SUPPLEMENTAL AGREEMENT NO. 1 TO AGREEMENT OF MAY 15, 2013 FOR ENGINEERING SERVICES

This Supplemental Agreement is made and entered into this day of April, 2014, and modifies the ENGINEERING SERVICES AGREEMENT between Fort Bend Grand Parkway Toll Road Authority and Klotz Associates, Inc., dated May 15, 2013 for engineering services for the Fort Bend Grand Parkway Toll Road, Segment D.

The agreement is hereby modified as follows:

- 1. The first sentence of Section 2.a is replaced with the following sentence:
 - "The Maximum Compensation under this contract is \$239,515.00."
- 2. The second paragraph of Section 2.a is replaced with the following paragraph:
 - "Compensation for performance of services within the Scope of Services described in Attachment A will be as follows: The lump sum compensation shall be increased by \$210,000.00, for the additional work shown in Attachment A. The maximum amount payable under this agreement shall not exceed \$239,515.00, as shown in Attachment B. Progress payments for work detailed in Attachment A will be made when the Engineer has attained a level of completion equal to or greater than the agreed upon milestones of completion in the reasonable opinion of FBGPTRA."
- 3. The Scope of Services shown in Attachment A shall be expanded to include Exhibit A-1, attached hereto.
- 4. The Compensation for Scope of Services shown in Attachment B shall be expanded to include Exhibit B-1, attached hereto.

[Remainder of page intentionally left blank.]

IN WITNESS WHEREOF, this Supplemental Agreement is hereby executed as of the date first set forth above.

FORT BEND GRAND PARKWAY TOLL ROAD AUTHORITY

James D Condrey, DDS

Chairman, Board of Directors

ATTEST

By:

KLOTZ ASSOCIATES

ENGINEER

By: William R. altal

Name: William R. Abbott

Title: Senior Vice President

EXHIBIT A-1 ATTACHMENT A SUPPLEMENTAL AGREEMENT NO. 1 ADDITIONAL SCOPE OF SERVICES

SEGMENT D OVERLAY

The Fort Bend Grand Parkway Toll Road Authority (hereinafter to be referred to as FBGPTRA) has commissioned the services of **Klotz Associates**, **Inc.** to serve as Design Consultant (hereinafter referred to as the "Engineer"). FBGPTRA has commissioned the Engineer to prepare plans, specifications, and estimates (PS&E) for Segment D of the Grand Parkway.

The work to be performed by the Engineer under this contract consists of providing engineering services required for the preparation of PS&E for the Grand Parkway overlay. The Engineer shall prepare plans, details and compute quantities to include roadway overlay plan, overlay typical sections, specifications, and cost estimates. The project limits include all of the original mainlanes and uncurbed portions of ramps remaining in service after the Grand Parkway is opened to toll traffic. The project is expected to have a construction value of approximately \$3,000,000 to \$3,500,000 and exact project limits may be adjusted to achieve this construction value.

The Engineer proposes to develop PS&E documents and provide construction phase services on a lump sum basis.

Services to be Provided by the Engineer

I. Design Phase Services

The Engineer will develop PS&E documents sufficient for construction of the project.

A. Roadway Design

- 1. Project Layout Sheet The Engineer shall develop an overall layout sheet reflecting the project limits, project alignment, and survey controls.
- 2. Roadway Plans The Engineer shall provide roadway plan drawings using CADD standards as required by FBGPTRA. The drawings shall consist of a planimetric file of existing features and files of the proposed improvements. The roadway base map shall contain line work that depicts existing surface features obtained from existing as-built and construction plans. The design will contain sufficient information to place the anticipated PFC overlay. Profile view will not be developed for this project.

- 3. Typical Sections Typical sections shall be required for the new overlay. Typical sections shall include width of travel lanes, shoulders and transitions.
- 4. Miscellaneous Roadway Details Provide necessary roadway details for the installation the PFC overlay. Details will include transition or feathering details at project endpoints and may include other necessary details for installation of bridge joints, etc. Transition or feathering details will include an analysis of pavement longitudinal and cross slopes to determine the appropriate location for termination of the overlay.
- 5. Roadway Standard Drawings The Engineer shall determine which standards are applicable and include them in the design plans.

B. Drainage Design

1. Sheet Flow Verification – The Engineer shall review and make recommendations for the sheet flow characteristics of the drainage after the installation of the PFC overlay. Particular attention will be paid to any superelevation transition areas. It is not anticipated that additional drainage structures will be required to implement the overlay.

C. Markings

- 1. Pavement Marking Layout The Engineer shall detail permanent pavement markings and channelization devices on plan sheets. The Engineer shall coordinate with FBGPTRA for overall final pavement marking strategies. Pavement markings shall be selected from the latest FBGPTRA standards using materials that are appropriate for the PFC overlay.
- 2. Pavement Marking Standards The Engineer shall determine which standards are applicable and include them in the design plans.

D. Miscellaneous Roadway

- 1. Traffic Control and Sequence of Construction The Engineer shall prepare traffic control plans (TCP) for the project. A detailed TCP shall be developed in accordance with the latest edition of the *Texas Manual on Uniform Traffic Control Devices* (TMUTCD). The Engineer will incorporate the current barricade and construction (BC) standards as applicable. The Engineer shall interface and coordinate phases of work.
 - a. Sequence of Construction/TCP Plan Sheets The Engineer shall provide a written narrative of the construction sequencing and work activities per phase and determine the existing and proposed traffic control devices

(regulatory signs, warning signs, guide signs, route markers, construction pavement markings, barricades, flag personnel, temporary traffic signal, etc.) to be used to handle traffic during each construction phase.

- b. Approach Signing The Engineer shall develop the approach signing details for the project, including signing on adjacent roadways as needed.
- c. Standard TCP Details, BC Sheets, Marking Standards The Engineer shall determine which standards are applicable and include them in the design plans.
- d. Calculate Construction Contract Working Days The Engineer shall prepare a construction contract time determination using a scheduling software such as Microsoft Project or Primavera. The schedule shall indicate tasks, subtasks, critical dates, milestones, and depicts the interdependence of the various items. The Engineer shall provide assistance to FBGPTRA in interpreting the schedule.
- 2. Title Sheet The Engineer shall develop a title sheet compatible with FBGPTRA standards.
- 3. Index Sheet The Engineer shall develop an index sheet reflective of all sheets included in the plan set.
- 4. Summaries The Engineer shall develop and summarize all quantities contained within the PS&E document by specific bid item.
- 5. Basis of Estimate & Preliminary Cost Estimate The engineer shall prepare the Basis of Estimate, which will be used as the basis for the probable cost estimate development. The Engineer shall independently develop and report quantities in bid format for the final PS&E submittals.
- 6. General Notes & Specifications The Engineer shall coordinate with the widening PS&E consultant to develop a list of additional standard specifications with the appropriate reference items from the estimate. The Engineer shall also identify the need for any special specifications, and special provisions. The Engineer shall coordinate with the widening PS&E consultant to prepare general notes from TxDOT/FBGPTRA's master list of general notes and any specific general notes, special specifications, and special provisions for inclusion in the plans and bidding documents. The Engineer shall provide general notes, special specifications, and special provisions in rich text format.
- 7. Coordination & Review The Engineer will meet with FBGPTRA up to two times throughout the life of each PS&E project for the purposes of

coordination and review of the PS&E plan set or other issues that may arise.

8. Project Management/Invoicing/Contracts - The Engineer shall prepare monthly invoices and progress reports for work performed in by the Engineer. The Engineer shall maintain detailed project files throughout the life of the project. These project files are available for review by FBGPTRA. The Engineer shall use standard forms (meeting minutes, telephone conversation record, e-mails etc.) as a means of documenting the project.

E. Bridge Design

- 1. Bridge Evaluation For Deck Overlay Capacity The Engineer will evaluate existing bridge design capacity and ability to accept the PFC overlay. Design calculations will be assembled for FBGPTRA's review. Evaluation of the bridge deck joints and modifications for acceptable of the PFC overlay will also be made.
- 2. Joint Overlay Details The Engineer will prepare any unique joint details that are required for the project.
- 3. Bridge Standards The Engineer shall determine which standards are applicable and include them in the design plans.

F. Bid Phase Services

The Engineer will support FBGPTRA during the bidding of the Project. Tasks include:

- 1. Prepare bid documents including bid form, technical specifications, provisions, front-end documents, and construction schedule.
- 2. Assist FBGPTRA in preparation of the advertisement for bids.
- 3. Attend the pre-bid conference.
- 4. Issue addenda for clarifications to the plans and specifications.
- 5. Attend bid opening.
- 6. Tabulate bids and assist FBGPTRA in the evaluations of bids.

EXHIBIT B-1 ATTACHMENT B SUPPLEMENTAL AGREEMENT NO. 1 ADDITIONAL SCOPE OF SERVICES

SEGMENT D OVERLAY

I. Design Phase Services

\$210,000.00

Total Engineering Fee

\$210,000.00