

**SUPPLEMENTAL AGREEMENT NO. 5  
TO  
AGREEMENT OF APRIL 20, 2011  
FOR  
ENGINEERING SERVICES for  
Fort Bend Parkway Toll Road at SH 6**

This Supplemental Agreement is made and entered into this 20<sup>th</sup> day of May, 2015, and modifies the ENGINEERING SERVICES AGREEMENT between the Fort Bend County Toll Road Authority (FBCTRA) and Parson Brinkerhoff, Inc., dated April 20, 2011 for engineering services for the Fort Bend Parkway Toll Road at SH 6 bridge.

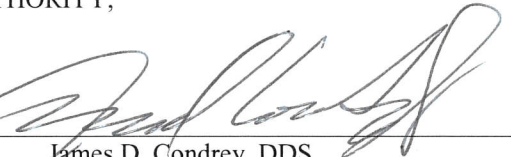
The agreement is hereby modified as follows:

1. The first sentence of Section 2.a is replaced with the following sentence:  
“The Maximum Compensation under this contract is \$2,133,282.57.”
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 paid in accordance with Attachment B. The compensation shall be increased by \$97,837.00 for the additional work shown in Exhibit A-5. The maximum amount payable under this agreement shall not exceed \$2,133,282.57. 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 FBCTRA.”
3. The Scope of Services shown in Attachment A shall be expanded to include Exhibit A-5, attached hereto.
4. The Compensation for Scope of Services shown in Attachment B shall be expanded to include Exhibit B-5, attached hereto.

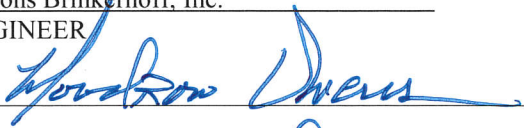
**[Remainder of page intentionally left blank.]**

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

FORT BEND COUNTY TOLL ROAD  
AUTHORITY,

By:   
James D. Condrey, DDS  
Chairman, Board of Directors

ATTEST:   
By \_\_\_\_\_  
Secretary, Board of Directors

Parsons Brinkerhoff, Inc. \_\_\_\_\_  
ENGINEER  
By:   
Name: WOODROW OWENS  
Title: Vice President

**EXHIBIT A-5  
ATTACHMENT A  
SUPPLEMENTAL AGREEMENT NO. 5  
ADDITIONAL SCOPE OF SERVICES**

**FORT BEND PARKWAY TOLL ROAD AT SH 6**

The Engineer shall modify existing FB SH 6 plans and perform additional construction phase services as indicated below:

**Traffic Engineering - Signalization**

1. The Engineer shall prepare complete plans, specifications, and estimates for the design of temporary signals at the southeast and northwest corners of the intersection of Fort Bend Parkway and SH 6 in Missouri City, TX to accommodate the construction of the Fort Bend Toll Road overpass including bridge bent drill shafts and right turn lanes. Modifications shall include relocation of the existing traffic signal controller, adjustments to the conduit and cabling,
2. The Engineer shall coordinate with the City of Missouri City and the Fort Bend County Toll Road Authority (FBCTRA) to review options and identify solutions for modifications to the City's traffic signal system and ITS network in the project area.
3. It is anticipated that three (3) joint meetings will be held with the City and FBCTRA, including 1) an initial kickoff meeting, 2) a project review meeting following submittal of the preliminary design, and 3) a final review meeting following completion of final design drawings.

**Bridge Modification**

1. Modify Bent 12 to eliminate the proposed foundation design to straddle an existing box culvert. The modification will include change the from three column bent to four column.
  - a. Revised Bridge Layouts
  - b. Revise Cap Design
  - c. Revise Column design and details
  - d. Revise foundation details
  - e. Revise quantity summary sheet.
2. Modify Bents 7 and 8 so that the footings clear the water table and is half above ground and half below ground.
  - f. Revise foundation design.
  - g. Revise Bridge Layouts .
  - h. Revise Foundation details and elevations.
  - i. Update quantity summary sheet.

### **Roadway Design**

The Engineer shall adjust Ramp A approximately 10 -15 feet to the north to provide an appropriate separation from the ROW near Knight Road. The modifications will include revisions to the following elements:

1. Minor Traffic Control Adjustments
2. Roadway Plan and Profile
3. Drainage Plan and Profile
4. Detention Pond Layout modification.
5. Signing & Pavement Marking adjustments.
6. Temporary Traffic Signal
7. SW3P Layouts Update Construction Estimate

### **Construction Phase Services**

1. The construction phase services will be same scope of services set forth in Supplement Agreement No. 4 (Hourly rates apply for this task).

Fort Bend Parkway Toll Road at SH 6 Bridge  
 Exhibit B-5  
 Attachment B

| CONTRACT SUMMARY                | SUPPLEMENTAL AGREEMENT #5            |                                 | FINAL CONTRACT VALUE  |
|---------------------------------|--------------------------------------|---------------------------------|-----------------------|
|                                 | CONSTRUCTION PHASE SERVICES (HOURLY) | ENGINEERING SERVICES (LUMP SUM) |                       |
| Parsons Brinckerhoff, Inc.      | \$25,000.00                          | \$70,437.00                     | \$1,553,283.08        |
| Associated Testing Labs         |                                      |                                 | \$156,151.20          |
| Dewatering Testing-Geosyntec    |                                      |                                 | \$50,547.00           |
| Lina T. Ramey and Associates    |                                      |                                 | \$64,792.20           |
| Lockwood, Andrews, Newman, Inc. |                                      | \$2,400.00                      | \$35,030.05           |
| BLANTON & ASSOCIATES            |                                      |                                 | \$1,646.18            |
| FCM Engineers, PC               |                                      |                                 | \$165,489.72          |
| TSC Engineering - Surveying     |                                      |                                 | \$106,343.14          |
| <b>Totals</b>                   | <b>\$25,000.00</b>                   | <b>\$72,837.00</b>              | <b>\$2,133,282.57</b> |

Notes:

- 1) Lina T.Ramey & Associates no longer in Houston. Parsons Brinckerhoff, Inc. will be completed remaining scope.
- 2) With Pump Station no longer part of the scope.

Fort Bend Parkway Extension  
State Highway 6 Overpass  
Exhibit B-5

Supplemental Agreement #05

Parsons Brinckerhoff, Inc.

| FUNCTION CODE                     | SENIOR PROJECT MANAGER | SENIOR ENGINEER | PROJECT ENGINEER | ENGINEER IN TRAINING | CADD OPERATOR | ADMIN/ CLERICAL | TOTAL HOURS | NO OF SHTS |
|-----------------------------------|------------------------|-----------------|------------------|----------------------|---------------|-----------------|-------------|------------|
| FC-110 Route and Design Studies   | 1                      | 2               | 0                | 0                    | 0             | 0               | 3           |            |
| FC-160 Roadway Design             | 8                      | 0               | 26               | 22                   | 0             | 0               | 56          | 21         |
| FC-161 Drainage Design            | 8                      | 0               | 43               | 22                   | 0             | 0               | 73          | 64         |
| FC-162 SIGNING, MARKING & TRAFFIC | 4                      | 28              | 36               | 5                    | 33            | 0               | 106         | 17         |
| FC-163 Miscellaneous Roadway      | 4                      | 0               | 18               | 15                   | 0             | 0               | 37          |            |
| FC-164 Project Management         | 6                      | 0               | 6                | 2                    | 0             | 2               | 16          |            |
| FC-170 Bridge Design              | 6                      | 20              | 90               | 72                   | 0             | 0               | 188         | 11         |
| SUBTOTAL                          | 37                     | 50              | 219              | 138                  | 33            | 2               | 479         | 113        |
| MULTIPLIER ( 3.000)               | \$74.50                | \$62.10         | \$54.00          | \$33.25              | \$55.00       | \$24.00         |             |            |
| TOTAL LABOR                       | \$223.50               | \$186.30        | \$162.00         | \$99.75              | \$105.00      | \$72.00         |             |            |
| DIRECT COST                       | \$8,289.50             | \$9,315.00      | \$35,478.00      | \$13,765.50          | \$3,465.00    | \$144.00        | \$70,437.00 |            |
| TOTAL INCLUDING DIRECT COST       |                        |                 |                  |                      |               |                 | \$70,437.00 |            |

| FUNCTION CODE 110        | SENIOR PROJECT MANAGER | SENIOR ENGINEER | PROJECT ENGINEER | ENGINEER IN TRAINING | CADD OPERATOR | ADMIN/ CLERICAL | TOTAL HOURS | TOTAL SHEETS | HRS PER SHEET |
|--------------------------|------------------------|-----------------|------------------|----------------------|---------------|-----------------|-------------|--------------|---------------|
| Route and Design Studies | 1                      | 2               |                  |                      |               |                 | 3           |              |               |
| Update Cost Estimate     |                        |                 |                  |                      |               |                 |             |              |               |
| SUBTOTAL                 | 1                      | 2               |                  |                      |               |                 | 3           |              |               |
| Percent Distribution     | 0                      |                 |                  |                      |               |                 |             |              |               |
| LABOR RATE / HOUR        | \$223.50               | \$186.30        | \$162.00         | \$99.75              | \$105.00      | \$72.00         |             |              |               |
| TOTAL LABOR COST         | \$223.50               | \$372.60        | \$0.00           | \$0.00               | \$0.00        | \$0.00          | \$596.10    |              |               |

| FUNCTION CODE 160            | SENIOR PROJECT MANAGER | SENIOR ENGINEER | PROJECT ENGINEER | ENGINEER IN TRAINING | CADD OPERATOR | ADMIN/ CLERICAL | TOTAL HOURS | TOTAL SHEETS | HRS PER SHEET |
|------------------------------|------------------------|-----------------|------------------|----------------------|---------------|-----------------|-------------|--------------|---------------|
| Roadway Design               |                        |                 |                  |                      |               |                 |             |              |               |
| Project Layouts (p.05)       |                        |                 | 2                | 2                    |               |                 | 4           | 4            | 1             |
| Typical Sections (p.10)      |                        |                 | 2                | 1                    |               |                 | 3           | 1            | 3             |
| Geometric Data Sheet (p. 67) |                        |                 | 1                | 1                    |               |                 | 2           | 1            | 2             |
| Maintance P&P (p. 73)        |                        |                 | 1                | 1                    |               |                 | 2           | 8            | 0             |
| Ramp A P&P (p. 74-76)        |                        |                 | 10               | 4                    |               |                 | 14          | 1            | 14            |
| Ramp B P&P (p. 79)           |                        |                 | 2                | 2                    |               |                 | 4           | 2            | 2             |
| Grading Plan (p. 80-81)      |                        |                 | 4                | 2                    |               |                 | 6           | 1            | 6             |
| Cross Sections               |                        |                 | 2                | 8                    |               |                 | 10          | 2            | 5             |
| Quantity Summary             |                        |                 | 2                | 1                    |               |                 | 3           | 1            | 3             |
| Management Oversight         | 8                      |                 |                  |                      |               |                 | 8           | LS           | 0             |
| SUBTOTAL                     | 8                      | 26              | 26               | 22                   |               |                 | 56          | 21           |               |
| LABOR RATE / HOUR            | \$223.50               | \$186.30        | \$162.00         | \$99.75              | \$105.00      | \$72.00         |             |              |               |
| TOTAL LABOR COST             | \$1,788.00             | \$0.00          | \$4,212.00       | \$2,194.50           | \$0.00        | \$0.00          | \$8,194.50  |              |               |

Fort Bend Parkway Extension  
State Highway 6 Overpass  
Exhibit B-5

| FUNCTION CODE 161                             | SENIOR PROJECT MANAGER | SENIOR ENGINEER | PROJECT ENGINEER | SENIOR ENGINEER | PROJECT ENGINEER | ENGINEER IN TRAINING | CADD OPERATOR | ADMIN/ CLERICAL | TOTAL HOURS | TOTAL SHEETS | HRS PER SHEET |
|---|------------------------|-----------------|------------------|-----------------|------------------|----------------------|---------------|-----------------|-------------|--------------|---------------|
| Drainage Design                               |                        |                 |                  |                 |                  |                      |               |                 |             |              |               |
| Storm Sewer                                   |                        |                 |                  |                 |                  |                      |               |                 |             |              |               |
| General Drainage Area Map (p. 116-118)        |                        |                 | 8                |                 |                  | 4                    |               |                 | 12          | 8            | 2             |
| Hydraulic Computations (p. 123-125)           |                        |                 | 6                |                 |                  | 2                    |               |                 | 10          | 8            | 1             |
| Mainlane P&P / Ramp A (p. 133-135)            |                        |                 | 12               |                 |                  | 6                    |               |                 | 18          | 8            | 2             |
| Mainlane P&P / Ramp B (p. 136)                |                        |                 | 1                |                 |                  | 1                    |               |                 | 2           | 8            | 0             |
| Laterals (p. 138)                             |                        |                 | 4                |                 |                  | 2                    |               |                 | 6           | 8            | 1             |
| Detention Pond Near Knight Road (p. 139-145A) |                        |                 | 8                |                 |                  | 6                    |               |                 | 14          | 8            | 2             |
| Quantity Summary                              |                        |                 | 2                |                 |                  | 1                    |               |                 | 3           | 8            | 0             |
| Management Oversight                          | 8                      |                 |                  |                 |                  |                      |               |                 | 8           | 8            | 1             |
| <b>SUBTOTAL</b>                               | 8                      |                 | 43               |                 |                  | 22                   |               |                 | 73          | 64           |               |
| <b>LABOR RATE / HOUR</b>                      | \$223.50               | \$186.30        | \$162.00         | \$99.75         | \$105.00         | \$72.00              |               |                 | \$10,948.50 |              |               |
| <b>TOTAL LABOR COST</b>                       | \$1,788.00             | \$0.00          | \$6,966.00       | \$2,194.50      | \$0.00           | \$0.00               |               |                 |             |              |               |

| FUNCTION CODE 162  | SENIOR PROJECT MANAGER | SENIOR ENGINEER | PROJECT ENGINEER | SENIOR ENGINEER | PROJECT ENGINEER | ENGINEER IN TRAINING | CADD OPERATOR | ADMIN/ CLERICAL | TOTAL HOURS | TOTAL SHEETS | HRS PER SHEET |
|--|------------------------|-----------------|------------------|-----------------|------------------|----------------------|---------------|-----------------|-------------|--------------|---------------|
| SIGNING, MARKING & TRAFFIC                                     |                        |                 |                  |                 |                  |                      |               |                 |             |              |               |
| Signalization (Temporary)                                      |                        |                 |                  |                 |                  |                      |               |                 |             |              |               |
| Plan Layouts for Signal Modification - Ft Bend Parkway at SH 6 | 2                      | 24              | 32               |                 |                  |                      | 24            |                 | 82          | 2            | 41            |
| Equipment and Conductor Schedules                              |                        | 2               | 4                |                 |                  |                      | 2             |                 | 8           | 2            | 4             |
| Traffic Signal Quantities Summary                              |                        | 2               |                  |                 |                  |                      | 1             |                 | 3           | 2            | 2             |
| Illumination   |                        |                 |                  |                 |                  |                      |               |                 |             |              |               |
| Plan Layouts (p. 355-357)                                      |                        |                 |                  |                 |                  | 3                    | 4             |                 | 7           | 8            | 1             |
| Illumination Quantities Summary                                |                        |                 |                  |                 |                  | 2                    | 2             |                 | 4           | 2            | 2             |
| Management Oversight   | 2                      |                 |                  |                 |                  |                      |               |                 | 2           | 1            | 2             |
| <b>SUBTOTAL</b>  | 4                      | 28              | 36               | 5               | 33               |                      |               |                 | 106         | 17           |               |
| <b>LABOR RATE / HOUR</b>                                       | \$223.50               | \$186.30        | \$162.00         | \$99.75         | \$105.00         | \$72.00              |               |                 | \$15,906.15 |              |               |
| <b>TOTAL LABOR COST</b>  | \$894.00               | \$5,216.40      | \$5,832.00       | \$496.75        | \$3,465.00       | \$0.00               |               |                 |             |              |               |

Fort Bend Parkway Extension  
State Highway 6 Overpass  
Exhibit B-5

| FUNCTION CODE 163                      | SENIOR PROJECT MANAGER | SENIOR ENGINEER | PROJECT ENGINEER | SENIOR ENGINEER IN TRAINING | CADD OPERATOR | ADMIN/CLERICAL | TOTAL HOURS | TOTAL SHEETS | HRS PER SHEET |
|--|------------------------|-----------------|------------------|-----------------------------|---------------|----------------|-------------|--------------|---------------|
| Miscellaneous Roadway PS & E Submittal |                        |                 |                  |                             |               |                |             |              |               |
| Advance Warning Signs (p.23)           |                        |                 | 1                | 1                           |               |                | 2           | LS           | 0             |
| Phase 1 (p. 27-28)                     |                        |                 | 4                | 4                           |               |                | 8           | LS           | 0             |
| Knight Road Intersection (p. 30)       |                        |                 | 2                | 1                           |               |                | 3           | LS           | 0             |
| Phase 2 (p. 33-35)                     |                        |                 | 6                | 4                           |               |                | 10          | LS           | 0             |
| Phase 3 (p. 40)                        |                        |                 | 2                | 1                           |               |                | 3           | LS           | 0             |
| Quantity Summary                       |                        |                 | 2                | 1                           |               |                | 3           | LS           | 0             |
| SW&P Plan Layout (p. 378)              |                        |                 | 1                | 3                           |               |                | 4           | LS           | 0             |
| Management Oversight                   | 4                      |                 |                  |                             |               |                | 4           | LS           | 0             |
| <b>SUBTOTAL</b>                        | 4                      |                 | 18               | 15                          |               |                | 37          |              |               |
| LABOR RATE / HOUR                      | \$223.50               | \$186.30        | \$162.00         | \$99.75                     | \$105.00      | \$72.00        |             |              |               |
| TOTAL LABOR COST                       | \$894.00               | \$0.00          | \$2,916.00       | \$1,496.25                  | \$0.00        | \$0.00         | \$5,306.25  |              |               |

| FUNCTION CODE 164                                     | SENIOR PROJECT MANAGER | SENIOR ENGINEER PLANNER | PROJECT ENGINEER | ENGINEER IN TRAINING | CADD OPERATOR | ADMIN/CLERICAL | TOTAL HOURS | TOTAL SHEETS | HRS PER SHEET |
|---|------------------------|-------------------------|------------------|----------------------|---------------|----------------|-------------|--------------|---------------|
| Project Management Meetings                           |                        |                         |                  |                      |               |                |             |              |               |
| General Review Meeting                                | 4                      |                         | 4                |                      |               |                | 8           |              |               |
| Lockwood Andrews & Newnan Progress Report Invoice (1) | 2                      |                         | 2                | 2                    |               |                | 4           |              |               |
| <b>SUBTOTAL</b>                                       | 6                      |                         | 6                | 2                    |               |                | 16          |              |               |
| LABOR RATE / HOUR                                     | \$223.50               | \$186.30                | \$162.00         | \$99.75              | \$105.00      | \$72.00        |             |              |               |
| TOTAL LABOR COST                                      | \$1,341.00             | \$0.00                  | \$972.00         | \$199.50             | \$0.00        | \$144.00       | \$2,656.50  |              |               |
|   |                        |                         |                  |                      |               |                | 44604       |              |               |

| FUNCTION CODE 170  | SENIOR PROJECT MANAGER | SENIOR ENGINEER | PROJECT ENGINEER | ENGINEER IN TRAINING | CADD OPERATOR | ADMIN/CLERICAL | TOTAL HOURS | TOTAL SHEETS | HRS PER SHEET |
|--|------------------------|-----------------|------------------|----------------------|---------------|----------------|-------------|--------------|---------------|
| Bridges Design   |                        |                 |                  |                      |               |                |             |              |               |
| Revised Plans Layouts, Qty Summary Sheet, Details and Elevations |                        |                 |                  |                      |               |                |             |              |               |
| Modification of Bent 7   | 3                      | 8               | 40               | 32                   |               |                | 83          | 10           | 8             |
| Modification of Bent 12  | 3                      | 12              | 50               | 40                   |               |                | 105         | 1            | 105           |
| <b>SUBTOTAL</b>  | 6                      | 20              | 90               | 72                   |               |                | 188         | 11           |               |
| LABOR RATE / HOUR  | \$223.50               | \$186.30        | \$162.00         | \$99.75              | \$105.00      | \$72.00        |             |              |               |
| TOTAL LABOR COST   | \$1,341.00             | \$3,726.00      | \$14,580.00      | \$7,182.00           | \$0.00        | \$0.00         | \$26,829.00 |              |               |

| DIRECT EXPENSES          | UNIT  | COST PER UNIT | NUMBER OF UNITS | TOTAL DIRECT COST |
|--------------------------|-------|---------------|-----------------|-------------------|
| 11X17 BW Paper Copies    | SHEET | \$0.15        | 40              | \$6.00            |
| Local Deliveries/Courier | EACH  | \$25.00       | 1               | \$25.00           |
| <b>TOTAL DIRECT COST</b> |       |               |                 | \$31.00           |

Fort Bend Parkway Extension  
State Highway 6 Overpass  
Exhibit B-5

Supplemental Agreement #05

CONSULTANT: LAN

| FUNCTION CODE                     | Principal<br>P | Sr. Project<br>Manager<br>PM | Sr. Specialty<br>Engineer<br>SPE | Design<br>Engineer<br>PE | Graduate<br>Engineer | Designer<br>D | Administrator<br>A | Secretary<br>S | TOTAL<br>HOURS | NO<br>OF<br>SHTS |
|-----------------------------------|----------------|------------------------------|----------------------------------|--------------------------|----------------------|---------------|--------------------|----------------|----------------|------------------|
| FC-162 Signing, Pavement Markings | 0              | 4                            | 0                                | 1                        | 0                    | 12            | 0                  | 0              | 17             | 6                |
| SUBTOTAL                          |                | 4                            |                                  | 1                        |                      | 12            |                    |                | 17             | 6                |
| RAW LABOR/HOUR                    | \$200.00       | \$185.00                     | \$170.00                         | \$140.00                 | \$95.00              | \$95.00       | \$90.00            | \$80.00        | \$2,020.00     |                  |
| TOTAL LABOR                       | \$0.00         | \$740.00                     | \$0.00                           | \$140.00                 | \$0.00               | \$1,140.00    | \$0.00             | \$0.00         | \$380.00       |                  |
| DIRECT COST                       |                |                              |                                  |                          |                      |               |                    |                |                |                  |
| TOTAL INCLUDING DIRECT COST       |                |                              |                                  |                          |                      |               |                    |                | \$2,400.00     |                  |

| FUNCTION CODE 162          | Principal<br>P | Sr. Project<br>Manager<br>PM | Sr. Specialty<br>Engineer<br>SPE | Design<br>Engineer<br>PE | Graduate<br>Engineer | Designer<br>D | Administrator<br>A | Secretary<br>S | TOTAL<br>HOURS | TOTAL<br>SHEETS | HRS<br>PER<br>SHEET |
|----------------------------|----------------|------------------------------|----------------------------------|--------------------------|----------------------|---------------|--------------------|----------------|----------------|-----------------|---------------------|
| Signing, Pavement Markings |                |                              |                                  |                          |                      |               |                    |                |                |                 |                     |
| Small Signs Ramp A         |                | 1                            |                                  |                          |                      | 4             |                    |                | 5              | 2               | 3                   |
| Large Signs Ramp A         |                | 1                            |                                  |                          |                      | 2             |                    |                | 3              | 2               | 2                   |
| Pavement Marking Ramp A    |                | 2                            |                                  |                          |                      | 4             |                    |                | 6              | 2               | 3                   |
| General Requirements QA/QC |                |                              |                                  | 1                        |                      | 2             |                    |                | 3              |                 |                     |
| SUBTOTAL                   |                | 4                            |                                  | 1                        |                      | 12            |                    |                | 17             | 6               |                     |
| LABOR RATE / HOUR          | \$200.00       | \$185.00                     | \$170.00                         | \$140.00                 | \$95.00              | \$95.00       | \$90.00            | \$80.00        | \$2,020.00     |                 |                     |
| TOTAL LABOR COST           | \$0.00         | \$740.00                     | \$0.00                           | \$140.00                 | \$0.00               | \$1,140.00    | \$0.00             | \$0.00         | \$380.00       |                 |                     |