or resulting from the award or execution of this Agreement. For breach or violation of this warranty the **Owner** shall have the right to annul this Agreement without liability or, in the **Owner's** discretion, to deduct from the *Services Fee*, or otherwise recover, the full amount of each fee, commission, percentage, brokerage fee, gift or contingent fee.

**ARTICLE 24. Gratuities.** The **Owner** mandates that employees of the **Owner** shall not accept any benefits, gifts or favors from any person doing business or who reasonably speaking may do business with the **Owner** under this Agreement; the only exceptions allowed are ordinary business meals. Any person doing business with or who may reasonably seeking to do business with the **Owner** under this Agreement may not make any offer of benefits, gifts or favors to **Owner** employees, except as mentioned

herein above. Failure on the part of the **Engineer** to adhere to this provision may result in the termination of this Agreement.

**ARTICLE 25. Payment of Franchise Tax.** The **Engineer** hereby certifies that the **Engineer** is not delinquent in Texas franchise tax payments, or that the **Engineer** is exempt from, or not subject to, such as tax. A false statement concerning corporation's franchise tax status shall constitute grounds for termination of the Agreement at the sole option of the **Owner**.

**ARTICLE 26. Disputes.** The **Engineer** shall be responsible for the settlement of all contractual and administrative issues arising out of any procurement made by the **Engineer** in support of the services under this Agreement.

**ARTICLE 27. Severability.** In the event any one or more of the provisions contained in this Agreement shall for any reason, be held to be invalid, illegal, or unenforceable in any respect such invalidity, illegality or unenforceability shall not affect any other provision thereof and this Agreement shall be construed as if such invalid, illegal or unenforceable provision had never been contained herein .

**ARTICLE 28. Notices.** All notices to either party by the other required under this Agreement shall be personally delivered or mailed to such party at the following respective addresses:

**OWNER:**        **Hidalgo County**  
                      **100 E. Cano, 2<sup>nd</sup> Floor**  
                      **Edinburg, Texas 78539**

**ENGINEER:**    **TEDSI Infrastructure Group, Inc.**  
                      **1201 E. Expressway 83**  
                      **Mission, Texas 78572**

The Address may be changed by either party by written notice and notice so mailed shall be effective upon mailing.

**ARTICLE 29. Miscellaneous Provisions.**

(a) This Agreement constitutes the entire Agreement between the **Engineer** and the **Owner** relating to the work herein described and supersedes any prior understanding or written or oral contracts

between the parties respecting the subject matter defined herein. These are no previous or contemporary representations or warranties of the **Owner** or the **Engineer** not set forth herein.

(b) Except as specifically provided herein no modification, waiver, termination, rescission, discharge or cancellation of this Agreement or of any terms thereof shall be binding on the **Owner** unless in writing and executed by an officer or employee of the **Owner** specifically authorized to do so.

(c) No waiver of any provision of or a default under this Agreement shall affect the right of the **Owner** thereafter to enforce said provision or to exercise any right or remedy in the event of any other default whether or not similar.

(d) No modification, waiver, termination, discharge or cancellation of this Agreement or of any terms thereof shall impair the **Owner's** right with respect to any liabilities whether or not liquidated of the **Engineer** to the **Owner** theretofore accrued.

(e) All rights and remedies of the **Owner** specified in this Agreement are in addition to the **Owner's** other rights and remedies.

(f) The **Engineer** shall remain an independent contractor and shall have no power nor shall the **Engineer** represent that the **Engineer** has any power to bind the **Owner** or to assume or to create any obligation express or implied on behalf of the **Owner** except as specifically authorized in advance by the **Owner**.

(g) The Agreement shall be construed under the laws of the State of Texas and is performable in Hidalgo County, Texas.

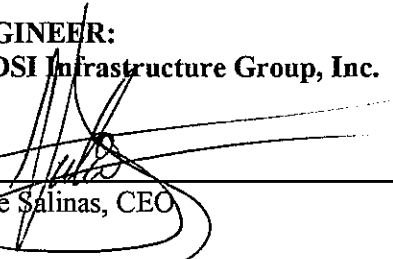
(h) This Agreement may only be amended by a written document executed by the **Owner** and the **Engineer** as provided by Article 8 herein.

**ARTICLE 30. Signatory Warranty.** The undersigned signatory or signatories for the **Engineer** hereby represent and warrant that the signatory is an officer of the organization for which he or she has executed this Agreement and that he or she has full and complete authority to enter into this Agreement on

behalf of the **Engineer**. The above-stated representations and warranties are made for the purpose of inducing the **Owner** to enter into this Agreement.

WITNESS WHEREOF, the **Engineer** and the **Owner** have caused this **Agreement for Professional Services** to be effective as of the \_\_\_\_ day of \_\_\_\_\_, 2012.

**ENGINEER:**  
**TEDSI Infrastructure Group, Inc.**

  
\_\_\_\_\_  
Jesse Salinas, CEO

**OWNER:**  
**HIDALGO COUNTY**

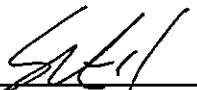
  
\_\_\_\_\_  
Ramon Garcia, County Judge

**ATTEST:**

  
\_\_\_\_\_  
Arturo Guajardo, Jr., County Clerk

Approved by Commissioners' Court  
on 7/31/12 RD

**APPROVED AS TO FORM:**  
**Atlas, Hall & Rodriguez, LLP**

  
\_\_\_\_\_  
By: Stephen L. Crain

**ATTACHMENTS:**

- EXHIBIT A** -Scope of Services to be provided by the Owner
- EXHIBIT B** -Scope of Services to be provided by the Engineer
- EXHIBIT C** -Work Schedule
- EXHIBIT D** -Engineer's Rates
- EXHIBIT E** -Work Authorization Form
- EXHIBIT F** -Supplemental Agreement Form
- EXHIBIT G** -Certificate of Insurance (*Hidalgo County*)

**EXHIBIT A**  
**Scope of Services to be provided by the**  
**Owner**

**EXHIBIT “A”**  
**Services to be Provided by the Owner**

The following provides an outline of the services to be provided by the **Owner** in the development of the **Work Authorizations**.

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

- 1) Prepare and execute a Purchase Order with Hidalgo County Purchasing Department
- 2) Authorization to the **Engineer** to begin work.
- 3) Payment for work performed by the **Engineer**.
- 4) Assistance to the **Engineer**, as necessary, to obtain required data and information from other local, regional, and state agencies that the **Engineer** cannot easily obtain.
- 5) Secure required Environmental permits from regulatory agencies
- 6) Acquire additional Right of Way identified by the **Engineer**
- 7) Provide any available relevant data that may on file concerning the Project.
- 8) Provide timely review and decisions in response to the **Engineers** request for information and/or submittals and deliverables.
- 9) Attend and participate in progress meetings as required and as coordinated and conducted by the **Engineer**.
- 10) Advertise and award, as assisted and recommended by the **Engineer**, construction contracts for the PS&E developed by the **Engineer**.
- 11) Attend pre-bid and pre-construction conferences coordinated and conducted by the **Engineer**.
- 12) Review and approve monthly and final estimates, developed by the **Engineer**, for payment to the Contractor. Compensate and pay the Contractor for work performed as identified in the approved monthly and final estimates.
- 13) Provide assistance to **Engineer** where necessary and possible with **Owner** information/resources to ensure project is completed within timely/efficient basis.
- 14) Disseminate, mail or deliver mail-out flyer, public meeting agendas and handouts, maps, and other related project information to the public.
- 15) Providing professional court transcribing and translation service as and when required for the public meeting and/or public hearing.
- 16) Provide a hard copy and digital copy of court transcript from meetings.
- 17) Provide hard copy of all public input received from meetings.
- 18) Publish the notices in the local newspaper, arrange for, pay and provide a location for the public meeting and hearing to be held,
- 19) Provide a mailing list and copy, collate and mail letters to adjacent property owners, local governmental officials and others as necessary.

**EXHIBIT B**  
**Scope of Services to be provided by the**  
**Engineer**

## EXHIBIT "B"

### Services to be Provided by the Engineer

The engineer shall provide the following engineer services required for the preparation of the plans, specification and estimate, and related documents for the above noted project. The Engineer shall maintain a direct line of communication and coordinate very closely with the Owner.

#### **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) Develop a design schematic and submit for review.
  - b) Revise schematic to incorporate comments
  - c) Identify irrigation system impacted by proposed improvements. Show proposed location for relocation of irrigation systems impacted. Design and detailing of irrigation systems is not included in the scope of work.
- 5) Develop flexible pavement design report.
- 6) Assist in developing a public involvement plan and accomplish tasks as necessary to effectuate the plan
- 7) Identify existing right of way limits and locate all major utilities within the study limits.
- 8) Determine minimum ROW and easement requirements using the proposed typical sections and preliminary cross sections. Adjust the proposed typical sections to accommodate refinements in design of the proposed alternative. Such refinements may include widening of pavement for turn lanes, changes in side slopes to reduce ROW requirements, use of retaining walls to minimize ROW and environmental

impacts, addition of the proposed pavement design section, and other changes in the roadway typical sections.

- 9) 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.
- 10) 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) Project Control and Baseline (Set in location clear of proposed improvements)
  - a) Establish Horizontal and Vertical Control Benchmarks by setting permanent benchmarks with an Aluminum disk on a 5/8" iron rod set in concrete, every 1000' throughout the limits of the project. Establish elevations on set points within the specifications of the TSPS Category 8. If applicable, NGS first order benchmarks shall be incorporated into the level loops utilizing the NAVD88 Datum elevations. Signed and Sealed, RPLS, control data sheets shall be created for the newly establish BMs and included in the deliverables.
  - b) Stake existing centerline
    - i) Set 2' #5 iron rods at every 1000 ft, at all angle points, PC's, PT's and all intersecting roadways. Center points to be set are every 1000 feet.
    - ii) Reference all angle points, PC's, PT's, and at 1000 foot interval stations with iron pins on the right of way line (on both sides).
    - iii) Stationing shall correspond with the design centerline. Stationing shall be painted at 500-foot stations on the pavement using traffic paint.
- 4) Obtain cross sections every 100 ft at whole stations. Cross sections to extend 10 ft outside of proposed right of way. Obtain additional survey information as necessary to accurately develop a digital terrain model (DTM).
- 5) Topographic Survey (All work will be to 10 foot outside of the proposed ROW)
  - a) Obtain driveway cross sections. Cross sections to extend 10 ft outside of proposed right of way.
  - b) Update Inventory public access, commercial, and private driveways by type (dirt, caliche, gravel, concrete or paved).
  - c) 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.
- 6) Culverts:
  - a) Obtain size of drainage structure, type, skewed angle, and material. Label and describe each structures (for example if it's an irrigation or drainage culvert) size and length.
  - b) Locate and obtain inlet and outlet flow lines elevations at structures, top of headwall, aprons, edge of pavement, and center line.
  - c) Obtain profile and cross sections of upstream and downstream ravines on man-made channels leading from and to the existing or proposed structure. These profiles and cross sections shall extend from inlet and outlet flow lines to distance of 500 ft. beyond the right of way or as directed by the Engineer.

- d) Determine type of wingwall (i.e. flared wingwall, parallel, etc...) and safety end treatments (pipe runners, safety end treatments, barrier rail, etc. For barrier rail include type of end treatments, location, type, length, and height.
- e) Obtain pictures of culverts barrels and outlet and inlet view to right of way line.
- 7) 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.
- 8) 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) Utility (All work will be to 10 foot outside of the proposed ROW)
  - a) The Engineer shall meet with Utility providers periodically to coordinate the work efforts and resolve any utility related problems. The Engineer shall prepare the minutes for these meetings and forwarded to the County. The Engineer shall address the following issues and any other items deemed necessary during the Utility Coordination meetings:
    - i) Activities completed since last meeting
    - ii) Problems encountered.
    - iii) Late activities.
    - iv) Activities required by the next progress meeting.
    - v) Solutions for unresolved and/or anticipated problems.
    - vi) Information or items required from other agencies/consultants.
  - b) If a reimbursable utility relocation exists, the Engineer shall request conveyance documents from the utility provider.
  - c) The Engineer shall notify the Utility companies in writing and request the following information in writing:
    - i) Project letting date and request they relocate prior to letting.
    - ii) Develop their relocation plan according to Utility Accommodation Policy Manual.
    - iii) Forward their relocation plan to the Engineer.
    - iv) Request in writing when relocation of utilities will be complete.
    - v) Upon immediate completion of relocation, request they forward as-built plans to the County.
  - d) The Engineer shall develop the typical sections, alignment, and preliminary cross sections addressing the utility location and shall forward these to the respective utility company.
  - e) The Engineer shall update all files and plans based on the utility company responses.
  - f) The Engineer shall identify all utility conflicts on the plans and prepare layouts and profiles of existing utility crossings showing conflicts of utilities with proposed improvements. The Engineer shall forward these layouts to the County and the utility companies. During design process, the Engineer shall field verify all visible utility conflicts.
  - g) The Engineer shall verify the proposed relocation plan submitted by the Utility companies to assure

their design is according to Utility Accommodation Policy Manual. Upon the Engineer's review and concurrence with the proposed relocation plan, they shall forward their recommendation for approval to the State.

- h) Contact "One Call" to request marking of underground utilities
  - i) Request existing utility information from local utility companies
  - j) The Engineer will perform any surveying necessary to for horizontal location of located, "Flagged", underground utilities and visible overhead utilities.
  - k) The Engineer will obtain measure downs on utilities as follows
    - i) Top of key on gas line values
    - ii) Top of key on water line values
    - iii) Flowline, size of tie-ins and direction of flow for sanitary sewer manholes
    - iv) Flowline, size pipe for irrigation systems
    - v) Flowline and size of system for inverted siphons.
  - l) Subsurface Utility Engineering is not included in the scope of work.
- 2) Right of Way
- a) The Engineer shall stake all proposed right of way and drainage easement necessary for preparation and construction of this project as required to finalize the acquisition process and as required for utility relocations.
  - b) Right of Way Map (NOT SEALED) Development – The Engineer will provide the Right of Way Maps in accordance with the TxDOT Checklist below:
    - i) General
      - (1) Graphics files will be in Microstation and Word software.
      - (2) Photos of proposed ROW staking included.
      - (3) Field notes and Parcel Plats are numbered continuous.
      - (4) Scale shall be 1"=50' for 34" x 22" plans and 1"=100" for 11" x 17" plans
    - ii) Title Sheet Requirements
      - (1) Title and description of project including county, limits, etc.
      - (2) Vicinity map with begin and end sta.
      - (3) Equations and Exceptions
      - (4) Index
      - (5) Legend
      - (6) Title block completely filled out with Construction and R.O.W. CSJs'
      - (7) List all Major Utilities from Station to Station
    - iii) Individual Map Sheet Requirements
      - (1) Sheet size 34" X 22"
      - (2) Text legible when reduced to half-scale.
      - (3) Title block completely filled out with R.O.W. CSJ
      - (4) Matchlines
      - (5) Project layout sheet
    - iv) Existing information:
      - (1) R.O.W. lines
      - (2) Whole property or whole property inset
      - (3) Roadways
      - (4) Survey, county, and city limit lines shown and labeled
      - (5) Improvements shown and labeled (see below)
      - (6) Monumentation i.e. P.C., P.T., Break Points
      - (7) North arrow
      - (8) Scale
      - (9) Property lines

- (10) Property descriptions i.e., lot, block, tract, subdivision, etc.
- (11) Identify existing and proposed access denial locations (if applicable)
- v) Proposed information:
  - (1) Type II Monumentation i.e. P.C., P.T., Break Points and 1500' intervals
  - (2) Survey and R.O.W. lines
  - (3) Basis of bearings
  - (4) Parcel bearings and distances correspond with traverse sheet
  - (5) Outside ties (P.O.C.) corresponds with field notes
  - (6) Point of beginning (P.O.B.) established on proposed R.O.W. line
  - (7) Parcel tied to baseline
  - (8) Baseline information shown i.e. Stationing, bearings, curve data, etc.
  - (9) Conveyance information shown in tables i.e. parcel number, grantors name, amount of take, remainder etc.
  - (10) Math checked on remainder
- vi) Improvements:
  - vii) 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.
  - viii) Off-premise outdoor advertising signs within proposed R.O.W. are shown and labeled.
- ix) Utilities:
  - (1) 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.
  - (2) Location of underground storage tanks and/or filler caps are shown and labeled
- c) Field Notes
  - i) Heading
  - ii) County
  - iii) Highway
  - iv) Parcel number
  - v) R.O.W. CSJ
  - vi) Construction CSJ
  - vii) General Description or "preamble"
  - viii) 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
  - ix) Parent tract data is shown:
    - (1) Size of parent tract
    - (2) Survey data or lot, block, and subdivision
    - (3) Name of last recorded seller and buyer
    - (4) Date, volume and page or document number of last recorded conveyance
    - (5) Records and county of last recorded conveyance
  - x) Beginning Description
    - (1) Point of commencement is on outside tie and is described accurately by bearings and distances as it leads to the point of beginning.
    - (2) Point of beginning is on proposed R.O.W. line
  - xi) Particular Description
    - (1) Traverse calls are clockwise sequence
    - (2) Bearings and distances correspond exactly with map, parcel sketch, and traverse sheet
    - (3) Bearings are to nearest whole second and distances are to the nearest one-hundredth of a foot
    - (4) Calls are numbered
    - (5) Denial of access shall be described from beginning to end (if applicable)

- xii) Closing Description
  - (1) Last call leads back to P.O.B.
  - (2) Restates area of parcel
  - (3) Establishes taking in existing road R.O.W. if applicable
  - (4) Legal description is referenced to Plat
  - (5) Sealed and signed
  - (6) Include an access clause whether access is permitted or denied (if applicable)
  - (7) Shows P.O.B. and P.O.C.
  - (8) All data corresponds exactly with Map and Field Notes
  - (9) Sheet size is no larger than 8 1/2" x 11"
  - (10) Plat closely matches example provided
  - (11) Plat referenced to legal description
  - (12) Sealed and signed
  - (13) Include an access clause whether access is permitted or denied (if applicable)
- d) Traverse Sheet
  - i) Computations show area to be acquired in sq. ft. or acres, whichever is applicable
  - ii) Computations show area that is existing road R.O.W. if applicable
  - iii) Traverse calls are in clockwise sequence
  - iv) Error of closure meets the following:
    - (1) Secondary rural .0003
    - (2) Primary rural - secondary urban .0002
    - (3) Urban or industrial .00013

## **ENVIRONMENTAL ASSESSMENT**

An Environmental Assessment (EA) will be prepared by the Engineer in accordance with applicable procedures of the State of Texas, and the requirements of the National Environmental Policy Act and Federal Highway Administration Technical Advisory 6640.8A. – As No significant environmental issues or impacts are expected for this project.

- 1) Document Need for and Purpose of the Project. This task will be based on existing roadway design elements and constraints, current and projected traffic volumes, traffic accident data, and proposed typical sections, schematics, and intersection configurations. As this data is developed, the information will be incorporated into appropriate EA sections describing the need for the project, the objectives and issues eliminated from further study. The project description section will include text and graphics illustrating the proposed project design.
- 2) Alternatives Analysis
  - a) This task will include text and graphics illustrating the different alternatives considered prior to selecting the preferred.
  - b) It will also describe the reasonable alternatives and those eliminated from further study.
- 3) Affected Environment and Environmental Consequences. For each of the categories listed below, the necessary background and field reconnaissance will be performed to include in the EA. Data will be provided on a regional scale, but will be specific to the project study area and alternatives that received primary consideration during the planning process. A study corridor will be identified which adequately provides the resource information used in the decision – making process and assist in determining which issues should be eliminated from further study.
  - a) Land Use and Public Facilities.
  - b) The effects of project alternatives will be characterized in light of land use trends, plans, and policies within the study area. This effort will entail close coordination with local and regional planning

- bodies and will include an analysis of potential secondary effects of the proposed improvements. Potential effects on public and community facilities will also be identified and discussed.
- c) Social Economic Impacts, Environmental Justice and Limited English Proficiency. As applicable, this task will address potential changes to local neighborhoods or communities and the effects on community cohesion relating to travel patterns, access, and public safety, particularly as those changes may differently affect various social groups and minorities. This information will include race/ethnicity, limited English proficiency, income, and other relevant data. The assessment will conform to FHWA guidance for compliance with Executive Order 12898, Environmental Justice. Project alternatives will also be evaluated with respect to potential effects on local economic development, secondary growth effects, tax revenues, public expenditures, employment and income, and access effects on local agricultural and commercial enterprises. The assessment will also address potential economic effects upon adjacent businesses due to changes in traffic patterns during and after construction.
  - d) Noise. The project noise assessment will inventory potential noise sensitive receptors. In accordance with TxDOT noise assessment guidelines, the existing alignment for the design year will be computer simulated, and future noise levels will be predicted at each of the sensitive receptors using the FHWA/TxDOT approved Traffic Noise Model (TNM).
  - e) Air Quality. Since the Average Annual Daily Traffic is expected to be below 140,000 vehicles per day, an air quality analysis will not be required, however, a mobile source air toxics (MSAT) qualitative analysis will be required. The qualitative analysis will include:
    - i) Brief MSAT description and discussion of national trend data projecting substantial overall reductions in emissions due to stricter engine and fuel regulations issued by EPA;
    - ii) Comparison of the expected effect of the project on traffic volumes, vehicle mix, or routing of traffic, and the associated assumed changes in MSATs;
    - iii) An assessment of schools, licensed day cares, elder care facilities, and hospitals located within 100 and 500 meters of the ROW;
    - iv) Discussion of information that is incomplete or unavailable for a project-specific assessment of MSAT impacts, in compliance with CEQ regulations (40 CFR 1502.22(b)); and
    - v) Summary of current studies regarding the health impacts of MSATs, in compliance with 40 CFR 150.22(b);
  - f) Water Resources. The effort will reflect the requirements of the National Pollutant Discharge Elimination System (NPDES) storm water general permit program for construction activities and the anticipated project Storm Water Pollution Prevention Plan (SW3P), particularly with respect to potential mitigation benefits to be achieved through the SW3P. Additionally, the 100-year floodplain, as delineated by FEMA, will be identified and the impacts of the proposed project will be assessed. Flood management effects will also be addressed through coordination with the local flood management agency.
  - g) Wetlands and Waters of the U.S. The Engineer will perform jurisdictional identifications, including wetlands and evaluations in all areas potentially affected by the primary alternatives. If required, delineations of wetlands, approved jurisdictional determination forms and Individual Section 404 wetlands permit(s) and/or Nationwide Permit(s) requiring a Pre-discharge Notification or wetland mitigation planning will be added by supplemental agreement.
  - h) Ecological Resources. The Engineer will perform a characterization of project area ecological resources, including descriptions of vegetation, prime farmland and wildlife habitat resources. Ecologically sensitive resources, if any, will be identified and discussed in the EA. An assessment of the project area's potential to support federally threatened or endangered species will be conducted. This includes a data search of the Natural Diversity Database (NDD), an assessment of habitat in the project area for any listed species determined to be of potential occurrence and early coordination with the U.S. Fish and Wildlife Service. A list of all state and federally sensitive

species of potential occurrence in the project area will be provided in the EA. If required, any required threatened or endangered species presence/absence surveys would be added by supplemental agreement.

i) Archaeological Resources

i) The archaeological investigations, the archaeologist will search site files and maps at the Texas Archeological Research Laboratory and the THC's Texas Archeological Sites Atlas on-line database for any previously recorded surveys and historic or prehistoric archaeological sites located in or near the proposed alignment. This will provide site and geographic information that will be essential to the discovery and interpretation of any undiscovered cultural resources along the proposed alignment. Because the project involves lands owned by a political subdivision of the state, any archaeological field investigations will require a Texas Antiquities Permit. The archaeologist will prepare a permit application and submit the THC.

ii) Once the background review is completed and the permit is obtained, the archaeologist will conduct an archaeological survey of the project area. The field survey will consist of one archaeologist walking the entire proposed project area with particular focus on any new, undisturbed right-of-ways and previously recorded sites. The survey will be of sufficient intensity to determine the nature, extent, and, if possible, potential significance of any cultural resources located within the proposed project area. During the survey, the archaeologist will be examining the ground surface and erosional profiles for cultural resources and excavating small shovel tests where appropriate to test for subsurface archaeological deposits or assess the geomorphic setting. Any discovered or previously documented sites will be document and plotted on USGS 7.5 minute topographic maps using hand-held Global Position System (GPS) units.

iii) Once the field survey has been completed, the archaeologist will prepare a report of the investigations. The report will document previous investigations in the area, background cultural settings, the methodology used in the investigations, the presence and condition of any previously recorded sites revealed in the records review, the general nature of the survey area with respect to archaeological potential, and recommendations on the need for further work. Draft copies of the report will be submitted to the Engineer for review and comment. Once this has been accomplished, any appropriate edits will be made and a draft report will be submitted to TxDOT and the THC for review. The Texas Antiquities Code also requires that 20 copies of the final report be submitted once the project is completed. Additionally, text will be provided to incorporate into the EA.

j) Historical Resources

i) For the historic portion of the project, a historian will conduct a literature review of the project area and present a research design to TxDOT-Environmental Affairs Division (ENV), as described in ENV guidance procedures regarding historic resource surveys. This review includes examination of files at THC to identify historic properties that have been previously listed in the NRHP, designated as Recorded Texas Historical Landmarks, and/or are included in the Texas Historic Sites Inventory or other available local historical surveys. The historical will also check other available archival sources, such as historic maps or aerial photographs, to locate previously unidentified potential historic resources in the project's area of potential effect. A historic literature review will also be conducted to establish appropriate historical and cultural contexts for the project area. This information will be compiled along with a survey methodology as part of the research design that will be submitted to ENV and the THC for final determination of the APE and approval for the project to proceed.

ii) Following completion of the preliminary research tasks, two architectural historians will carry out a reconnaissance field survey of the proposed alignment to identify and record historic buildings, structures, and objects within the project's APE. The historians will plot the location

- of each identified resource on a USGS (or similar) map, take photographs, obtain addresses, and gather physical data on the structure such as property type and subtype classifications, stylistic influences, construction dates, integrity issues and preliminary eligibility recommendations.
- iii) Four copies of a summary reconnaissance report will be provided and will include the following:
- (1) A letter report containing an overview of the results of the reconnaissance survey. The letter report will describe the findings of the reconnaissance survey and recommend the need, if any, to conduct further survey efforts. The letter report will have sufficient detail and clarity to provide a basis for making determinations of NRHP eligibility.
  - (2) Photographic documentation for each identified historic resource. At a minimum, this documentation will include an oblique view of the primary facade and a side elevation of each resource, with the subject filling the frame. All photographs will be 3.5-x-5-inch or 4-x6-inch color prints. All photographs will be well focused and clearly depict architectural and other details relevant to an evaluation of the resource's character-defining features. Photographs will be attached to separately labeled pages that clearly identify project name, address (or location) of resource, and site ID number.
  - (3) An inventory of all identified resources provided in tabular form that lists their site ID numbers, locations, property and subtype classifications, stylistic influences, construction dates, integrity issues, and preliminary NRHP eligibility recommendations.
  - (4) A map or maps showing the location of each identified historic resource labeled with its appropriate site ID number. Outbuildings and landscape features will be reported as subsets of the main site ID number for a property. The project APE, major street names, and other directional landmarks will be clearly indicated on the map. Maps will be based on aerial photographs, USGS 7.5-minute quadrangle topographic maps, or similarly detailed maps.
  - (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.
- k) Recreational Resources. The assessment will include a review of the applicability of Section 4(f) of the DOT Act. A Section 4(f) Evaluation, should one be required, will be added as a supplemental agreement.
- l) Hazardous Materials. An electronic search of potential hazardous materials sites will be conducted followed by reconnaissance-level field investigations to verify the location of potential sites and collect additional preliminary information. If required, a Phase I Environmental Site Assessments will be added by supplemental agreement. Information will be incorporated into the EA, along with a discussion of potential impacts, based on the best available information.
- m) Indirect and Cumulative Impacts. The Engineer will identify indirect and cumulative impacts in accordance with the requirements of FHWA Technical Advisory T 6640.8A (1987), Report 466: Desk Reference for Estimating the Indirect Effects of Proposed Transportation Projects (National Cooperative Highway Research Program 2002), TxDOT Guidance on Preparing Indirect and Cumulative Impact Analyses (2006), and related guidance from FHWA and TxDOT.
- n) Identify Corridor Issues and Field Investigations. The Engineer will perform collect, research, review and assemble available environmental data and review various maps. The Engineer will perform site visits to identify environmental constraints including land use, socioeconomic issues, wetlands and other waters of the U.S., recreational issues (Section 4[f]), industrial waste issues, and ecological resources. If necessary, any threatened or endangered species presence/absence surveys or wetland delineation will be added by supplemental agreement.
- o) Graphics. The Engineer will prepare base maps for field use, stakeholder and public meeting presentation graphics, and final EA graphics using digital aerial photography. Screening graphics will be developed for each resource constraint category appropriate for the project. Alternatives will be mapped and each resource category quantified to provide the objective basis for the alternatives

analysis. Report graphics will be prepared as needed to show the potential impacts of the proposed action on various resources and how these impacts may be minimized and/or avoided through the EA process.

- 4) Report Preparations. The EA document will comply in all respects with the NEPA and the guidelines of TxDOT and the FHWA for preparing environmental documents. The analysis will address the adverse and beneficial impacts of project construction and operation, and will also include indirect and cumulative impacts. The impact analysis will be organized to facilitate equivalent comparisons of alternatives, employing charts, tables, maps, and matrices as appropriate. Generalized preliminary mitigation options will be emphasized where adverse impacts may potentially occur. The Engineer will submit the EA document in accordance with the provisions in Phase II.
- 5) Public Involvement
  - a) Draft and advertise project Public Notices (English and Spanish) in accordance with the standards set forth by the Texas Department of Transportation public hearing requirements to provide effective notification procedures for project events and meetings that will heighten overall public participation.
  - b) Design and develop project support materials (English and Spanish), including mail-out flyer, public meeting agendas and handouts, maps, and other related project information, for public dissemination. Owner to be responsible for disseminating provided material.
  - c) Provide coordination of professional transcribing and translation services for Public Meetings and/or Public Hearings. Additionally, the Engineer will provide technical support and assistance at one mock meeting and one public hearing. Upon receipt of the transcripts the Engineer will prepare the Summary and Analysis for submittal to TxDOT. Owner is responsible for providing professional transcribing and translation service.
  - d) Hidalgo County will publish the notices in the local newspaper, arrange for, pay and provide a location for the public meeting and hearing to be held, will provide a mailing list and copy, collate and mail letters to adjacent property owners, local governmental officials and others as necessary.
  - e) Agency Coordination: As part of the proposed effort, the Engineer intends to communicate with local, state, and federal agencies and organizations regarding project compliance with applicable environmental approvals, including the regulatory programs. These entities include:
    - i) Local, county and municipal government agencies
    - ii) U.S. Army Corps of Engineers regarding jurisdictional determinations, if necessary
    - iii) U.S. Fish & Wildlife Service regarding federally threatened or endangered species
    - iv) Federal Emergency Management Agency and local flood management agency regarding NFIP compliance, if necessary.
    - v) Texas Parks & Wildlife Department (TPWD) regarding area parks, wildlife refuges, state-listed endangered species, and compliance with TxDOT/TPWD Memorandum of Understanding and request for data from the Natural Diversity Database
    - vi) Texas Commission on Environmental Quality (TCEQ) regarding hazardous materials and groundwater protection compliance with TxDOT/TCEQ Memorandum of Understanding.
- 6) All correspondence will be preserved for inclusion in the EA document; telephone or in-person discussions with agency officials will be logged as part of the project file.
- 7) Assumptions Used to Derive the Proposed Scope of Services:
  - a) All investigations will be conducted based on existing literature and mapped data, aerial photographic interpretation, interactions with local and regional experts, and field reconnaissance. If necessary for specific site investigations, access to private property will be the responsibility of the Engineer.
  - b) The Engineer team assumes an EA that leads to the issuance of a Finding of No Significant Impact will fulfill the NEPA requirements for this project (as opposed to an Environmental Impact Statement). Additional work beyond EA will be added by supplemental agreement.

- c) Any technical studies required as a result of modifications in project design alignment, or alternatives submitted after submittal of the draft EA will added by supplemental agreement.
- d) The Engineer assumes that requisite engineering information such as traffic data will be provided by the Pharr District of TxDOT in a timely manner. The draft EA will be submitted to County/TxDOT not less than 60 days after receiving final engineering information, including diagrams for all alternative alignments or design options to be addressed in the EA.
- e) The Engineer will prepare a scoping letter for distribution to resource and public agencies. This letter will also include minutes of the meetings with City/County officials, and Public Hearing.
- f) This scope and fee is based on the current standards of practice for environmental documents developed for Texas Department of Transportation as of the date of signature of this Agreement. Modifications to submitted document required by subsequent changes to the standards of practice are additional services. Additional services will be added by supplemental agreement.

#### **PLAN, SPECIFICATIONS AND ESTIMATE SERVICES**

- 1) The Engineer shall prepare and submit work under this task in accordance to the PS&E Preparation Manual. The location of project should depict the entire project with beginning and ending (Station Numbers/Reference Markers) for each noted CSJ. Mapping landmarks (side streets, creeks, etc.) along with North Arrow and a scale should be shown to help relate the physical location of the project.
- 2) The Engineer shall use the Design Speed, the Funding Category, Average Daily Traffic, ADT, Roadway Classification, Location Type, and the appropriate Design Criteria to develop the typical sections as set forth in the Roadway Design Manual, PS&E Preparation Manual and other deemed necessary State approved manuals to prepare and submit the work under this task. The existing typical section should be shown with current roadway (pavement, right of way, etc.) characteristics. The proposed typical sections should be shown below the existing typical section with all related pertinent (pavement, right of way, etc.) information for the proposed roadway construction.
- 3) For Roadway, Bridge and Traffic quantities, the Engineer shall prepare and submit work under this task in accordance to the PS&E Preparation Manual and other deemed necessary State approved manuals. All summaries shall be consolidated per CSJ, City or County participation, etc. Any quantities shown "For Contractor Information Only" should be shown as such.

#### **TRAFFIC CONTROL PLANS (TCP)**

- 1) The Engineer will develop a conceptual traffic control plan (TCP), roll plot, and narrative. These information will be submitted to the County and TxDOT for review. The Engineer shall make a presentation to the District Traffic Control Safety Review Committee to obtain approval of the TCP prior to development of plan sheets. Modifications requested by TxDOT or County after approval will be consider additional work and be added by supplemental agreement.
- 2) The Engineer shall notify the State if they plan on requesting a speed reduction at the work zones. The Engineer shall prepare the request form using the latest approved Strip Map within the project limits in conjunction with the Traffic Standards for this request. If the project limits is within the city limits, the request shall be coordinated with the State and the local municipality at the early design process.
- 3) The Engineer shall provide the State with a hardcopy and accompanying electronic file of a schedule and Critical Path Method for project duration for each phase of construction using SureTrack software
- 4) The Engineer shall describe the type of work to be performed for each phase of sequence of construction and any special instructions (ex: storm sewer, culverts, bridges, railing, illumination, signals, retaining walls, signing, paving surface sequencing or concrete placement, ROW restrictions, utilities, etc.) that the contractor should be made aware to include limits of construction, obliteration, and shifting or detouring of traffic prior to the proceeding phase.
- 5) The Engineer shall include the work limits, the location of channelizing devices, positive barrier, location & direction of traffic, work area, stations, pavement markings, and other information deemed

necessary for each phase of sequence of construction.

- 6) If Engineer determines that a standard is not applicable to address the entire project, then the Engineer shall prepare layouts for each respective phase of sequence of construction to illustrate any necessary additional construction details not covered by the Standards to address work limits for each sequence in stations, channelizing devices, barricades, positive barrier, tapers, buffer zones, TCP signage, signs, work zone pavement markings, work area, location & direction of traffic, locations for pedestrian crossings, and other information deemed necessary for each phase of sequence of construction. The Engineer shall develop the layouts by referring to the TxDOT standards, latest version of the TxMUTCD for non-TCP signage that may be needed as part of the TCP signage for intersections. The layouts shall address construction of detours, access to business, homes, side streets, and driveways, and reroute of traffic to other roads.
- 7) The Engineer will address drainage issues that are a result of changes in horizontal and vertical profiles by specifying the location and size of the temporary drainage structures.
- 8) The Engineer shall prepare the plan and profile sheets and cross sections for all detours.
- 9) The Engineer will develop TCP plans as double stacked, 1" = 100'. TCP plans will be developed for a two phase approach to traffic control.

### **ROADWAY DETAILS**

- 1) The alignment sheet(s) include the following for complex projects and/or where it is not desirable to show the following information on the plan and profiles sheet(s): include the project limits for the entire project, label curve data bearings/coordinates for each alignment, computer generated data may be graphically place on the sheet(s) and if applicable the State Plane Coordinates System should be noted on this sheet(s).
- 2) The Benchmark Data sheet shall be developed in tabulated form and accompanied by surveyor's sketch showing the Station Number from respective alignment, Offset, and Elevation and Physical Description.
- 3) The Engineer shall design the plan (horizontal) and profile (vertical) including roadway transitions based on the controlling criteria previously defined and as set forth in the previously listed. The Engineer shall develop the alignment for the project in GEOPAK format. Plan and Profile sheets will be developed at 1"=100'.
- 4) The Engineer shall identify and notify the State all locations not meeting the set criteria. In addition, the Engineer shall provide alternatives and a recommendation to address these design issues.
- 5) The Engineer shall develop and verify all cross sections in preparation of the proposed traffic control plan, drainage, utilities, right-of-way, and access onto adjacent properties. In addition, the cross sections shall be drained to maintain the natural watershed unless otherwise directed by the State.
- 6) The Engineer shall determine all cut and fill quantities.
- 7) The Engineer shall design all intersections to accommodate the design vehicles turning radius. The ADA-wheelchair ramps shall be designed in accordance to the TDLR compliance and the latest TxDOT's Pedestrian Ramp Standards in conjunction with the requirement of the latest version of the TxMUTCD as it relates location of the traffic signals pedestrian heads, signage, and pavement markings.
- 8) The Engineer shall design all longitudinal barriers (railing and guardrail), raised median, fencing, bus bays, parking areas, mailboxes, and shoulder texturing in accordance to the criteria set forth in the roadway design manual and standards. Miscellaneous Details Sheet(s) may be developed to illustrate any necessary additional construction details not covered by the Standards.

### **DRAINAGE DETAILS**

- 1) The Engineer shall use the Roadway Design Manual, Hydraulic Manual, PS&E Preparation Manual, and other deemed necessary State approved manuals to prepare and submit the work under this section
- 2) The Engineer shall use the above-listed manuals to prepare and submit the work under this task. The

hydraulic calculations shall have the following based on previously County approved drainage study:

- a) Description-Material, Size, & Entrance (headwall)
  - b) Design discharges, Flow per barrel, barrel slope, and Manning n-value
  - c) Inlet flow line, allowable headwater, roadway (shoulder) elevation, calculated inlet headwater elevation
  - d) Outlet flow line, Tailwater for design frequency/frequencies, type of flow, critical depth, and calculated friction losses, calculated outlet water elevation
  - e) Controlling headwater elevation, outlet velocity, and recommended countermeasures to maintain an acceptable outlet velocity.
- 3) The Engineer shall show the location of culverts and ditches on the roadway plan view.
  - 4) The Engineer shall use TxDOT standards preferably at all times. Modification to inlets, pipe connection, bedding details, and other elements pertaining to drainage details shall be included under this work task. The BCS sheet must be submitted for all box culverts within the project limits. This sheet must be signed and sealed by the Engineer.

### **TRAFFIC ITEMS**

The Engineer shall inventory all signage through the project limits including those limits that are considered incidental to the project limits. All intersections and roadway signage shall be designed and spaced according to the requirements set forth in TxDOT's Sign Crew Field Book and standards for work under this task. Any signs no longer used by the State shall be taken out and replaced by an accepted TxMUTCD sign. The Engineer shall design all signage according to the latest version of the TxMUTCD, Supplemental to TxMUTCD, and TxDOT's Signs and Markings Manual. Design of flashing beacons or traffic signals not specifically indicated in Attachment D is not included. Additional locations will be added by supplemental agreement.

### **STORM WATER POLLUTION PREVENTION PLANS (SW3P)**

The Engineer shall submit and prepare separate SW3P sheets when soil is to be disturbed as part of the erosion control measures during each phase of the sequence of construction. The general plan for the SW3P on this project is to enclose the area under construction including existing and proposed inlets with erosion control devices and provide a stabilized construction entrance at points where traffic will be entering or leaving the construction site. The Engineer shall also design structures or features to control erosion and suspended sediments for post-construction. A standardized General Note will serve as the SW3P where there is to be no soil disturbance (seal coats, overlays, etc.) in the project. The Engineer shall refer to the Hydraulic Design Manual, TxDOT standards, TxDOT Storm Water Management Guidelines, the Environmental Manual, and District Environmental Staff for guidance on work under this task. Erosion Control measures shall conform to one or more of the approved TxDOT / Texas Natural Resources Conservation Commission (TNRCC) / US Environmental Protection Agency (EPA) / US Army Corps of Engineers (USACE) Best Management Practices. The appropriate Best Management Practice(s) shall be listed on the Environmental Issues, Permits, and Commitments (EIPC) sheet to be included as a Plan Sheet and shall be followed by the Engineer and Contractor to completion. Plan sheets will be developed separate from TCP as 1"=100', double stacked.

### **CROSS SECTIONS**

For the Final Submission, the Engineer shall furnish the final cross-section plots, on 36" wide x 120" long roll plots, showing both the original terrain and the design cross-sections, showing the roadway template, at a vertical scale of 1"=10' and a horizontal scale of 1"=10'. The design cross-sections shall indicate the slope rate on the side slopes. The Engineer shall use GeoPak software and provide the state with the applicable files. Cross sections are to show proposed pavement thickness, top of subgrade, finish grade of side bar

ditches with slopes and location of right of way. Indicating other features within the cross sections is not part of the scope of work, ie. Underground utilities, storm sewer lines, top soil, etc.

## **CONSTRUCTION PHASE SERVICES**

### **Construction Management and Support**

The Engineer will provide engineering and support services for and during the construction of the Project or portions of the Project approved by the Owner. Specific services for CONSTRUCTION MANAGEMENT AND SUPPORT by the Engineer will include the following:

#### **Construction Bidding**

- 1) The Engineer will furnish to the Owner the necessary copies of approved plans, specifications, notices to bidders, and proposals as prepared under PS&E.
- 2) The Engineer will coordinate and conduct a Pre-Bid Conference for prospective bidders.
- 3) The Engineer will assist Owner the tabulation of bids, recommendations to the Owner as to the proper action on all bid proposals received, and the preparation of formal contract documents for the award of each construction contract.

#### **4) Construction Contract Administration**

- a) In general, the Engineer will provide the management and engineering support/data required for consultation and advisement to the Owner and act as the Owners representative as provided in the General Condition of the Construction Contract.
- b) The Engineer will coordinate and conduct a pre-construction conference.
- c) Defects and Deficiencies. The Engineer will use his best efforts to protect the Owner against defects and deficiencies in the work of the Contractor. The Engineer will promptly notify the Owner of any such defect or deficiency, and take all steps possible to require the Contractor to correct the defect or deficiency.
- d) Contractor Payment. The Engineer will take measurements and calculate quantities, in accordance with the construction contract specifications, of those items of work accepted and conforming to the construction contract specifications, for the preparation of the monthly and final estimates for payment to the Contractor.
- e) The Engineer will provide Project site inspection of the authorized construction contract(s) as follows:
  - i) Project Engineer. The Engineer will provide visits by the Project Engineer or a competent representative of the Engineer to the site of construction for the purpose of monitoring the Contractor's progress and conformance to the construction contract plans and specifications.
  - ii) Resident Engineer and/or Construction Inspector(s). The Engineer will furnish the services of a Resident Engineer and/or Construction Inspector(s) for continuous on the site inspection construction to monitor/inspect the Contractor's daily progress and conformance to PS&E specifications.

#### **5) Miscellaneous Technical Activities**

- a) Shop Drawings. The Engineer will review and check all shop or working drawings furnished by the Contractor.
- b) Control of Materials & Equipment. The Engineer will provide inspection of all materials and equipment furnished/used by the Contractor as follows:

- i) Review and record all laboratory, shop and mill tests of materials and equipment for compliance with the construction contract specifications.
  - ii) Observe and/or perform Project record testing and/or independent assurance testing as outlined in the construction contract specifications.
- 6) Change Orders. When applicable the Engineer will prepare the engineering data, including plan sheet drawings, specifications, and estimates, for the preparation of construction contract change orders, which may be required due to actual field conditions encountered or new requirements directed by the Owner.
- 7) As Built Drawings. The Engineer will develop as built drawings to depict the work as actually constructed. The Owner will be furnished five (8) set of prints.

# **EXHIBIT C**

## **Work Schedule**

EXHIBIT "C"  
**Work Schedule**

A detailed work schedule for each **Work Authorization**, identified and more particularly described in Article 7 of this Agreement, shall be prepared by the **Engineer** to be submitted and approved by the Owner in writing for each **Work Authorization**. The work schedule will provide specific work sequence and definite review times by the **Owner** and the **Engineer** of the work performed.

The **Engineer** will diligently pursue the completion of each **Work Authorization** as defined by the milestones and deliverable due dates outlined in each **Work Authorization**'s associated work schedule.

The **Engineer** will inform the **Owner** (in reasonable advance of the delay) should the **Engineer** encounter delays that would prevent the performance of all work in accordance with the established work schedule.

**EXHIBIT D**  
**CONTRACT RATES**

**EXHIBIT "D"**  
**CONTRACT RATES**

**LABOR COST**

<b>JOB DESCRIPTION</b>	<b>2012 CONTRACT RATE</b>	<b>2013 CONTRACT RATE</b>	<b>2014 CONTRACT RATE</b>	<b>2015 CONTRACT RATE</b>
SR. PROJECT MANAGER	\$200.00	\$210.00	\$220.00	\$232.00
PROJECT MANAGER	\$180.00	\$189.00	\$198.00	\$208.00
SR. ENGINEER	\$160.00	\$168.00	\$176.00	\$185.00
PROJECT ENGINEER	\$145.00	\$152.00	\$160.00	\$168.00
ENGINEER	\$125.00	\$131.00	\$138.00	\$145.00
SR. ENGINEER DESIGNER / EIT	\$110.00	\$116.00	\$122.00	\$128.00
ENGINEERING DESIGNER	\$100.00	\$105.00	\$110.00	\$116.00
CADD OPERATOR	\$90.00	\$95.00	\$100.00	\$105.00
CLERICAL	\$75.00	\$79.00	\$83.00	\$87.00

Rates beyond 2015 will be increase by 5% per year.

**DIRECT EXPENSES**

Mileage	\$ Current GSA Travel Rate/Mi.
Car Rental	\$ At Cost
Lodging (in state)	\$ Current GSA Per Diem Rate
Meals	\$ Current GSA Per Diem Rate
Air Travel	at cost
Overnight Carrier cost	\$40/letter
Copies (8 ½ x 11)	\$0.10/ea
Color Copies (8 ½ x 11)	\$1.00/ea
Copies (11 x 17)	\$0.20/ea
Color Copies (11 x 17)	\$2.00/ea
Mylar (11 x 17) Plots	\$3.50/ea
Color Mylar (11 x 17) Plots	\$7.00/ea
Bond Plots	\$1.00/sq. ft.
Color Bond Plots	\$2.50/sq. ft.
Mylar Plots	\$2.50/sq. ft.
Color Mylar Plots	\$5.00/sq. ft.
Photo Quality Color Plots	\$12.00/sq. ft.
SUBCONSULTANTS	COST PLUS 15%

**EXHIBIT E**  
**Work Authorization Form**

**HIDALGO COUNTY**  
**Professional Engineering Services**  
**Contract # C-12-119-06-26**  
**Work Authorization Form**

**WORK AUTHORIZATION NO. \_\_\_**

**THIS WORK AUTHORIZATION** is made pursuant to the terms and conditions of Section I.A. of the Agreement made by and between **HIDALGO COUNTY**, action herein by and through the **Commissioner's Court**, hereinafter called the "**Owner**," and, TEDSI Infrastructure Group, professional engineers of Mission, Texas, hereinafter called "**Engineer**".

**PART 1. SCOPE OF WORK**

The purpose of this Work Authorization is for the **Engineer** to provide \_\_\_\_\_.

The scope of services to be provided by the **Owner** is identified in *EXHIBIT "A" – Scope of Services to be Provided by the Owner* attached hereto.

The scope of services to be provided by the **Engineer** is identified in *EXHIBIT "B" – Scope of Services to be Provided by the Engineer* attached hereto.

**PART 2. ESTIMATED COST**

The estimated cost for services under this Work Authorization is \$ \_\_\_\_\_. This amount is based upon the costs outlined in the **Estimated Cost Proposal** attached hereto as **EXHIBIT "D"**.

**PART 3. PAYMENT**

Compensation and payment to the **Engineer** for the services established under this Work Authorization shall be made in accordance with Article/Part/Section \_\_\_ of the Agreement.

**PART 4. FUNDING**

This Work Authorization No.1 shall be funded through funding source:

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

Requisition Number \_\_\_\_\_ (MUST BE INCLUDED AFTER CC APPROVAL)

**PART 5. PERIOD OF SERVICE**

This Work Authorization shall become effective on the date of final acceptance of the parties hereto, and terminate upon completion of scopes of the work authorization.

**PART 6. RESPONSIBILITIES AND OBLIGATIONS**

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

**PART 7. ACKNOWLEDGEMENT AND CONFIRMATION**

Acknowledgement and confirmation by Hidalgo County Precinct No.2 Commissioner Hector Palacios as to content and detail of this Work Authorization No. # 2.

HIDALGO COUNTY  
COMMISSIONER PRECINCT NO. 2:

BY: \_\_\_\_\_

**PART 8. ACCEPTANCE AND APPROVAL**

This Work Authorization is hereby accepted, approved by Hidalgo County Commissioners' Court on \_\_\_\_\_ as indicated below and effective as of \_\_\_\_\_ day of \_\_\_\_\_, 2012.

THE ENGINEER:  
**TEDSI Infrastructure Group**

THE OWNER:  
HIDALGO COUNTY

\_\_\_\_\_  
Jesse Salinas, CEO

\_\_\_\_\_  
Ramon Garcia, County Judge

ATTEST:

\_\_\_\_\_  
Arturo Guajardo, Jr., County Clerk

**LIST OF ATTACHMENTS**

- ATTACHMENT "A" - Service to be Provided by the Owner
- ATTACHMENT "B" - Services to be Provided by the Engineer
- ATTACHMENT "C" - Work Schedule
- ATTACHMENT "D" - Cost Proposal

**EXHIBIT F**  
**Supplemental Agreement Form**

**EXHIBIT "F"**

**Supplemental Agreement Form**

THE STATE OF TEXAS §  
  §  
COUNTY OF HIDALGO §

**SUPPLEMENTAL AGREEMENT No. \_\_\_\_\_**  
**TO AGREEMENT FOR PROFESSIONAL SERVICES**

**THIS SUPPLEMENTAL AGREEMENT** is made pursuant to the terms and conditions of Article 8 of the Agreement made by and between **HIDALGO COUNTY**, acting herein by and through the **Commissioner's Court**, hereinafter called the "**Owner**", and \_\_\_\_\_, Professional Consultant of, \_\_\_\_\_, Texas, hereinafter called the "**ENGINEER**".

**WITNESSETH**

**WHEREAS**, the **Owner** and the **CONSULTANT** executed the **Agreement** on the \_\_\_\_\_ day of \_\_\_\_\_ 2012 concerning **CONSULTANT** for \_\_\_\_\_ (hereinafter referred to as the "**Project**"); and,

**WHEREAS**, Article \_\_\_ of the **Agreement**, (article title), establishes \_\_\_\_\_; and,

**WHEREAS**, it has become necessary to amend the contract to \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**AGREEMENT**

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

- I. Article \_\_\_ of the **Agreement**, (article title), is revised to

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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:**

BY: \_\_\_\_\_

**THE OWNER:  
HIDALGO COUNTY**

BY: \_\_\_\_\_

Ramon Garcia, County Judge

**ATTEST:**

BY: \_\_\_\_\_

Arturo Guajardo, Jr., County Clerk

**APPROVED AS TO FORM:**

ATLAS, HALL & RODRIGUEZ, L.L.P.

BY: \_\_\_\_\_

Stephen L. Crain

LIST OF ATTACHMENTS

(as required)

**EXHIBIT G**  
**Certificate of Insurance**



CONTRACT NO. C-12-119-07-31

DICKER ROAD

EXHIBIT "E"

Work Authorization Form

WORK AUTHORIZATION NO. 1

**THIS WORK AUTHORIZATION** is made pursuant to the terms and conditions of Article 7 of the **Agreement** made by and between the **HIDALGO COUNTY**, acting herein by and through the **Commissioner's Court**, hereinafter called the "**Owner**", and **TEDSI Infrastructure Group**, professional engineers of Mission, Texas, hereinafter called the "**Engineer**".

**PART 1. Scope of Work.** The purpose of this Work Authorization is to provide services as indicated below:

The scope of services to be provided by the **Owner** is identified in **ATTACHMENT "A" -Scope of Services to be Provided by the Owner** attached hereto.

The scope of services to be provided by the **Engineer** is identified in **ATTACHMENT "B" -Scope of Services to be Provided by the Engineer** attached hereto.

**PART 2. Estimated Cost.** The estimated cost for services under this Work Authorization is **\$ 397,469.00**. This amount is based upon the costs outlined in the **Fee Proposal** attached hereto as **ATTACHMENT "D"**.

**PART 3. Payment.** Compensation and payment to the **Engineer** for the services established under this Work Authorization shall be made in accordance with Articles 5, 6, and 7 of the **Agreement**.

**PART 4. Funding.** Work Authorization No. 1 shall be funded through funding source:  
Account No. 2-1200-431-00-122-062-0-731  
Requisition No. #220229

**PART 5. Period of Service.** This Work Authorization shall become effective on the date of final acceptance of the parties hereto, and all work associated with this Work Authorization shall be performed within the time period identified in the **Work Schedule** attached hereto as **ATTACHMENT "C"**.

**PART 6. Responsibilities and Obligations.** This Work Authorization does not waive the parties' responsibilities and obligations provided under the **Agreement**.

**PART 7. Acceptance and Acknowledgement.** Acknowledgement and confirmation by Hidalgo County Precinct No. 2, Commissioner Hector "Tito" Palacios, as to the content and detail of this Work Authorization No. 1.

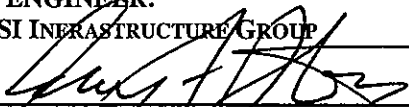
Hidalgo County Precinct No. 2

By:   
Hector "Tito" Palacios, Commissioner Precinct No. 2

**PART 8 Acceptance and Approval.** Work Authorization is hereby accepted, and approved by Hidalgo Commissioners' Court on \_\_\_\_\_ as indicated below and effective as of \_\_\_\_\_ day of \_\_\_\_\_, 2012.

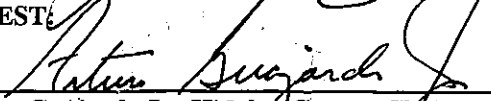
A purchase order will be issued by the Hidalgo County Purchasing Department after the execution of this document. Issuance of the purchase order will serve as the written Notice to Proceed on Work Authorization No. 1.

**THE ENGINEER:**  
TEDSI INFRASTRUCTURE GROUP

BY:   
Craig F. Stong, (Vice President)

**THE OWNER:**  
HIDALGO COUNTY

  
Ramon Garcia (County Judge)

ATTEST:  
By:   
Arturo Guajardo Jr., Hidalgo County Clerk

Approved by Commissioners' Court  
on 7/31/12 - 160

- LIST OF ATTACHMENTS
- ATTACHMENT "A" - Services to be Provided by the Owner
  - ATTACHMENT "B" - Services to be Provided by the Engineer
  - ATTACHMENT "C" - Work Schedule
  - ATTACHMENT "D" - Fee Proposal

CONTRACT NO. C-12-119-00-00  
DICKER ROAD  
WORK AUTHORIZATION NO. 1  
ATTACHMENT "A"  
Services to be Provided by the Owner

The following provides an outline of the services to be provided by the **Owner** in the development of the **Work Authorizations**.

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

- 1) Prepare and execute a Purchase Order with Hidalgo County Purchasing Department
- 2) Authorization to the **Engineer** to begin work.
- 3) Payment for work performed by the **Engineer**.
- 4) Assistance to the **Engineer**, as necessary, to obtain required data and information from other local, regional, and state agencies that the **Engineer** cannot easily obtain.
- 5) Secure required Environmental permits from regulatory agencies
- 6) Acquire additional Right of Way identified by the **Engineer**
- 7) Provide any available relevant data that may on file concerning the Project.
- 8) Provide timely review and decisions in response to the **Engineers** request for information and/or submittals and deliverables.
- 9) Attend and participate in progress meetings as required and as coordinated and conducted by the **Engineer**.
- 10) Advertise and award, as assisted and recommended by the **Engineer**, construction contracts for the PS&E developed by the **Engineer**.
- 11) Attend pre-bid and pre-construction conferences coordinated and conducted by the **Engineer**.
- 12) Review and approve monthly and final estimates, developed by the **Engineer**, for payment to the Contractor. Compensate and pay the Contractor for work performed as identified in the approved monthly and final estimates.
- 13) Provide assistance to **Engineer** where necessary and possible with **Owner** information/resources to ensure project is completed within timely/efficient basis.
- 14) Disseminate, mail or deliver mail-out flyer, public meeting agendas and handouts, maps, and other related project information to the public.
- 15) Providing professional court transcribing and translation service as and when required for the public meeting and/or public hearing.
- 16) Provide a hard copy and digital copy of court transcript from meetings.
- 17) Provide hard copy of all public input received from meetings.
- 18) Publish the notices in the local newspaper, arrange for, pay and provide a location for the public meeting and hearing to be held,
- 19) Provide a mailing list and copy, collate and mail letters to adjacent property owners, local governmental officials and others as necessary.

**CONTRACT NO. C-12-119-00-00**  
**DICKER ROAD**  
**WORK AUTHORIZATION NO. 1**  
**ATTACHMENT "B"**

**Services to be Provided by the Engineer**

The engineer shall provide the following engineer services required for the preparation of the plans, specification and estimate, and related documents for the above noted project. The Engineer shall maintain a direct line of communication and coordinate very closely with the Owner.

**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.

**PRELIMINARY ENGINEERING REPORT**

- 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) Drainage Report
  - a) Develop drainage area map for project site
  - b) Determine existing drainage conditions
  - c) Evaluate hydraulics for roadside ditches for widening of existing roadway.
  - d) Evaluate storm sewer system for potential curb and gutter roadway.
  - e) Evaluate potential impacts on existing FEMA Floodplain locations.
  - f) Prepare report of findings.
- 5) Geotechnical Report
  - a) Perform a Geotechnical Engineering Study for the two bridge structures and the siphon structure located along Dicker Road (Farm-to-Market [F.M.] Road 3072, between its intersections with . 23rd Street (State Highway [S.H.] 115) and S. Jackson Road (F.M. Road 2061), that will include drilling a total of six, 60-ft deep each borings. Typically, drilling will cease if five consecutive Texas Cone Penetrometer (TCP) test results of 100 blows for less than 4 in. are recorded. If unexpected soil conditions are encountered (i.e. softer than expected soil conditions based upon the TCP results), drilling will be continued past the anticipated maximum drilling depth and ceased at the Engineer's discretion.
  - b) Borings will be located in the field utilizing tape and right angle measurements from existing benchmarks.

Work Authorization No. 1  
Attachment "B" Con't

- c) Obtain a grab sample at or near the bottom of the embankment near the two irrigation canals and drainage ditch for a total of three samples. Sieve analyses will be conducted to compute D50 and D95 values for scour analyses by others.
  - d) Samples from the borings will be collected by split-spoon or Shelby tube sampling techniques in between each TCP sampling interval. Representative portions of the recovered samples will be sealed, identified, packaged, and transported to our laboratory for subsequent testing and classification.
  - e) 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.
  - f) 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. Testing program is anticipated to include water content determinations, Atterberg Limits (plasticity) tests, unconfined compressive strength tests, dry unit weight determinations, and grain size analyses. Laboratory testing will be performed in general accordance with applicable American Society for Testing and Materials (ASTM) standards.
  - g) The results of the field and laboratory analysis will be presented in a written engineering report which will include the results of the field and laboratory testing, as well as pier capacity curves and grain size curves for scour analyses.
  - h) Our scope of services and cost assumes that the boring locations will be accessible to truck-mounted drilling rigs conducting the drilling operations parked at or near the road shoulder and off of the existing roadway utilizing standard warning signs and cones to alert the traveling public of work ahead. If additional traffic control measures other than standard warning signs and cones are needed, Engineer will notify County and discuss traffic control services. The cost of such additional traffic control services will be an additional charge and will not be done until approved by the County via additional work by supplemental agreement.
  - i) Reasonable efforts to locate underground utilities prior to performing any underground exploration activities by contacting the local "one call" utility locating service for commercial utility companies (such as natural gas, electric, water, etc.) to locate and mark in the field all utilities within the limits of the subsurface exploration activities. Engineer will not be responsible for any damage to utilities not properly located by the aforementioned method or to any utility not located by the aforementioned method but encountered and damaged during the subsurface exploration process. If during project execution Engineer feels that there exists a possibility of un-located or improperly located utilities, Engineer will notify County and discuss additional utility locating services and processes to reduce the probability of encountering a utility to acceptable levels. The cost of such additional utility locating services will be an additional charge and will not be done until approved by the County via additional work by supplemental agreement.
- 6) Pavement Section Design Services
- a) Engineer will perform the pavement section design services for this segment of Dicker Road utilizing the 1993 American Association of State Highway and Transportation Officials (AASHTO) pavement design method based on traffic loading and frequency information developed from the traffic data collected by the Engineer.
  - b) Engineer will drill 18, 7-ft deep each pavement borings along the subject alignment and conduct California Bearing Ratio testing on subgrade samples for use in pavement design. Collection of falling weight deflectometer data is not included in our scope.
  - c) Borings will be located in the field utilizing tape and right angle measurements from existing benchmarks.
  - d) Samples from the borings will be collected by split-spoon or Shelby tube sampling techniques in between each TCP sampling interval. Representative portions of the recovered samples will be sealed, identified, packaged, and transported to our laboratory for subsequent testing and classification.
  - e) 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.
  - f) 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. Testing program is anticipated

Work Authorization No. 1  
Attachment "B" Con't

- to include water content determinations, Atterberg Limits (plasticity) tests, lime series determinations, sulfate content determinations, and grain size analyses. Laboratory testing will be performed in general accordance with applicable ASTM standards.
- g) The results of the field and laboratory analysis will be presented in a written engineering report which will include the results of the field and laboratory testing, as well as the pavement section design report.
  - h) Our scope of services and cost assumes that the boring locations will be accessible to truck-mounted drilling rigs conducting the drilling operations parked at or near the road shoulder and off of the existing roadway utilizing standard warning signs and cones to alert the traveling public of work ahead. If additional traffic control measures other than standard warning signs and cones are needed, Engineer will notify County and discuss traffic control services. The cost of such additional traffic control services will be an additional charge and will not be done until approved by the County via additional work by supplemental agreement.
  - i) Engineer will take reasonable efforts to locate underground utilities prior to performing any underground exploration activities by contacting the local "one call" utility locating service for commercial utility companies (such as natural gas, electric, water, etc.) to locate and mark in the field all utilities within the limits of the subsurface exploration activities. Engineer will not be responsible for any damage to utilities not properly located by the aforementioned method or to any utility not located by the aforementioned method but encountered and damaged during the subsurface exploration process. If during project execution Engineer feels that there exists a possibility of un-located or improperly located utilities, Engineer will notify County and discuss additional utility locating services and processes to reduce the probability of encountering a utility to acceptable levels. The cost of such additional utility locating services will be an additional charge and will not be done until approved by the County via additional work by supplemental agreement.
- 7) Development of level of service analysis, turning movement counts or traffic counts at 23<sup>rd</sup>, 10<sup>th</sup>, McColl Rd and Jackson Road.
- a) Project traffic counts for anticipated completion of construction and 20 years after completion of construction.
  - b) Prepare traffic signal warrants for locations based on counts.
  - c) Determine lane configuration based on traffic counts.
- 8) Roadway Design Evaluation
- a) Develop preliminary schematic for the following
    - i) Widening of existing roadway with roadside ditches
    - ii) Reconstruction of roadway with curb and gutter section.
  - b) Develop narrative and typical section for Traffic Control Plan for each roadway sections indicated above.
  - c) Develop typical section and preliminary pavement design.
  - d) Develop construction cost estimate for the two roadway sections indicated above.
- 9) Bridge Evaluation
- a) Request current BRINSAP reports from TxDOT
  - b) Complete field condition survey of bridges
  - c) Develop cost evaluations for replacement versus widening of existing structures
  - d) Prepare Report
- 10) Attend design coordination meetings with County, MPO and TxDOT as appropriate.
- 11) Prepare Preliminary Engineering Report

#### **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) Project Control and Baseline (Set in location clear of proposed improvements)
  - a) Establish Horizontal and Vertical Control Benchmarks by setting permanent benchmarks with an Aluminum disk on a 5/8" iron rod set in concrete, every 1000' throughout the limits of the project. Establish elevations on

Work Authorization No. 1  
Attachment "B" Con't

- set points within the specifications of the TSPS Category 8. If applicable, NGS first order benchmarks shall be incorporated into the level loops utilizing the NAVD88 Datum elevations. Signed and Sealed, RPLS, control data sheets shall be created for the newly establish BMs and included in the deliverables.
- b) Stake existing centerline
    - i) Set 2' #5 iron rods at every 1000 ft, at all angle points, PC's, PT's and all intersecting roadways. Center points to be set are every 1000 feet.
    - ii) Reference all angle points, PC's, PT's, and at 1000 foot interval stations with iron pins on the right of way line (on both sides).
    - iii) Stationing shall correspond with the design centerline. Stationing shall be painted at 500-foot stations on the pavement using traffic paint.
  - 4) Obtain cross sections every 100 ft at whole stations. Cross sections to extend 10 ft outside of proposed right of way. Obtain additional survey information as necessary to accurately develop a digital terrain model (DTM).
  - 5) Topographic Survey (All work will be to 10 foot outside of the proposed ROW)
    - a) Obtain driveway cross sections. Cross sections to extend 10 ft outside of proposed right of way.
    - b) Update Inventory public access, commercial, and private driveways by type (dirt, caliche, gravel, concrete or paved).
    - c) 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.
  - 6) Culverts:
    - a) Obtain size of drainage structure, type, skewed angle, and material. Label and describe each structures (for example if it's an irrigation or drainage culvert) size and length.
    - b) Locate and obtain inlet and outlet flow lines elevations at structures, top of headwall, aprons, edge of pavement, and center line.
    - c) Obtain profile and cross sections of upstream and downstream ravines on man-made channels leading from and to the existing or proposed structure. These profiles and cross sections shall extend from inlet and outlet flow lines to distance of 500 ft. beyond the right of way or as directed by the Engineer.
    - d) Determine type of wingwall (i.e. flared wingwall, parallel, etc...) and safety end treatments (pipe runners, safety end treatments, barrier rail, etc. For barrier rail include type of end treatments, location, type, length, and height.
    - e) Obtain pictures of culverts barrels and outlet and inlet view to right of way line.
  - 7) 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.
  - 8) 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) Utility
  - a) Contact "One Call" to request marking of underground utilities
  - b) Request existing utility information from local utility companies
  - c) The Engineer will perform any surveying necessary to for horizontal location of located, "Flagged",

Work Authorization No. 1  
Attachment "B" Con't

- underground utilities and visible overhead utilities.
  - d) The Engineer will obtain measure downs on utilities as follows
    - i) Top of key on gas line values
    - ii) Top of key on water line values
    - iii) Flowline, size of tie-ins and direction of flow for sanitary sewer manholes
    - iv) Flowline, size pipe for irrigation systems
    - v) Flowline and size of system for inverted siphons.
  - e) Develop a preliminary list of potential conflicts with existing utilities.
  - f) Subsurface Utility Engineering is not included in the scope of work.
- 2) Right of Way
- a) The Engineer shall obtain the most current existing adjoining right of way information information as follows:
    - i) Plats
    - ii) Deeds
    - iii) Ownership information
  - b) The Engineer shall survey in the exiting roadway right of way and adjoining parcel lines in the project coordinate system.
  - c) Microstation file shall be provided to show the following:
    - i) Existing roadway right of way
    - ii) Adjoining parcel property lines
    - iii) Legal information
    - iv) Ownership information

## ENVIRONMENTAL CONSTRAINTS ANALYSIS

Engineer's approach will be to take photographs of the corridor, the collection of available and observable desktop environmental data, the identification of potential environmental issues and recommendations. A more detailed outline is as follows:

- 1) In order to identify potential environmental issues that may impact the design and construction of the Dicker Road added capacity project, Engineer will prepare an environmental constraints map. Environmental-related information will be compiled using publically obtainable data, State of Texas agency data, and field observations. This information will be mapped in relationship to the proposed route using Arc View 10.0 in a Geographic Information Systems (GIS) database and then overlain on an aerial map. The Area of Potential Effects (APE) to be considered for data collection will be 150 feet on either side of the corridor. The corridor will be examined for elements of the environment that are subject to regulation under the National Environmental Policy Act of 1969 (NEPA) and will be as follows:
  - a) State and Federally- listed hazardous materials/hazardous wastes regulated sites;
  - b) Known historical sites and/or districts and Texas Recorded Historic Landmarks; Texas Historic Sites Atlas; Handbook of Texas Online entries; Irrigation system maps from Texas A&M University's Irrigation Technology Center; TxDOT's South Texas irrigation context ; Available previous historic resources survey reports at TxDOT Environmental Affairs Division; Historical United States Department of Agriculture soil survey maps;
  - c) Current and historical United States Geological Survey (USGS) maps;
  - d) 1968 aerial photographs, available online from the University of North Texas' Portal to Texas History.(For structures over the age of 45 years [allows for five year construction window];
  - e) Biologically-sensitive areas relative to State and Federally-listed threatened and endangered species including rare species communities;
  - f) Block groups indicated minority and low-income populations and limited English proficiency;
  - g) Soil conditions and geological formations;

Work Authorization No. 1  
Attachment "B" Con't

- h) Unusually large trees and other unique habitat or vegetation features;
  - i) Property Lines;
  - j) Water resources including floodplains and waters of the U.S. including wetlands, which may be jurisdictional under Section 404 of the Clean Water Act;
  - k) Existing general land use (residential, commercial, public, industrial, agricultural, undeveloped);
  - l) Proposed land use (residential, commercial);
  - m) Churches, cemeteries, schools, community centers and parks;
  - n) Municipal and Hazardous Wastes Landfills;
  - o) Prime farmlands;
  - p) Utilities (pipelines, transmissions, cell towers, water wells, etc.); and
  - q) Drainage ditches, canals, siphons.
- 2) Each element will be placed in the GIS database as a discrete layer. Layers can be viewed separately or in any combination in order to access potential constraints. All information will be field verified. A local RKEI Biologist will conduct a 100% visual survey of the entire route after the initial data compilation has been completed. Additional information garnered from this task will be added to the constraints map as is appropriate.
- 3) Deliverables
- a) Provide all data on an aerial map (an overall environmental constraints map) showing locations of features identified in the corridor analyses
  - b) Summary report of the literature review/data acquisition process, observations
  - c) Results, and recommendations.

CONTRACT NO. C-12-119-00-00  
DICKER ROAD  
WORK AUTHORIZATION NO. 1  
ATTACHMENT "C"  
Work Schedule

<b>Description</b>	<b>Time</b>
Purchase Order and NTP	Written NTP
Survey	3 months
Reports	3 months
<b>Total</b>	<b>6 months from NTP</b>

CONTRACT NO. C-12-119-00-00  
DICKER ROAD  
WORK AUTHORIZATION NO. 1  
ATTACHMENT "D"  
Fee Proposal

**TEDSI BASIC ENGINEERING SERVICES**

<b>Description</b>	<b>Fee</b>
Coordination with MPO, TxDOT and County	\$ 14,560
Utility Coordination	\$ 6,505
Preliminary Engineering Report	\$ 120,905
Direct Expenses	\$ 12,930
<b>Subtotal TEDSI Basic Engineering Services</b>	<b>\$ 154,900</b>

**TEDSI ADDITIONAL ENGINEERING SERVICES**

<b>Description</b>	<b>Fee</b>
Drainage Report	\$ 29,780
Traffic Engineering Report	\$ 46,800
<b>Subtotal TEDSI Additional Engineering Services</b>	<b>\$ 76,580</b>

**SUBCONSULTANT ADDITIONAL ENGINEERING SERVICES**

<b>Description</b>	<b>Fee</b>
Survey	\$ 95,623
Environmental Constraints Analysis	\$ 8,840
Geotechnical Testing, Pavement Design and Report	\$ 39,875
Subtotal Subconsultant Additional Engineering Services	\$ 144,338
TEDSI Management and Coordinate Fee at 15%	\$ 21,651
<b>Subtotal</b>	<b>\$ 165,989</b>

**Total Fee Proposal** **\$ 397,469**



**AGENDA  
CC REGULAR  
HIDALGO COUNTY  
COMMISSIONERS COURT  
MEETING  
July 31, 2012  
9:30 A.M.**

**NOTICE is hereby given in accordance with Chapter 551, Texas Government Code, that a SPECIAL MEETING of the Commissioners' Court will be held at Edinburg Council Chambers, 415 W. University Drive, Edinburg, Hidalgo County, Texas. Discussion and possible action relating to the following business will be transacted:**

1. **Roll Call**
2. **Pledge of Allegiance**
3. **Prayer**
4. **Approval of Consent Agenda**
5. **Executive Officer - Valde Guerra:**
  - A.
    1. Requesting exemption from competitive bidding requirements under the Texas Local Government Code, Section 262.024(A) (4) "a Professional Service" for the "provision of legal services/representation in connection with litigation."
    2. Requesting engagement with the firm of \_\_\_\_\_ for the "Provision of Legal Services/Representation in connection with Litigation"
  - B. **AI-33360** Elections Department:  
Requesting approval to advertise/ hire for the following position:

Slot No.	Position Title	Grade
0109	Accountant II	10

- C. **AI-33293** Health & Human Services:  
Approval for Dairen Sarmiento (employee # 058726) to travel on 8/6/12 - 8/8/12 to attend HHSC Regional Healthcare Partnership (RHP) Planning Summit.
6. **County Judge's Office:**
  - A. **AI-33459** Presentation, discussion, and possible action on acceptance of Energy Efficiency & Conservation Strategy
  - B. **AI-33462** Presentation by Pharr-San Juan-Alamo Independent School District

1. **Presentation for acceptance and approval of Current inter-local(s) and/or contract(s) for the "Housing of Inmates"**
2. **Presentation for discussion, consideration and action**  
Including, but not limited to, the following items in connection with New Adult Detention Center:
  - a) Detention Facility Law Enforcement Center Design- Build Contract with including action regarding Landmark Application for payment, final punch list and release of retainage
  - b) Construction of additional pod(s)
  - c) Selection and engagement of an architect for the construction of additional pods
3. Presentation for discussion, consideration and action (if necessary) including, but not limited to the following:
  - a) Renovations of administration building
  - b) Other ongoing county owned building construction, renovation repair projects
  - c) Emergency situations occurring since last agenda meeting
4. **AI-33284** Approval to accept rebate checks from Comdata Product Services (Fuel Purchases) for the 2nd quarter of 2012 in the amount of \$ 857.33
5. **AI-32222** Authority/Action from CC in connection with the sole proposal received for - RFP: "Energy Management Consultant":
  - a. Continue with the project's deadline for action by Commissioners Court of 8-26-12; OR,
  - b. Approval by Hidalgo County Commissioners Court of one or more of the following options related to the project:
    1. Reject the sole response received; or
    2. Re-advertise the project; or
    3. Cancel the project until such time as necessary due to need by HC to select a new electric energy provider.

19. **B.**

**Pct. 2**

1. **AI-32994**

APPROVE

  - a. Acceptance and approval to execute a professional engineering services contract with TEDSI Infrastructure Group, Inc. for the, "Dicker Road Improvements" for Precinct No. 2 as approved for negotiations on CC 4/24/12. C-12-119-07-31
  - b. Acceptance and approval of Work Authorization No. 1 (estimated cost of \$397,469.00) for provision of engineering services required by Pct. #2 consisting of: "Dicker Road Improvements" with TEDSI Infrastructure Group, Inc., under contract No. C-12-119-07-31
  - c. Pursuant to contract with TEDSI Infrastructure Group, Inc., (article 14) C-12-119-07-31, a request for approval by engineer to permit the subcontracting of R. Gutierrez Engineering Corp. and Raba-Kistner Engineering in connection with Work Authorization No. 1-Dicker Road Improvements;

1. **Presentation for acceptance and approval of Current inter-local(s) and/or contract(s) for the "Housing of Inmates"**
2. **Presentation for discussion, consideration and action**  
Including, but not limited to, the following items in connection with New Adult Detention Center:
  - a) Detention Facility Law Enforcement Center Design- Build Contract with including action regarding Landmark Application for payment, final punch list and release of retainage
  - b) Construction of additional pod(s)
  - c) Selection and engagement of an architect for the construction of additional pods
3. **Presentation for discussion, consideration and action (if necessary) including, but not limited to the following:**
  - a) Renovations of administration building
  - b) Other ongoing county owned building construction, renovation repair projects
  - c) Emergency situations occurring since last agenda meeting

*None*

4.  **AI-33284** Approval to accept rebate checks from Comdata Product Services (Fuel Purchases) for the 2nd quarter of 2012 in the amount of \$ 857.33
5.  **AI-32222** Authority/Action from CC in connection with the sole proposal received for - RFP: "Energy Management Consultant":

- a.  Continue with the project's deadline for action by Commissioners Court of 8-26-12; OR,
- b.  Approval by Hidalgo County Commissioners Court of one or more of the following options related to the project:
  1.  Reject the sole response received; or
  2.  Re-advertise the project; or
  3.  Cancel the project until such time as necessary due to need by HC to select a new electric energy provider.

**B.**

**Pct. 2**

1.  **AI-32994**
  - a.  Acceptance and approval to execute a professional engineering services contract with TEDSI Infrastructure Group, Inc. for the, "Dicker Road Improvements" for Precinct No. 2 as approved for negotiations on CC 4/24/12. C-12-119-07-31
  - b.  Acceptance and approval of Work Authorization No. 1 (estimated cost of \$397,469.00) for provision of engineering services required by Pct. #2 consisting of: "Dicker Road Improvements" with TEDSI Infrastructure Group, Inc., under contract No. C-12-119-07-31
  - c.  Pursuant to contract with TEDSI Infrastructure Group, Inc., (article 14) C-12-119-07-31, a request for approval by engineer to permit the subcontracting of R. Gutierrez Engineering Corp. and Raba-Kistner Engineering in connection with Work Authorization No. 1-Dicker Road Improvements:

*OK*

**CONTRACT NO. C-12-119-07-31**  
**DICKER ROAD**  
**EXHIBIT "E"**  
**Work Authorization Form**

**WORK AUTHORIZATION NO. 2**

**THIS WORK AUTHORIZATION** is made pursuant to the terms and conditions of Article 7 of the **Agreement** made by and between the **HIDALGO COUNTY**, acting herein by and through the **Commissioner's Court**, hereinafter called the "**Owner**", and **TEDSI Infrastructure Group**, professional engineers of Mission, Texas, hereinafter called the "**Engineer**".

**PART 1. Scope of Work.** The purpose of this Work Authorization is to provide services as indicated below:

The scope of services to be provided by the **Owner** is identified in **ATTACHMENT "A" –Scope of Services to be Provided by the Owner** attached hereto.

The scope of services to be provided by the **Engineer** is identified in **ATTACHMENT "B" –Scope of Services to be Provided by the Engineer** attached hereto.

**PART 2. Estimated Cost.** The estimated cost for services under this Work Authorization is **\$ 32,424.75**. This amount is based upon the costs outlined in the **Fee Proposal** attached hereto as **ATTACHMENT "D"**.

**PART 3. Payment.** Compensation and payment to the **Engineer** for the services established under this Work Authorization shall be made in accordance with Articles 5, 6, and 7 of the **Agreement**.

**PART 4. Funding.** Work Authorization No. 2 shall be funded through funding source:  
 Account No. 3-1200-431-00-122-062-0-731  
 Requisition No. 231906

**PART 5. Period of Service.** This Work Authorization shall become effective on the date of final acceptance of the parties hereto, and all work associated with this Work Authorization shall be performed within the time period identified in the **Work Schedule** attached hereto as **ATTACHMENT "C"**.

**PART 6. Responsibilities and Obligations.** This Work Authorization does not waive the parties' responsibilities and obligations provided under the **Agreement**.


**PART 7. Acceptance and Acknowledgement.** Acknowledgement and confirmation by Hidalgo County Precinct No. 2, Commissioner Hector "Tito" Palacios, as to the content and detail of this Work Authorization No. 2.


Hidalgo County Precinct No. 2

By:   
 Hector "Tito" Palacios, Commissioner Precinct No. 2

**PART 8 Acceptance and Approval.** Work Authorization is hereby accepted, and approved by Hidalgo Commissioners' Court on 2/26/13 as indicated below and effective as of 26th day of February, 2013

A purchase order will be issued by the Hidalgo County Purchasing Department after the execution of this document. Issuance of the purchase order will serve as the written Notice to Proceed on Work Authorization No. 2.

**THE ENGINEER:**  
**TEDSI INFRASTRUCTURE GROUP**  
 BY:   
 Craig F. Stong, (Vice President)

**THE OWNER:**  
**HIDALGO COUNTY**  
  
 Ramon Garcia (County Judge)

**ATTEST:**  
 By:   
 Arturo Guajardo Jr., Hidalgo County Clerk

Approved by Commissioners' Court  
 on 2/26/13 ko

**LIST OF ATTACHMENTS**

- ATTACHMENT "A" - Services to be Provided by the Owner
- ATTACHMENT "B" - Services to be Provided by the Engineer
- ATTACHMENT "C" - Work Schedule
- ATTACHMENT "D" - Fee Proposal

CONTRACT NO. C-12-119-07-31

DICKER ROAD

WORK AUTHORIZATION NO. 2

ATTACHMENT "A"

Services to be Provided by the Owner

The following provides an outline of the services to be provided by the **Owner** in the development of the **Work Authorizations**.

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

- 1) Prepare and execute a Purchase Order with Hidalgo County Purchasing Department
- 2) Authorization to the Engineer to begin work.
- 3) Assistance to the Engineer, as necessary, to obtain required data and information from other local, regional, and state agencies that the Engineer cannot easily obtain.
- 4) Provide any available relevant data that may on file concerning the Project.
- 5) Provide timely review and decisions in response to the **Engineers** request for information and/or submittals and deliverables.
- 6) Attend and participate in progress meetings as required and as coordinated and conducted by the **Engineer**.
- 7) Review and approve monthly and final estimates, developed by the **Engineer**, for payment to the Contractor. Compensate and pay the **Engineer** for work performed as identified in the approved monthly and final estimates.
- 8) Provide assistance to **Engineer** where necessary and possible with **Owner** information/resources to ensure project is completed within timely/efficient basis.

**CONTRACT NO. C-12-119-07-31**  
**DICKER ROAD**  
**WORK AUTHORIZATION NO. 2**  
**ATTACHMENT "B"**

**Services to be Provided by the Engineer**

The engineer shall provide the following engineer services required for the preparation of the plans, specification and estimate, and related documents for the above noted project. The Engineer shall maintain a direct line of communication and coordinate very closely with the Owner.

**1) Project Management**

- a) Prepare and submit a letter to TxDOT requesting a "Project Sponsor Agreement" from TxDOT for the Precinct
- b) Review and develop required documentation to be included in the "Project Sponsor Agreement".
- c) Complete and provide the "Project Sponsor Agreement" to Precinct for execution by the County.
- d) Direct and coordinate the various elements and activities associated with the Scoping Documents and Classification Letter.
- e) Coordinate and communicate with the TxDOT for environmental activities and issues.
- f) Schedule and participate in a scoping meeting with the County and TxDOT Pharr District.
- g) Update the County on progress of the scoping documents and Classification Letter. The PM will provide monthly invoices and progress reports.
- h) QA/QC the deliverables prior to submittal.

**2) Scoping Documents**

In compliance with TxDOT's new environmental rules (new statutory requirements passed by the 82nd Texas Legislature) related to the environmental review process for transportation projects, which were effective April 16, 2012, a scoping meeting must be held and a "project scope" must be agreed to at the outset, which provides an outline for a collaborative agreement between the project sponsor and TxDOT regarding the specific requirements and expectations for the preparation of the environmental document and related services. The project scope also establishes the basis for all subsequent activities and reviews related to the project. The PM will participate in a scoping meeting with the County and TxDOT Pharr District.

The following items of work will be completed:

- a) Prepare scoping documents for preliminary meeting
- b) Revise scoping documents per TxDOT remarks

**3) Classification Letter and associated exhibits**

- a) Prepare a Classification Letter for submittal to TxDOT ENV to receive concurrence on the appropriate level of environmental documentation
- b) The letter will provide the following:
  - i) Background information
  - ii) Purpose and need
  - iii) Description of the proposed improvements
  - iv) Right-Of-Way requirements
  - v) Previous studies
  - vi) Waters of the U.S. issues
  - vii) Potential environmental issues including:
    - (1) Threatened and endangered species

Work Authorization No. 2  
Attachment "B" Con't

- (2) Hazardous materials
- (3) Potential for controversy
- viii) Public involvement activities
- ix) Project location map on an aerial depicting the project limits

**4) Review of schematic**

- a) Submit Dicker Road Curb and Gutter preliminary schematic developed under work authorization no. 1 is acceptable by TxDOT
- b) Attend review meeting with TxDOT to discuss the schematic provided

**5) Issuance of Classification Letter and Schematic Document requirements by TxDOT**

The following work will be completed upon issuance of the above item.

- a) Development of scope of work and fee proposal for
  - i) Environmental document
  - ii) Schematic
  - iii) PS&E
- b) Attendance of coordination meetings with Precinct

CONTRACT NO. C-12-119-07-31  
DICKER ROAD  
WORK AUTHORIZATION NO. 2  
ATTACHMENT "C"  
Work Schedule

<b>Description</b>	<b>Time</b>
Purchase Order and NTP	Written NTP
Development of Scoping Documents and Classification Letter	1 months
Meeting and final determinations by TxDOT	1 months
<b>Total</b>	<b>2 months from NTP</b>

Description	General Management/Coordination						Total Hours	
	Sr. Project Manager	Senior Engineer	Project Engineer	Sr. Eng. Designer/EIT	Eng. Designer	Clerical		
Project Meetings (4 meetings)	16		16				32	\$ 5,520.00
Prepare letter for request of "Project Sponsor Agreement" (PSA)	1			4		4	9	\$ 940.00
Develop PSA exhibits	4		8	16	16	4	48	\$ 5,620.00
Complete PSA	2					8	10	\$ 1,000.00
Coordinate with Precinct	8						8	\$ 1,600.00
Coordinate with TxDOT	8						8	\$ 1,600.00
Schedule and attend Env Scoping Meeting	8		8				16	\$ 2,760.00
Development of scope and fee for work authorization no. 3	4		8				12	\$ 1,960.00
<b>Total Hours</b>	<b>51</b>	<b>0</b>	<b>40</b>	<b>20</b>	<b>16</b>	<b>16</b>	<b>143</b>	<b>\$ 21,000.00</b>
<b>Contract Rate</b>	<b>\$ 200.00</b>	<b>\$ 160.00</b>	<b>\$ 145.00</b>	<b>\$ 110.00</b>	<b>\$ 100.00</b>	<b>\$ 75.00</b>		

Description	Review of Schematic						Total Hours	
	Sr. Project Manager	Senior Engineer	Project Engineer	Sr. Eng. Designer/EIT	Eng. Designer	Clerical		
Prepare and submit WA#1 Curb and Gutter preliminary schematic to TxDOT	1				8		9	\$ 1,000.00
Attend review meeting with TxDOT	4		4				8	\$ 1,380.00
<b>Total</b>	<b>5</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>17</b>	<b>\$ 2,380.00</b>
	<b>\$ 200.00</b>	<b>\$ 160.00</b>	<b>\$ 145.00</b>	<b>\$ 110.00</b>	<b>\$ 100.00</b>	<b>\$ 75.00</b>		

**Subconsultant Additional Services**

Environmental Subconsultant	=	\$7,865.00
TEDSI Management and Coordination Fee		<u>\$1,179.75</u>
<b>Sub-Total</b>	=	<b>\$ 9,044.75</b>
<b>Total Lump Sum Fee</b>	=	<b>\$ 32,424.75</b>

CONTRACT NO. C-12-119-07-31

DICKER ROAD

EXHIBIT "E"

Work Authorization Form

WORK AUTHORIZATION NO. 3

**THIS WORK AUTHORIZATION** is made pursuant to the terms and conditions of Article 7 of the **Agreement** made by and between the **HIDALGO COUNTY**, acting herein by and through the **Commissioner's Court**, hereinafter called the "**Owner**", and **TEDSI Infrastructure Group**, professional engineers of Mission, Texas, hereinafter called the "**Engineer**".

**PART 1. Scope of Work.** The purpose of this Work Authorization is to provide services as indicated below:

The scope of services to be provided by the **Owner** is identified in ATTACHMENT "A" –*Scope of Services to be Provided by the Owner* attached hereto.

The scope of services to be provided by the **Engineer** is identified in ATTACHMENT "B" –*Scope of Services to be Provided by the Engineer* attached hereto.

**PART 2. Estimated Cost.** The estimated cost for services under this Work Authorization is \$ 1,033,645.00. This amount is based upon the costs outlined in the *Fee Proposal* attached hereto as ATTACHMENT "D".

**PART 3. Payment.** Compensation and payment to the **Engineer** for the services established under this Work Authorization shall be made in accordance with Articles 5, 6, and 7 of the **Agreement**.

**PART 4. Funding.** This Supplemental Agreement to Work Authorization No. 3 shall be funded through funding source: Account No. 3-1315-431-00-122-062-0-731 841  
Requisition No. 246219

**PART 5. Period of Service.** This Work Authorization shall become effective on the date of final acceptance of the parties hereto, and all work associated with this Work Authorization shall be performed within the time period identified in the *Work Schedule* attached hereto as ATTACHMENT "C".

**PART 6. Responsibilities and Obligations.** This Work Authorization does not waive the parties' responsibilities and obligations provided under the **Agreement**.

**PART 7. Acceptance and Acknowledgement.** Acknowledgement and confirmation by Hidalgo County Precinct No. 2, Commissioner Hector "Tito" Palacios, as to the content and detail of this Work Authorization No. 3.

Hidalgo County Precinct No. 2

By: Hector Palacios  
Hector "Tito" Palacios, Commissioner Precinct No. 2

**PART 8 Acceptance and Approval.** Work Authorization is hereby accepted, and approved by Hidalgo Commissioners' Court on \_\_\_\_\_ as indicated below and effective as of \_\_\_\_\_ day of \_\_\_\_\_, 2012.

A purchase order will be issued by the Hidalgo County Purchasing Department after the execution of this document. Issuance of the purchase order will serve as the written Notice to Proceed on Work Authorization No. 3

**THE ENGINEER:**  
TEDSI INFRASTRUCTURE GROUP

BY: Craig F. Stong  
Craig F. Stong, (Vice President)

**THE OWNER:**  
HIDALGO COUNTY

Ramon Garcia  
Ramon Garcia (County Judge)

**ATTEST:**

By: Arturo Guajardo Jr.  
Arturo Guajardo Jr., Hidalgo County Clerk

APPROVED BY  
COMMISSIONERS' COURT  
ON: 10/29/13

LIST OF ATTACHMENTS

- ATTACHMENT "A" - Services to be Provided by the Owner
- ATTACHMENT "B" - Services to be Provided by the Engineer
- ATTACHMENT "C" - Work Schedule
- ATTACHMENT "D" - Fee Proposal



CONTRACT NO. C-12-119-07-31  
DICKER ROAD  
WORK AUTHORIZATION NO. 3  
ATTACHMENT "A"  
Services to be Provided by the Owner

The following provides an outline of the services to be provided by the **Owner** in the development of the **Work Authorizations**.

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

- 1) Prepare and execute a Purchase Order with Hidalgo County Purchasing Department
- 2) Authorization to the **Engineer** to begin work.
- 3) Payment for work performed by the **Engineer**.
- 4) Assistance to the **Engineer**, as necessary, to obtain required data and information from other local, regional, and state agencies that the **Engineer** cannot easily obtain.
- 5) Secure required Environmental permits from regulatory agencies
- 6) Acquire additional Right of Way identified by the **Engineer**
- 7) Provide any available relevant data that may on file concerning the Project.
- 8) Provide timely review and decisions in response to the **Engineers** request for information and/or submittals and deliverables.
- 9) Attend and participate in progress meetings as required and as coordinated and conducted by the **Engineer**.
- 10) Advertise and award, as assisted and recommended by the **Engineer**, construction contracts for the PS&E developed by the **Engineer**.
- 11) Attend pre-bid and pre-construction conferences coordinated and conducted by the **Engineer**.
- 12) Review and approve monthly and final estimates, developed by the **Engineer**, for payment to the Contractor. Compensate and pay the Contractor for work performed as identified in the approved monthly and final estimates.
- 13) Provide assistance to **Engineer** where necessary and possible with **Owner** information/resources to ensure project is completed within timely/efficient basis.
- 14) Disseminate mail or deliver mail-out flyer, public meeting agendas and handouts, maps, and other related project information to the public.
- 15) Providing professional court transcribing and translation service as and when required for the public meeting and/or public hearing.
- 16) Provide a hard copy and digital copy of court transcript from meetings.
- 17) Provide hard copy of all public input received from meetings.
- 18) Publish the notices in the local newspaper, arrange for, pay and provide a location for the public meeting and hearing to be held,
- 19) Provide a mailing list and copy, collate and mail letters to adjacent property owners, local governmental officials and others as necessary.

CONTRACT NO. C-12-119-07-31  
DICKER ROAD  
WORK AUTHORIZATION NO. 3  
ATTACHMENT "B"

**Services to be Provided by the Engineer**

The Engineer shall provide the following engineer services required for the preparation of the plans, specification and estimate, and related documents for the above noted project. The Engineer shall maintain a direct line of communication and coordinate very closely with the Owner.

The Engineer shall develop PS&E in conformance with Hidalgo County Specifications/Standards, TXDOT Pharr District requirements and TXDOT Standards, including any appropriate Texas Accessibility Standards (TAS) design considerations.

**RIGHT OF WAY SERVICES**

Develop right of way documents as follows for the proposed parcel to be taken in the northeast corner of Dicker and Jackson Road. Additional parcel, if required will be added by supplemental agreement. Scope of work is as followings:

- 1) Preliminary title search and determination of ownership
- 2) Surveying for identification of platted boundaries.
- 3) Prepare parcel plats and metes and bound documents
- 4) Provide title reports
- 5) Provide right of way acquisition services

**UTILITY COORDINATION**

- 6) Utility (All work will be to 10 foot outside of the proposed ROW)
  - a) The Engineer shall meet with Utility providers periodically to coordinate the work efforts and resolve any utility related problems. The Engineer shall prepare the minutes for these meetings and forwarded to the County. The Engineer shall address the following issues and any other items deemed necessary during the Utility Coordination meetings:
    - i) Activities completed since last meeting
    - ii) Problems encountered.
    - iii) Late activities.
    - iv) Activities required by the next progress meeting.
    - v) Solutions for unresolved and/or anticipated problems.
    - vi) Information or items required from other agencies/consultants.
  - b) If a reimbursable utility relocation exists, the Engineer shall request conveyance documents from the utility provider.
  - c) The Engineer shall notify the Utility companies in writing and request the following information in writing:
    - i) Project letting date and request they relocate prior to letting.
    - ii) Develop their relocation plan according to Utility Accommodation Policy Manual.
    - iii) Forward their relocation plan to the Engineer.
    - iv) Request in writing when relocation of utilities will be complete.
    - v) Upon immediate completion of relocation, request they forward as-built plans to the County.
  - d) The Engineer shall develop the typical sections, alignment, and preliminary cross sections addressing the utility location and shall forward these to the respective utility company.

Work Authorization No. 3  
Attachment "B" Con't

- e) The Engineer shall update all files and plans based on the utility company responses.
- f) The Engineer shall identify all utility conflicts on the plans and prepare layouts and profiles of existing utility crossings showing conflicts of utilities with proposed improvements. The Engineer shall forward these layouts to the County and the utility companies. During design process, the Engineer shall field verify all visible utility conflicts.
- g) The Engineer shall verify the proposed relocation plan submitted by the Utility companies to assure their design is according to Utility Accommodation Policy Manual. Upon the Engineer's review and concurrence with the proposed relocation plan, they shall forward their recommendation for approval to the State.
- h) Contact "One Call" to request marking of underground utilities
- i) Request existing utility information from local utility companies
- j) The Engineer will perform any surveying necessary to for horizontal location of located, "Flagged", underground utilities and visible overhead utilities.
- k) The Engineer will obtain measure downs on utilities as follows
  - i) Top of key on gas line values
  - ii) Top of key on water line values
  - iii) Flowline, size of tie-ins and direction of flow for sanitary sewer manholes
  - iv) Flowline, size pipe for irrigation systems
  - v) Flowline and size of system for inverted siphons.
- l) Subsurface Utility Engineering Level A will be provided as follows:
  - i) Six test holes on three existing gas lines located between STA 26+00 and STA 28+00.
  - ii) Two test holes on existing gas line located at approximate STA 51+75.
  - iii) Two test holes on existing gas line located within the intersection of Dicker Road and 10<sup>th</sup> Street.
  - iv) Two test holes on existing irrigation line located at approximate STA 102+00.
  - v) Two test holes on existing gas line located at approximate STA 111+00.
  - vi) Two test holes on existing irrigation line located at approximate STA 116+00.
  - vii) Two test holes on existing irrigation line located at approximate STA 132+50.
  - viii) Addition test holes over the above will be added by supplemental agreement.
- m) Design of utilities adjustments and/or upgrades of facilities is not included but will be added by supplemental agreement if and when needed.

## ENVIRONMENTAL

Categorical Exclusion (CE) Document The work will be performed to provide environmental documentation according to TxDOT procedures. The documentation will be prepared in accordance with 23 CFR 771.117, the Federal Highway Administration's (FHWA) Technical Advisory T6640.8A, TAC - Title 43, Part 1, Chapter 2, TxDOT Environmental Affairs Division's Standards of Uniformity (SOU) for Determination of Categorical Exclusions, TxDOT's Environmental Manual, and other TxDOT guidance as needed. The CE will follow a format specified in the SOUs. The deliverable under this work scope shall be a CE.

The work for this task includes the following:

### 1) DATA COLLECTION PROCESS AND FIELD VISIT

The Environmental Consultant will research readily available environmental information from appropriate local, state, and federal agencies relative to the project area. A field visit will be conducted in support of the CE document.

### 2) ENVIRONMENTAL INVESTIGATIONS AND ASSESSMENTS

The CE report will document the economic, social, and environmental conditions and potential impacts of the proposed project. The environmental studies and investigations will include an assessment of one build alternative and the no build alternative. Impacts to be addressed will be in accordance with

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applicable TxDOT guidelines and SOUs. The CE will be organized according to a TxDOT format and will include the following sections as applicable to the project:

Description of the existing and proposed facility  
Need for and Purpose of Project  
Description of Alternatives  
Existing/Proposed Right-of-Way/Easements  
Project Setting and Land Use  
Socioeconomic Issues  
Displacements  
Environmental Justice/LEP  
Airway-Highway Clearance  
Soils and Prime Farmlands  
Vegetation including beneficial landscaping practices and invasive species  
Wildlife  
Threatened and Endangered Species  
Section 4(f) Properties  
Water Quality  
Floodplains  
Permitting/Waters of the United States, including wetlands  
Noise  
Air Quality  
Cultural Resources – Archeological and Historical  
Hazardous Materials/Waste  
Construction Impacts  
Indirect and Cumulative Analysis  
Public Involvement (public comments summarized from the public meeting and public hearing)  
Conclusion  
Appendices including exhibits, figures, photos, coordination letters, etc.

#### **Description of the Existing and Proposed Facility**

The Environmental Consultant will describe the existing roadway facility and the proposed action, which would include right-of-way requirements, project funding and any utility adjustments.

#### **Need and Purpose of the Project**

The Environmental Consultant will describe the proposed project and the transportation problem(s) or other needs that the proposed project is intended to address. The Environmental Consultant will prepare this section based on descriptions of the project's need and purpose.

#### **DESCRIPTION OF THE ALTERNATIVES**

The Environmental Consultant will describe the build and no-build alternative for project.

#### **AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES**

The Environmental Consultant will describe the existing social, economic, and environmental setting for the area affected by the project. The following provides methods of analyses for resources discussed in the CE:

Socioeconomic Issues/Environmental Justice/Project Setting/Land Use – U.S. Department of Commerce, Bureau of the Census 2010 information on the census block groups for the project area will be obtained and summarized. This information will include race/ethnicity, limited English proficiency, income, and other relevant data. Changes in the neighborhoods or community cohesion will be assessed for various social groups in terms of generating new development, changing property values, and accessibility. Impacts on school districts, recreation areas, churches, businesses, and police and fire

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protection will be assessed, where information is available. Impacts to minority and/or low income groups due to the implementation of the proposed project will be reviewed. The impact of changes in travel patterns, highway and traffic safety, and public safety from the proposed project will be assessed. Traffic analysis is not included in this scope of service.

The extent of residential and business displacements (if any) will be discussed for the project. The estimated number of single-family residential and multi-family residential homes to be displaced (if any) and a summary of the social characteristics of these households will be determined, based on available public information. Impacts on commercial/retail facilities that may be displaced will also be determined. Impacts on existing farms and commercial/retail facilities that will be displaced will also be determined. Any special relocation considerations will also be identified.

In addition, available population and land use study data will be reviewed to assess potential impacts of the proposed project on land use. This assessment of land use will include residential, commercial, industrial, education, open space, roadway ROW, and undeveloped land use categories.

Economic impacts on the regional and local economies, such as the effects of the proposed project on development, tax revenues and public expenditures, employment opportunities, accessibility, and retail sales will be discussed. The impacts, both beneficial and adverse, on the economic vitality of existing businesses, business districts, and the resultant impact on the local economy will be described. The impacts will be assessed qualitatively.

Airway Highway Clearance – The Environmental Consultant will collect and analyze data concerning airports within two miles of the proposed project.

Soils/Prime Farmlands – Soils in the area of the proposed project will be described according to the Natural Resources Conservation Service (NRCS). To ensure compliance with the Farmland Protection Policy Act (FPPA), the Environmental Consultant will consider proposed project impacts, and if necessary coordinate with the NRCS, complete the Farmland Conversion Impact Rating Form CPA 106 and submit it to the NRCS for review. The NRCS maps for Brazos County will be reviewed, and the NRCS list of prime farmland soil types will be reviewed to determine if the proposed project area is potentially subject to the FPPA. If there is a potential for adverse impacts to FPPA lands, or if the Land Evaluation and Site Assessment score is 160 points or greater, the CE will discuss alternative measures to avoid or minimize the impacts..

Invasive Species and Beneficial Landscaping Practices – The CE will address the Executive Order related to Invasive Species and the Executive Memorandum related to Beneficial Landscaping Practices. Vegetation – The vegetation of the project area will be categorized and evaluated according to TxDOT's Memorandum of Understanding (MOU) with the Texas Parks and Wildlife Department (TPWD). Wildlife – Wildlife habitat will be evaluated and potential impacts on wildlife will be assessed. Mitigation of possible impacts including habitat loss and fragmentation, and construction in wetland areas, if applicable, will also be addressed.

Threatened and Endangered Species – Data will be obtained from the U.S. Fish and Wildlife Service (USFWS) and the TPWD to determine the potential presence or absence of federally listed and proposed endangered or threatened species and critical habitat in the proposed project area. The Environmental Consultant will report suitable and non-suitable habitat for the species potentially occurring within the project area. This scope of work does not include the preparation of a Biological Assessment or formal consultation under Section 7 of the Endangered Species Act. The Environmental Consultant will include information from the Natural Diversity Database (NDD) from TPWD.

Section 4(f) Properties – The Environmental Consultant will review available data and perform on site

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investigations to ascertain the presence of potential Section 4(f) lands, including public parks, recreation lands, and wildlife and waterfowl refuges that may be impacted by the proposed project.

It is anticipated that a Section 4(f) De Minimis documentation would be required for the Hidalgo County Irrigation District (HCID) No. 2 main canal and/or HCID No. 2 underground pipeline adjacent to Dicker Road. Both properties are contributing resources to the NRHP-listed Louisiana-Rio Grande Canal Company Historic District. The De Minimis Section 4(f) documentation will be prepared for inclusion in the project's added capacity CE document or as a stand-alone document. The documentation will follow TxDOT ENV's Section 4(f) De Minimis Documentation in FHWA Projects – Review Checklist. This task will also include coordination with project design engineers as early as practicable to discuss possible minimization, avoidance, and mitigation strategies. These discussions and implemented strategies will be included in the De Minimis Section 4(f) documentation.

Completion of the De Minimis Section 4(f) documentation will be dependent on TxDOT's prior or concurrent completion of Section 106 coordination with the Texas State Historic Preservation Officer (SHPO) for determination of effects. For purposes of the scope and cost estimation, it is assumed that the project will pose no adverse effects to the Section 4(f) properties and that the Texas SHPO will concur with this determination, to allow for application of the De Minimis Section 4(f) finding. The Historic Consultant will prepare the wording for use in the Section 4(f) sections of the project's environmental document.

Water Quality – The ambient conditions of streams and water bodies that are likely to be impacted by the proposed project, and the identification of the potential for impacts to these water bodies will be assessed. The Environmental Consultant will obtain data from the water quality division of the Texas Commission on Environmental Quality (TCEQ) and the U.S. Environmental Protection Agency (EPA) under the Federal Clean Water Act and the Safe Drinking Water Act regarding principal or sole source aquifers and wellhead protection areas.

Floodplains – National Flood Insurance Program (NFIP) maps will be reviewed to determine what portions of the proposed project area are encumbered by the base (100 year) floodplain. Floodplain encroachment will be described and mitigation measures will be discussed.

Waters of the U.S. including wetlands – The results (impacts) of any waters of the U.S./wetlands delineation for the project will be incorporated into the CE.

Permits/Commitments – The CE will describe any permits that will need to be obtained and any commitments (i.e. mitigation). This scope of services does not include the preparation of a pre-construction notification to the U.S. Army Corps of Engineers for impacts exceeding nationwide permit thresholds.

Traffic Noise – Since this project would increase the number of through-traffic lanes, a traffic noise analysis would be required. Construction noise would also be addressed. The Environmental Consultant will follow the Noise SOUs. The Environmental Consultant will conduct a traffic noise analysis for the build alternative. The objective of the noise analysis will be to 1) model existing and predicted future design year noise levels at various locations along the proposed project; 2) evaluate the possible impact of traffic noise at these locations; and 3) discuss and evaluate possible mitigation measures to reduce or eliminate potential noise impacts. Predictions of traffic noise levels will be performed in accordance with the current and applicable state and federal regulations, standards, and guidelines using the Federal Highway Administration (FHWA) Traffic Noise Model (TNM) software. Traffic data is required and should consist of the existing (estimated time of completion [ETC]) and projected design year (existing plus 20 years) peak hour volumes for cars, medium trucks, and heavy trucks traveling on the mainlanes. Traffic data needed to complete this item will be supplied by TxDOT and should include average annual daily traffic count's (AADT), design hourly volumes predicted for

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lanes, traffic mix, directional traffic split for the design hour, and speeds. This information will be provided for existing year (ETC) and 20 year proposed AADT. The potential noise impact on sensitive receptors will be assessed in accordance with the FHWA Federal Aid Highway Program Manual, Volume 7, Chapter 7, Section 3.

The noise analysis will consist of the following tasks.

Subtask 1 – Determine Receptor Locations

Identify noise-sensitive land uses and activities that currently exist in the proposed project area and where development is planned, designed, and programmed. Determine receptor locations based on noise-sensitive land uses and activities identified. Where possible, the preliminary engineering layout will include adjacent land use information, to include existing and planned (platted) subdivisions, residences, commercial facilities, parks, etc. This scope assumes that no more than 10 noise receiver locations will be modeled.

Subtask 2 – Model Existing and Predicted Future Noise Levels

The Environmental Consultant will model existing and future worst case noise levels at selected locations along the Build alternative using TNM 2.5 software. This scope does not include field measurements for existing noise levels. Traffic data information will be provided by the design engineers for this analysis. The Environmental Consultant will assess potential impacts of future noise levels on sensitive land uses including analysis and documentation of the results.

Subtask 3 – Noise Abatement Measures

If the predicted noise levels at the sensitive receptors approaches or exceeds FHWA's Noise Abatement Criteria, or substantially exceeds existing noise levels, the Environmental Consultant will provide a preliminary evaluation of alternative noise abatement measures for reducing or eliminating future traffic noise impacts. Should the noise analysis determine that noise abatement measures are warranted, a noise barrier analysis and a noise workshop would be an additional service.

Subtask 4 – Prepare Traffic Noise Section of CE

The Environmental Consultant will review and analyze the results of the noise analysis, then prepare the traffic noise section of the CE.

Air Quality – The Environmental Consultant will prepare the air quality section of the CE to document the status of regional air quality and the project impacts. A mobile source air toxics (MSAT) analysis will be required and since the Average Annual Daily Traffic is expected to be below 140,000, a qualitative analysis will be performed. The qualitative analysis will include:

1. Brief MSAT description and discussion of national trend data projecting substantial overall reductions in emissions due to stricter engine and fuel regulations issued by EPA;
2. Comparison of the expected effect of the project on traffic volumes, vehicle mix, or routing of traffic, and the associated assumed changes in MSATs;
3. An assessment of schools, licensed day cares, elder care facilities, and hospitals located within 100 and 500 meters of the ROW;
4. Discussion of information that is incomplete or unavailable for a project-specific assessment of MSAT impacts, in compliance with CEQ regulations (40 CFR 1502.22(b)); and
5. Summary of current studies regarding the health impacts of MSATs, in compliance with 40

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CFR 150.22(b);

The qualitative analysis will be included in the CE document. This scope does not include a quantitative analysis.

Archeological Resources – An RKEI Archeologist will complete the Project Coordination Request (PCR) form for submittal to the Pharr District and TxDOT ENV. It is not anticipated that an archeological survey would be required because minimal ROW is required at one corner and improvements are occurring in a previously-disturbed ROW. However, if it is determined that an archeological survey is required by TxDOT ENV, then this service will be added by a supplemental agreement.

Historic Resources

Subtask 1 – Project Coordination Request (PCR) Form Preparation

The Historic Consultant will prepare a Project Coordination Request (PCR) form, for submittal to TxDOT Pharr District/TxDOT ENV. The PCR form will be completed as outlined in TxDOT ENV's Standards of Uniformity – Historical Studies Project Coordination Request (PCR).

Subtask 2 – Research Design

Prior to undertaking the fieldwork, the Historic Consultant will conduct a literature review of the project area and present a research design to be submitted to TxDOT Pharr District/TxDOT ENV as outlined in TxDOT ENV's Standards of Uniformity for Non-archeological Historic-age Resource Research Designs. The research design will include:

- Project description and discussion of possible project impacts.
- List of consulting partners including prime contractor, subconsultants, Certified Local Governments, and local preservation contacts, including County Historical Commissions.
- Survey methodology describing the Area of Potential Effects (APE), the study limits of the survey area, the historic-age cutoff date, and the historic period of significance.
- Discussion of previously designated historic properties in the study area, with reference to Texas Historical Commission (THC) survey files and Texas Historic Sites Atlas for identification of properties that have been previously listed in the National Register of Historic Places (NRHP), designated as Recorded Texas Historical Landmarks, and/or are included in the Texas Historic Sites Inventory or other available local historical surveys.
- Literature review results appropriate to the study area, its historic-age resources, and historic period of significance.
- Maps based on aerial photographs or USGS quadrangle showing the APE, proposed project locations, major street names and other directional landmarks, and location of Official State Historical Markers in the study area.
- Bibliography of sources consulted in the literature review and research design.

Subtask 3 – Reconnaissance-Level Field Survey

Following TxDOT ENV's acceptance of the research design, the Historic Consultant will complete a reconnaissance-level field survey of the proposed project to identify and record historic-age

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resources within the project's APE. The location of each identified resource will be plotted on an aerial photograph, USGS map, or similarly detailed map. Photographs will be taken, addresses obtained, and physical data gathered on the resource, such as property type and subtype classifications, stylistic influences, construction dates, integrity issues, and eligibility recommendations. Representative contextual photographs will be taken of the surrounding the proposed project improvement locations for use in understanding the overall setting of the study area around the project's APE.

Subtask 4 – Draft Reconnaissance-Level Survey Report

The Historic Consultant will prepare two paper copies and one electronic copy (in PDF format) of the draft reconnaissance-level historic resources survey report for submittal to TxDOT Pharr district/TxDOT ENV as outlined in TxDOT ENV's Standards of Uniformity for Non-archeological Historic-age Resource Reconnaissance Survey Reports. The report will include the following:

- Brief overview of the results of the reconnaissance survey, including an outline of the survey methodology, a background history of the study area presenting historic contexts relevant to the time period associated with the historic-age resources, brief description of property types, and NRHP registration requirements with integrity analysis.
- Discussion of previously designated historic resources within 1,300 feet of the project, even if they are outside of the APE.
- Photographic documentation for each identified historic-age resource in the project's APE. Photographs will be attached to separately labeled pages that clearly identify project name, address (or location) of resource, direction of the photograph, style and/or form of the resource, NRHP eligibility, resource integrity issues, and any limitations encountered when photographing the resource.
- Evaluation of NRHP eligibility for each identified historic-age resource in the project's APE.
- Preliminary assessments of potential direct, indirect, and cumulative effects on historic properties, noting presence or absence of character-defining features within the proposed right-of-way. Such assessments may be limited if information regarding exact project improvement location and improvement type is not available.
- Recommendations for additional intensive survey efforts to finalize NRHP determinations of eligibility.
- Proposed changes to the research design arising from the results of the reconnaissance survey, including contextual issues, comparative property information needs, data gaps, and discussion of additional work necessary to finalize the evaluation and documentation phases of the project, based on the results of the reconnaissance survey.
- An inventory of identified resources that lists their resource ID numbers, addresses/locations, property type and subtype classifications, stylistic influences, construction dates, integrity issues, and NRHP eligibility recommendations or need for intensive-level investigations to finalize NRHP eligibility.
- A map or maps based on aerial photographs or USGS quadrangle showing the APE, major street names and major directional landmarks, and the location of each identified historic-age resource labeled with its appropriate resource ID number.

Subtask 5 – Final Reconnaissance-Level Survey Report

The Historic Consultant will incorporate TxDOT ENV comments to the draft historic resources survey report as needed and will provide two paper copies and one electronic copy (in PDF format) of the final historic resources survey report.

Subtask 6 – Environmental Document – Historic Resources Wording

The Historic Consultant will prepare the wording for use in the historic resources sections of the project's environmental document. An electronic copy of the wording in Word format will be provided.

Hazardous Materials – The Environmental Consultant will purchase a regulatory database search report including electronic GIS shapefiles. A review of the provided records will be performed according to TxDOT standards to identify listed hazardous waste generators; treatment, storage, and disposal facilities; solid waste landfills; unauthorized sites; documented spills; and underground storage tank sites within the proposed project area. Where practicable, during the field investigations, the hazardous materials sites identified in the database search that are adjacent to the project corridor will be visually inspected from public access points for the potential presence of hazardous substances and petroleum products on the subject properties. Identified sites will be located on maps. The current regulatory status of the site will be determined and presented along with the additional investigations that may be recommended based on these findings. A Hazardous Materials Initial Site Assessment (ISA) would be provided to TxDOT for their files.

This task does not include interviews with any local or adjacent landowners regarding the potential for hazardous materials use or sites. Should the hazardous materials sites review indicate that a Phase I Environmental Site Assessment, sampling, and/or subsurface investigations are warranted, these items would be additional services.

Construction Impacts – Potential adverse impacts associated with construction of the proposed project will be assessed.

Indirect and Cumulative Impacts – Since this project adds capacity, an indirect and cumulative impact analysis would be required. The Environmental Consultant will identify indirect and cumulative impacts in accordance with the requirements of FHWA Technical Advisory T 6640.8A (1987), Report 466: Desk Reference for Estimating the Indirect Effects of Proposed Transportation Projects (National Cooperative Highway Research Program 2002), TxDOT Guidance on Preparing Indirect and Cumulative Impact Analyses (2010), and related guidance from FHWA and TxDOT.

Public Involvement – A summary of the public meeting that will be held will be summarized for the CE. If a public hearing is held, the public's comments will also be summarized in the CE.

Summary – The Environmental Consultant will prepare the summary section of the CE.

Appendices – Photos and figures to include location map, existing and proposed typical sections, project layouts, USGS map including any floodplains, natural diversity database, noise receiver maps, soils map, record of resource agency coordination, etc. will be included.

**3) DELIVERABLES AND CE REVIEW/REVISIONS**

The information above will be compiled into a preliminary draft CE document. The CE text will be prepared on an IBM compatible computer with Microsoft Word software and a CD will be provided, if

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requested. Exhibits will be limited to 8.5"x 11" format, if possible. The necessary Client copies will be provided as necessary. The Environmental Consultant will provide the following:

- Two (2) copies of the draft CE document (V1) to the TxDOT- Pharr District for review and comment. Upon receipt of comments, revisions will be made and the additional information needed to complete the items will be incorporated into the draft CE (V2).
- Six (6) copies of the draft CE document (V2) will be prepared and provided to the TxDOT- Pharr District for TxDOT Environmental Affairs Division (ENV) review.
- After receiving comments from TxDOT ENV, the Environmental Consultant will revise the draft CE document and submit the revised drafts back to TxDOT ENV for resource agency review (V3) (3 copies).
- Six (6) copies of the draft CE document (V4) will be prepared and provided to TxDOT- Pharr District for FHWA review (V4).
- After receiving comments from FHWA, the Environmental Consultant will revise the draft CE document and submit the revised draft to the TxDOT- Pharr District for (V5) (6 copies).
- After advertising an opportunity for a public hearing, the Environmental Consultant will provide final CE documents (V6) (6 copies).

#### 4) Public Meeting

The Environmental Consultant will plan, coordinate, and conduct one Public Meeting for the project to solicit input from the community. The Public Meeting will be held in either an open house format, followed by a formal presentation and oral comment period or without the open house. The Engineer's or City's staff will be present at the Public Meeting to receive comments from the public and other attendees. The tasks to be performed will include the following:

- The Environmental 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.
- Prepare materials to facilitate the Public Meeting.
- Identify and secure the venue for the Public Meeting and coordinate the logistics in support of the hearing.
- Update and maintain a mailing list that includes, but is not limited to adjacent property owners, special interest groups, and others identified by TxDOT to be used for the hearing notice.
- Prepare, publish, and distribute meeting notices and obtain affidavits of publication, in accordance with TxDOT and FHWA requirements. Notices will be published in English and in 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 for an English to Spanish translator at the Public Meeting.
- Provide for an English to Spanish translated materials such as legal notice, comment forms and handouts.
- Provide and coordinate Public Meeting informational and directional signs (registration/sign-in, written comment station, and directional arrows for traffic flow).
- Provide two personnel (Sr. Planner and Env. Planner) to conduct the Public Meeting.
- Prepare graphics related to the environmental study.
- Provide a Summary and Analysis 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. The Public Meeting comments and responses will be compiled to properly record the meeting and hearing. 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.

### 5) Afford for an Opportunity for Public Hearing

The Environmental Consultant will prepare and advertise an Opportunity for a Public Hearing.

- Prepare and publish a public hearing notice and obtain affidavits of publication, in accordance with TxDOT and FHWA requirements. Notices will be published in English and in Spanish newspapers at 30 days and 10 days.

This scope of work does not include holding a public hearing. If a public hearing is requested to be held, an additional scope and fee will be added by supplemental agreement.

### PLAN, SPECIFICATIONS AND ESTIMATE SERVICES

- 1) The Engineer shall prepare and submit work under this task in accordance to the PS&E Preparation Manual. The location of project should depict the entire project with beginning and ending (Station Numbers/Reference Markers) for each noted CSJ. Mapping landmarks (side streets, creeks, etc.) along with North Arrow and a scale should be shown to help relate the physical location of the project.
- 2) The Engineer shall use the Design Speed, the Funding Category, Average Daily Traffic, ADT, Roadway Classification, Location Type, and the appropriate Design Criteria to develop the typical sections as set forth in the Roadway Design Manual, PS&E Preparation Manual and other deemed necessary State approved manuals to prepare and submit the work under this task. The existing typical section should be shown with current roadway (pavement, right of way, etc.) characteristics. The proposed typical sections should be shown below the existing typical section with all related pertinent (pavement, right of way, etc.) information for the proposed roadway construction.
- 3) For Roadway, Bridge and Traffic quantities, the Engineer shall prepare and submit work under this task in accordance to the PS&E Preparation Manual and other deemed necessary State approved manuals. All summaries shall be consolidated per CSJ, City or County participation, etc. Any quantities shown "For Contractor Information Only" should be shown as such.

### TRAFFIC CONTROL PLANS (TCP)

- 1) The Engineer will develop a conceptual traffic control plan (TCP), roll plot, and narrative. These information will be submitted to the County and TxDOT for review. The Engineer shall make a presentation to the District Traffic Control Safety Review Committee to obtain approval of the TCP prior to development of plan sheets. Modifications requested by TxDOT or County after approval will be consider additional work and be added by supplemental agreement.
- 2) The Engineer shall notify the State if they plan on requesting a speed reduction at the work zones. The Engineer shall prepare the request form using the latest approved Strip Map within the project limits in conjunction with the Traffic Standards for this request. If the project limits is within the city limits, the request shall be coordinated with the State and the local municipality at the early design process.
- 3) The Engineer shall provide the State with a hardcopy and accompanying electronic file of a schedule and Critical Path Method for project duration for each phase of construction using SureTrack software
- 4) The Engineer shall describe the type of work to be performed for each phase of sequence of construction and any special instructions (ex: storm sewer, culverts, bridges, railing, illumination, signals, retaining walls, signing, paving surface sequencing or concrete placement, ROW restrictions, utilities, etc.) that the contractor should be made aware to include limits of construction, obliteration, and shifting or detouring of traffic prior to the proceeding phase.
- 5) The Engineer shall include the work limits, the location of channelizing devices, positive barrier, location & direction of traffic, work area, stations, pavement markings, and other information deemed necessary for each phase of sequence of construction.
- 6) If Engineer determines that a standard is not applicable to address the entire project, then the Engineer shall prepare layouts for each respective phase of sequence of construction to illustrate any necessary additional construction details not covered by the Standards to address work limits for each sequence in stations,

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channelizing devices, barricades, positive barrier, tapers, buffer zones, TCP signage, signs, work zone pavement markings, work area, location & direction of traffic, locations for pedestrian crossings, and other information deemed necessary for each phase of sequence of construction. The Engineer shall develop the layouts by referring to the TxDOT standards, latest version of the TxMUTCD for non-TCP signage that may be needed as part of the TCP signage for intersections. The layouts shall address construction of detours, access to business, homes, side streets, and driveways, and reroute of traffic to other roads.

- 7) The Engineer will address drainage issues that are a result of changes in horizontal and vertical profiles by specifying the location and size of the temporary drainage structures.
- 8) The Engineer shall prepare the plan and profile sheets and cross sections for all detours.
- 9) The Engineer will develop TCP plans as double stacked, 1" = 100'. TCP plans will be developed for a two phase approach to traffic control.

#### **ROADWAY DETAILS**

- 1) The alignment sheet(s) include the following for complex projects and/or where it is not desirable to show the following information on the plan and profiles sheet(s): include the project limits for the entire project, label curve data bearings/coordinates for each alignment, computer generated data may be graphically place on the sheet(s) and if applicable the State Plane Coordinates System should be noted on this sheet(s).
- 2) The Benchmark Data sheet shall be developed in tabulated form and accompanied by surveyor's sketch showing the Station Number from respective alignment, Offset, and Elevation and Physical Description.
- 3) The Engineer shall design the plan (horizontal) and profile (vertical) including roadway transitions based on the controlling criteria previously defined and as set forth in the previously listed. The Engineer shall develop the alignment for the project in GEOPAK format. Plan and Profile sheets will be developed at 1" = 100'.
- 4) The Engineer shall identify and notify the State all locations not meeting the set criteria. In addition, the Engineer shall provide alternatives and a recommendation to address these design issues.
- 5) The Engineer shall develop and verify all cross sections in preparation of the proposed traffic control plan, drainage, utilities, right-of-way, and access onto adjacent properties. In addition, the cross sections shall be drained to maintain the natural watershed unless otherwise directed by the State.
- 6) The Engineer shall determine all cut and fill quantities.
- 7) The Engineer shall design all intersections to accommodate the design vehicles turning radius. The ADA-wheelchair ramps shall be designed in accordance to the TDLR compliance and the latest TxDOT's Pedestrian Ramp Standards in conjunction with the requirement of the latest version of the TxMUTCD as it relates location of the traffic signals pedestrian heads, signage, and pavement markings.
- 8) The Engineer shall design all longitudinal barriers (railing and guardrail), raised median, fencing, bus bays, parking areas, mailboxes, and shoulder texturing in accordance to the criteria set forth in the roadway design manual and standards. Miscellaneous Details Sheet(s) may be developed to illustrate any necessary additional construction details not covered by the Standards.

#### **DRAINAGE DETAILS**

- 1) The Engineer shall use the Roadway Design Manual, Hydraulic Manual, PS&E Preparation Manual, and other deemed necessary State approved manuals to prepare and submit the work under this section
- 2) The Engineer shall use the above-listed manuals to prepare and submit the work under this task. The hydraulic calculations shall have the following based on previously County approved drainage study:
  - a) Description-Material, Size, & Entrance (headwall)
  - b) Design discharges, Flow per barrel, barrel slope, and Manning n-value
  - c) Inlet flow line, allowable headwater, roadway (shoulder) elevation, calculated inlet headwater elevation
  - d) Outlet flow line, Tailwater for design frequency/frequencies, type of flow, critical depth, and calculated friction losses, calculated outlet water elevation
  - e) Controlling headwater elevation, outlet velocity, and recommended countermeasures to maintain an acceptable outlet velocity.
- 3) The Engineer shall show the location of culverts and ditches on the roadway plan view.
- 4) The Engineer shall use TxDOT standards preferably at all times. Modification to inlets, pipe connection, bedding details, and other elements pertaining to drainage details shall be included under this work task. The BCS sheet

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must be submitted for all box culverts within the project limits. This sheet must be signed and sealed by the Engineer.

**TRAFFIC ITEMS**

The Engineer shall coordinate with the TXDOT Pharr District for traffic items under TXDOT maintenance (Signs, Pavement Markings and Traffic Signals). The Engineer will incorporate TXDOT comments into the PS&E.

**1) SIGNS**

The Engineer shall inventory all signage through the project limits including those limits that are considered incidental to the project limits. All intersections and roadway signage shall be designed and spaced according to the requirements set forth in TXDOT's Sign Crew Field Book and standards for work under this task. Any signs no longer used by the State shall be taken out and replaced by an accepted TXMUTCD sign. The Engineer shall design all signage according to the latest version of the TXMUTCD, Supplemental to TXMUTCD, and TXDOT's Signs and Markings Manual.

Signing Layouts (double banked 1"=50') shall include the following:

- Legend
- Notes
- Callouts/dimensions
- Existing signs to remain
- Existing signs to be removed
- Proposed signs type/location
- Summary - Proposed signs
- Summary - Existing signs to be removed

**2) PAVEMENT MARKINGS**

The Engineer shall design all pavement markings according to the latest version of the TXMUTCD, Supplemental to TXMUTCD, and TXDOT's Signs and Markings Manual. The Engineer will develop pavement marking details within the work area. All striping to be removed will be so indicated along with complete restriping of the project area.

Pavement Markings Layouts (double banked 1"=50') shall include the following:

- Legend
- Notes
- Callouts/dimensions
- Existing striping to remain
- Existing striping to be removed
- Proposed pavement markings
- Tie in proposed pavement markings to existing striping
- Summary - Pavement Markings

**3) TRAFFIC SIGNALS**

The Engineer shall inventory all traffic signals through the project limits including those limits that are considered incidental to the project limits. All traffic signals shall be designed and spaced according to the requirements set forth in TXDOT's standards for work under this task. The Engineer will submit to TXDOT traffic signal warrants.

Traffic Signal will be installed at the following intersections:

- Dicker Rd at Spur 115 (23rd St) - Modification

Work Authorization No. 3  
Attachment "B" Con't

- Dicker Rd at SH 336 (10th St) - Modification
- Dicker Rd at McColl Rd - Modification
- Dicker Rd at FM 2061 (Jackson Rd) - Modification

General Requirements:

- Contact Local Utility Company, conduct joint field investigation, determine service drop locations, determine need for adjustment of overhead utility lines.
- Select TXDOT standard drawings.
- Signal configuration shall be span wire with luminaires on signal poles.

Traffic Signal Layouts to include the following layouts:

- General Notes
- Summary - Traffic Signal
- Existing Conditions Layout (single bank 1"=50')
- Proposed Signal Layouts (single bank 1"=60') shall include the following:
  - Legend
  - Notes
  - Signal configuration type
  - Detection location
  - Controller location/type
  - Ground box location/type
  - Wiring/Conduit location
  - Signal head orientation
  - Luminaires location/orientation
  - Overhead signs location
  - Phasing/Phase sequence diagram
  - Electrical schedule
  - Detector schedule
  - Signal head schedule
  - Foundation schedule
  - Sign details schedule
  - Timing chart (isolated)
  - Electrical service data

**STORM WATER POLLUTION PREVENTION PLANS (SW3P)**

The Engineer shall submit and prepare separate SW3P sheets when soil is to be disturbed as part of the erosion control measures during each phase of the sequence of construction. The general plan for the SW3P on this project is to enclose the area under construction including existing and proposed inlets with erosion control devices and provide a stabilized construction entrances at points where traffic will be entering or leaving the construction site. The Engineer shall also design structures or features to control erosion and suspended sediments for post-construction. A standardized General Note will serve as the SW3P where there is to be no soil disturbance (seal coats, overlays, etc.) in the project. The Engineer shall refer to the Hydraulic Design Manual, TxDOT standards, TxDOT Storm Water Management Guidelines, the Environmental Manual, and District Environmental Staff for guidance on work under this task. Erosion Control measures shall conform to one or more of the approved TxDOT / Texas Natural Resources Conservation Commission (TNRCC) / US Environmental Protection Agency (EPA) / US Army Corps of Engineers (USACE) Best Management Practices. The appropriate Best Management Practice(s) shall be listed on the Environmental Issues, Permits, and Commitments (EIPC) sheet to be included as a Plan Sheet and shall be followed by the Engineer and Contractor to completion. Plan sheets will be develop separate from TCP as 1"=100', double stacked.

**CROSS SECTIONS**

Work Authorization No. 3  
Attachment "B" Con't

For the Final Submission, the Engineer shall furnish the final cross - section plots, on 36" wide x 120" long roll plots, showing both the original terrain and the design cross-sections, showing the roadway template, at a vertical scale of 1"=10' and a horizontal scale of 1"=10'. The design cross - sections shall indicate the slope rate on the side slopes. The Engineer shall use GeoPak software and provide the state with the applicable files. Cross sections are to show proposed pavement thickness, top of subgrade, finish grade of side bar ditches with slopes and location of right of way. Indicating other features within the cross sections is not part of the scope of work, ie. Underground utilities, storm sewer lines, top soil, etc.

## BRIDGE DESIGN

Bridge design will be provided for the widening of the San Juan Main Canal and HCDD# 1 South Floodway Bridge. Work is limited to widening of existing structures. Additional work if and when required by TxDOT for bridge replacement, detail evaluation of existing conditions and global stability analysis of fill section will be added by supplemental agreement if and when required.

- 1) Preparation of Structural Details
- 2) Preparation of Bridge Layouts (each bridge)
  - a) Bridge Layouts (PLAN)
    - i) Horizontal curve information or bearing of centerline.
    - ii) Including horizontal, vertical, and template information of all roadways or railroads crossed.
    - iii) Bearing of center line or reference line.
    - iv) Skew angle(s).
    - v) Slope for header banks and approach fills.
    - vi) Control stations at beginning and ending of bridge (with deck elevation), intersections, etc.
    - vii) Approach pavement and crown width.
    - viii) Bridge roadway width and curbs, face of rail, shoulders, or sidewalks.
    - ix) Bridge end treatments (cement stabilized backfill details, etc.)
    - x) Limits and type of riprap.
    - xi) Proposed features under structure.
    - xii) Location of profile grade line.
    - xiii) North arrow.
    - xiv) Typical bridge roadway section including preliminary proposed beam types and spacings.
    - xv) Cross slope and superelevation data.
    - xvi) Minimum horizontal clearances will be calculated and indicated (dimensioned) to controlling features, when applicable.
    - xvii) Location of soil core holes (station and offset), shown on layout.
    - xviii) Bent stations and bearings.
    - xix) Retaining wall locations.
    - xx) Traffic flow directional arrows.
    - xxi) Railing types shown (use single slope railing unless otherwise directed).
    - xxii) Joint types and seal size, if used.
    - xxiii) Beam line numbers consistent with span details.
    - xxiv) Critical horizontal clearances (location of railroad tracks, nearby structures and utilities).
    - xxv) Bearings of utilities.
    - xxvi) Overhead sign bridge locations, if applicable
  - b) Bridge Layouts (ELEVATION)
    - i) Type of foundation.
    - ii) Finished grade elevations at beginning and end of bridge,
    - iii) Overall length of structure.
    - iv) Length, type of spans and units.

Work Authorization No. 3  
Attachment "B" Con't

- v) Type of railing.
  - vi) Minimum calculated vertical clearance(s).
  - vii) Existing and proposed ground lines clearly marked.
  - viii) Grid elevations and stations.
  - ix) Bent numbers encircled.
  - x) Stationing of bridge compatible with grid stations.
  - xi) Standard title.
  - xii) Profile grade data.
  - xiii) Type of riprap.
  - xiv) Soil Core Hole information with penetrometer test data shall be shown on the bridge layout at correct station, elevation and scale.
  - xv) Dowel locations at all bents.
  - xvi) Column "H" heights.
  - xvii) Number, size and length of foundations.
  - xviii) Overhead sign bridge locations.
- c) Additional layout requirements for waterway structures and bridge classification culverts.
- i) Design and 100-year peak discharges.
  - ii) Design and 100-year high water (HW). (Recorded HW and date if available.)
  - iii) Natural and through-bridge velocities for design and 100-year floods.
  - iv) Calculated backwater for design and 100-year floods.
  - v) Direction of flow for waterway crossings.
  - vi) Contours for water crossing.
- 3) Bridge Total Quantities, Cost Estimates, and Summary Sheets (each bridge)
- 4) Bearing seat elevations for each beam or girder. Top of cap elevations for non-beam type structures.
- 5) General Guidelines for Bridge Design - The Engineer shall prepare a bridge layout of each bridge structure for the TxDOT's review and approval. The bridge layout shall be in conformance with the Bridges and Structures, Operation and Planning Manual and the Bridges and Structures, Detailing Manual. Soil core hole data is not required for submission of the preliminary bridge layout. No bridge design work is to be performed until the State has given the Engineer written approval of the preliminary bridge layout. Several months may be required after the preliminary bridge layout is submitted for the District to obtain approval and/or permits from the following: TxDOT Design Division, FHWA, US Army Corps of Engineers, Texas Parks and Wildlife. Consequently, the Engineer's design contract schedule should reflect all bridge layouts being submitted at the earliest possible date, and generous review times should be associated with the submittals.

## DELIVERABLES

### PS&E

The Engineer shall deliver to the County and TxDOT Project Manager one copies and one CD's containing PDF's of the plan sheets provided, respective of the 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> submittal. For the final submittal, the Engineer shall submit one set in Mylar accompanied by a paper copy and two CD's containing PDF's of the final plans.

#### 1<sup>st</sup> Submittal -

- 1) Design Summary Report
- 2) Title Sheet
- 3) Typical Sections (existing and proposed)
- 4) Traffic Control Plan
- 5) Utility Layout (conflicts identified)
- 6) Plan & Profile
  - a) Vertical Alignment (existing and proposed)
  - b) Horizontal Alignment (existing and proposed)

Work Authorization No. 3  
Attachment "B" Con't

- 7) Miscellaneous Details
- 8) Bridge Layouts
- 9) Corresponding Quantity Summary Sheets
- 10) Corresponding Standard Detail Sheets for all Items of Work in this submittal
- 11) Preliminary Estimate
- 12) Design Exceptions/Waivers required
- 13) Newly created Special Provisions/Specifications to be used (Form 1814)
- 14) R.O.W. (issues identified)
- 15) 2 Rolls of Cross Sections

2<sup>nd</sup> Submittal -

- 1) Index Sheet
- 2) Hydrologic Computation Sheets
- 3) Hydraulic Data Sheets
- 4) Drainage Area Maps
- 5) Drainage Plan & Profile
- 6) Drainage Structure Details
- 7) Storm Sewer Details
- 8) Storm Water Pollution Prevention Plan
- 9) Miscellaneous Details
- 10) Bridge Details
- 11) Corresponding Quantity Summary Sheets
- 12) Corresponding Standard Detail Sheets for all Items of Work in this submittal
- 13) Updated Estimate
- 14) Utility Adjustment/Relocation Details
- 15) R.O.W. Acquisition Detail
- 16) 2 Rolls of Cross Sections

3<sup>rd</sup> Submittal -

- 1) Final Index of Sheets
- 2) Pavement Marking Layout/Details
- 3) Bridge Details
- 4) Miscellaneous Details
- 5) Corresponding Quantity Summary Sheets
- 6) Corresponding Standard Detail Sheets for all Items of Work in this submittal
- 7) Final Estimate
- 8) General Notes
- 9) Certifications
- 10) Form 1002
- 11) Cross Sections

4<sup>th</sup> Submittal - PS&E Package 100% complete.

**ENVIRONMENTAL ASSESSMENT**

The Engineer shall submit the Environmental Assessment to the Texas Department of Transportation for review and approval. Three hard copies and one CD with PDF's of the submittal will be provided for the preliminary draft, final draft and final assessment.

**HYDRAULIC DELIVERABLES**

The Engineer shall submit the Hydraulic Report signed and sealed by a Registered Professional Engineer in the State of Texas.

**SURVEY DELIVERABLES**

The Engineer shall submit, after completion of PS&E, all original field books containing all survey information requested for this work authorization. The field book shall contain all information gathered in the field. The survey information provided shall be to the surveyor's best knowledge, accurate, and complete.

Electronic files (\*.txt) containing survey information with proper identification and with the following data format x, y, and z NAD-83 coordinate system. The x-coordinate corresponding to the east bearing, the y-coordinate corresponding to the north bearing, and the z-coordinate corresponding to the vertical elevation.

Electronic 2d and 3d Microstation files (\*.dgn) containing survey information with proper identification and with the following data format x, y, and z NAD-83 coordinate system.

CONTRACT NO. C-12-119-07-31  
DICKER ROAD  
WORK AUTHORIZATION NO. 3  
ATTACHMENT "C"  
Work Schedule

<b>Description</b>	<b>Time</b>
Purchasing Department PO and NTP	NTP
Begin PS&E and Draft CE Report	7 months
TxDOT Review	3 months
Revise CE and Resubmit	1 month
Review by FHWA	2 months
Revise CE and Resubmit	1 month
Approval to afford opportunity to Public Hearing	3 months
Clearance from FHWA	1 month
Purchase of One Parcel and finalize PS&E	4 months
<b>Total</b>	<b>22 months from NTP</b>

CONTRACT NO. C-12-119-07-31  
 DICKER ROAD  
 WORK AUTHORIZATION NO. 3  
 ATTACHMENT "D" FEE PROPOSAL  
 UPDATED 10/10/13

ESTIMATE OF CONSTRUCTION COST \$ 9,800,000.00

**BASIC ENGINEERING SERVICES**

<b>ITEM</b>	<b>AMOUNT</b>
General Management	\$ 33,120.00
Utility Coordination	\$ 69,080.00
General PS&E	\$ 83,250.00
Traffic Control Plan	\$ 81,060.00
Roadway Details	\$ 168,935.00
Drainage Details	\$ 54,710.00
Signing, Pavement Markings and Traffic Signals	\$ 121,805.00
EPIC & SW3P	\$ 31,785.00
Bridge Design	\$ 105,920.00
Project DirectCosts	\$ 30,000.00
<b>SUBTOTAL BASIC ENGINEERING SERVICES</b>	<b>\$ 779,665.00</b>

**SPECIAL ENGINEERING SERVICES**

<b>ITEM</b>	<b>AMOUNT</b>
Stakeholder Meeting (TEDSI)	\$ 36,480.00
Environmental Documentation Allowance	\$ 172,500.00
Public Involvement Allowance	\$ 45,000.00
	\$ -
<b>SUBTOTAL SPECIAL ENGINEERING SERVICES</b>	<b>\$ 253,980.00</b>

**TOTAL FEE PROPOSAL \$ 1,033,645.00**