

**GENERAL MEETING OF THE BOARD OF DIRECTORS
OF THE
CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY**

RESOLUTION NO. 09-24

**Supplement No. 1 to Work Authorization No. 1
Jacobs Carter Burgess Engineering 290 East Segment 1 Design Contract**

WHEREAS, the Central Texas Regional Mobility Authority ("CTRMA") was created pursuant to the request of Travis and Williamson Counties and in accordance with provisions of the Transportation Code and the petition and approval process established in 43 Tex. Admin. Code § 26.01, *et seq.* (the "RMA Rules"); and

WHEREAS, the Board of Directors of the CTRMA has been constituted in accordance with the Transportation Code and the RMA Rules; and

WHEREAS, the Texas Transportation Commission in Minute Order 110190, dated August 25, 2005, authorized the CTRMA to pursue the development of the 290 East Turnpike Project (the "Project"); and

WHEREAS, PBS&J is providing project management services to the CTRMA in connection with the Project (the "Project Manager"); and

WHEREAS, CTRMA staff and the Project Manager determined that the design and engineering of the Project should be undertaken in three segments, such segments being described as Segment No. 1 (from US 183 to Tuscany Way, including four direct connectors at the US 183 interchange), Segment No. 2 (from Tuscany Way to FM 3177 [Decker Lane]), and Segment No. 3 (from FM 3177 to FM 734 [Parmer Lane]); and

WHEREAS, in Resolution No. 08-16, dated March 26, 2008, the Board of Directors authorized entering into a contract with Jacobs Carter Burgess Engineering ("Jacobs") for the design and engineering services related to Segment No. 1 of the Project; and

WHEREAS, the contract was executed with Jacobs, including a Work Authorization No. 1 regarding the general design work to be undertaken for Segment No. 1 in correlation with the design of Segments No. 2 and 3 by other firms; and

WHEREAS, in late 2008 and early 2009, the CTRMA worked with the Texas Department of Transportation and the Capital Area Metropolitan Planning Organization to include Segment No. 1 of the Project for consideration for possible federal "stimulus" funding through the American Recovery and Reinvestment Act of 2009 ("ARRA"); and

WHEREAS, the Texas Transportation Commission in Minute Order No. 111734, dated March 5, 2009, authorized the CTRMA to construct Segment No. 1 of the Project utilizing \$90 million in funds made available under the ARRA in accordance with the requirements of the ARRA; and

WHEREAS, in order to have the necessary design services and plans required for Segment No. 1 completed by Jacobs on a timetable consistent with the requirements of the ARRA and in a manner allowing for Segment No. 1 to be constructed as a "stand alone" project separate from Segments No. 2 and 3, it is necessary to enter into Supplement No. 1 to Work Authorization No. 1 substantially in the form set forth in Attachment "A" attached hereto and incorporated herein; and


WHEREAS, the Project Manager has represented to the Board of Directors and CTRMA staff that the work reflected in Supplement No. 1 to Work Authorization No. 1 and the cost thereof are necessary and appropriate to provide for the efficient and timely design of the Project and the realization of the requirements set forth above.

NOW THEREFORE, BE IT RESOLVED, that the Board of Directors approves Supplement No. 1 to Work Authorization No. 1 to the Jacobs contract, substantially in the form attached hereto as Attachment "A", provided that any work commenced under Supplement No. 1 to Work Authorization No. 1 be subject to the terms and conditions of the Jacobs contract; and

BE IT FURTHER RESOLVED, that the Executive Director is authorized to finalize and execute Supplement No. 1 on behalf of the CTRMA.


Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 29th day of April, 2009.

Submitted and reviewed by:



Tom Nielson
General Counsel for the Central
Texas Regional Mobility Authority

Approved:



Robert E. Tesch
Chairman, Board of Directors
Resolution Number 09-24
Date Passed 4/29/09

ATTACHMENT "A"
TO
RESOLUTION NO. 09-24
SUPPLEMENT NO. 1 TO
WORK AUTHORIZATIONS NO. 1
JACOBS 290 EAST DESIGN CONTRACT

ATTACHMENT C

C-2

**SUPPLEMENTAL WORK AUTHORIZATION NO. 1
TO WORK AUTHORIZATION NO. 1
CONTRACT FOR ENGINEERING SERVICES**

THIS SUPPLEMENTAL WORK AUTHORIZATION is made pursuant to the terms and conditions of Article 4 of the Engineering Contract (the Contract) entered into by and between the Central Texas Regional Mobility Authority (the Authority) and Carter & Burgess, Inc. (the Engineer) dated _____.

The following terms and conditions of Work Authorization No. 1 are hereby amended as follows:

PART I. Exhibit B is amended through the addition of Exhibit B-1 to reflect changes to the project scope to divide Segment #1 and create a separate plan set for the stimulus project.

PART II. The work schedule has been amended and Exhibit C is to be replaced in its entirety with Exhibit C-1 to reflect the time needed to complete the work.

PART III. The maximum amount payable is increased by \$696,916.00 from \$4,631,673.00 to \$5,328,589.00. This amount is based upon the Engineer's estimated Supplemental Work Authorization's costs included in Exhibit D-1, Fee Schedule, which adds to Exhibit D and is attached and made part of this Work Authorization. The basis for payment will be as follows:

The Lump Sum shall be equal to the amount payable. The Lump Sum includes all direct and indirect costs and fixed fee. The Engineer shall be paid pro rata based on the percentage of work completed. For payment the Engineer is not required to provide evidence of actual hours worked, travel, overhead rates or other evidence of cost.

PART IV. This Supplemental Work Authorization shall become effective on the date of final execution of the parties hereto. All other terms and conditions of Work Authorization No. 1 not hereby amended are to remain in full force and effect.

PART V. This Supplemental Work Authorization does not waive the parties' responsibilities and obligations provided under the Contract.

IN WITNESS WHEREOF, this Supplemental Work Authorization is executed in duplicate counterparts and hereby accepted and acknowledged below.

THE ENGINEER

**CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY**

(Signature)

(Signature)

(Printed Name)

Mike Heiligenstein

(Title)

Executive Director

(Date)

(Date)

LIST OF EXHIBITS

Exhibit B-1	Scope of Services to be provided by the Engineer
Exhibit C-1	Work Schedule
Exhibit D-1	Fee Schedule/Budget
Attachment H-2	DBE Sub-provider Forms

EXHIBIT B-1
SEGMENT #1 – Jacobs Carter Burgess

SUPPLEMENTAL SCOPE OF SERVICES TO BE PROVIDED

BY THE SEGMENT ENGINEER

This supplemental scope covers the scope items that have been added or removed from the Scope of Services as described in Work Authorization #1, Exhibit B. All items described as “*No changes in scope*” shall be performed by the Segment Engineer as described in the Work Authorization #1, Exhibit B, Scope of Services.

1.01 Design Features

No changes in scope.

1.01 Governmental Agency Coordination

No changes in scope.

1.02 Data Collection

- A. The Engineer shall collect, review and evaluate data described below. The Engineer shall notify the Corridor GEC, herein referred to as the “GEC”, in writing whenever the Engineer finds disagreement with the information or documents:

1. *No changes in scope.*
2. *No changes in scope.*
3. *No changes in scope.*

4. **Review Additional Information prepared by the GEC; Descriptions and exhibits of stimulus project iterations and phases of construction.**

- B. **Perform additional field investigations to gather information for existing US 183 S Signage.**

1.03 Geotechnical Investigation

- A. *No changes in scope.*
- B. *No changes in scope.*
- C. *No changes in scope.*

D. Retaining Walls

Reduce Exhibit B by 6 Borings @ 35' for Drilled Pier Wall & Lab Testing that is no longer needed.

Perform 6 Additional borings @ 25' for Slope Stability Analysis and Lab Testing.

E. Geotechnical Report(s)

EXHIBIT B-1
SEGMENT #1 – Jacobs Carter Burgess

The Engineer will prepare two (2) geotechnical report(s) that will present recommendations for the design of the bridge foundations, retaining wall foundations, and sign structure and toll gantry foundations for the two (2) separate projects now described by Segment 1 and include:

The Engineer will coordinate and perform a review for two (2) separate geotechnical reports for Segment 1.

F. Deliverables

The Engineer shall (for 2 separate reports):

1. Submit three (3) draft copies of the geotechnical report(s) for review and comment to the GEC. Two (2) additional draft copies of the geotechnical report shall also be kept on file with the Engineer for future reference.
2. *No changes in scope.*
3. Submit three (3) final copies of geotechnical report(s) that incorporate review comments. Two (2) additional final copies of the geotechnical report that incorporate review comments shall also be kept on file with the Engineer for future reference.
4. Provide signed and sealed sheets of boring logs for insertion into the construction plan set(s).
5. *No changes in scope.*
6. *No changes in scope.*
7. *No changes in scope.*

1.04 Supplemental Surveying

A. **Coordinate Supplemental Survey needs with GEC and SAM, Inc.**

B. Project Control

No changes in scope.

C. Topographic Survey

Perform Supplemental Survey (SUE) for existing footings due to as-built information being unavailable to the Engineer. Requires the use of Landscape services to remove/replace pavers, vacuum truck to excavate down to footing, survey, restore to existing conditions.

D. Survey Deliverables:

No changes in scope.

EXHIBIT B-1
SEGMENT #1 – Jacobs Carter Burgess

- E. **Coordinate supplemental survey beyond limits of original project due to project extension along Eastbound Mainlanes.**

1.06 ROW Mapping

- A. *No changes in scope.*
B. *No changes in scope.*
C. **Prepare ROW exhibit showing potential ROW needs for Shared-use path along US 183 S at SE quadrant of US 183/290E Interchange beyond the limits of the project to Springdale.**

1.07 Utility Coordination and Design

No changes in scope.

1.08 Initial Design and Design Concept Conference

No changes in scope.

1.09 Roadway Design

A. Basic Plan Sheets

The Engineer will:

1. **Prepare the PS&E Title Sheet(s) (2).**
2. **Complete the detailed Index of Sheets for two (2) separate plan sets that identifies each sheet location in the plan set, as well as its corresponding sheet number.**
3. **Prepare Project Layout Sheets for two (2) plan sets at a scale of 1"=200' that clearly indicates the limits of the entire project(s).**
4. *No changes in scope.*

B. Roadway Plans & Geometry

The Engineer will:

1. **Develop Proposed Typical Sections Sheets for two (2) plan sets depicting the improvements to the 290 East Toll Project mainlanes, ramps, frontage roads and side streets.**

Adjust current typical sections to reflect new pavement design. Adjust station limits on typical(s) to reflect current separate projects.

Reduce Exhibit B, Scope of Services by removing Southbound Frontage Road Widening Typical Section that is no longer needed.

EXHIBIT B-1
SEGMENT #1 – Jacobs Carter Burgess

2. Complete Existing Typical Sections Sheets depicting the existing conditions of the project roadways, according to information provided by the GEC.

Revise US 183 S existing typical section to reflect new assumption that Direct Connectors will tie into the existing facility rather than the project being developed by the Austin District.

3. Complete Mainlane Roadway Plan and Profile sheets depicting the proposed construction of the 290 East Toll Project, frontage roads and ramps in the plan view. Drawings will be prepared at a scale of 1"=100' H and 1"=10' V.

Adjust Northbound to Eastbound and Westbound to Southbound Direct Connectors to tie to existing US 183 S.

Revise and add Mainlane Plan and Profile sheets for the additional portion of Eastbound Mainlanes that will be constructed with Project 1 as a result of the revised long-term temporary tie to existing eastbound US 290.

4. Complete Frontage Road Plan and Profile Sheets separate from the mainlanes, depicting the area in the plan view from mainlane centerline out for each direction. Drawings will be prepared at a scale of 1"=100' H and 1"=10' V.

Create Duplicate Frontage Road Sheet to illustrate relationship from Project 1 and Project 2 plan sets for both WBFR and EBFR.

Reduce Exhibit B, Scope of Services by removing Southbound Frontage Road Widening Plan and Profile Sheets from the plans.

5. *No changes in scope.*

6. *No changes in scope.*

7. *No changes in scope.*

8. Prepare Horizontal Alignment Data Sheets depicting the horizontal geometric information for the project roadways to be included in the construction plan set. **Extend and create new sheets as appropriate to extend project alignments beyond Project limits to the West, North and South.**

9. Develop Super-elevation Data Sheet(s) for two (2) separate projects, to be included in the PS&E set. These sheets will define the pavement cross slopes for individual roadway alignments and describe transition locations and values.

10. *No changes in scope.*

11. *No changes in scope.*

C. Grading and Details

The Engineer will:

EXHIBIT B-1
SEGMENT #1 – Jacobs Carter Burgess

1. Prepare Design Cross Sections at 100-foot stations and other locations as necessary for the determination of cut and fill quantities. Cross sections shall display proposed storm sewer and proposed utility elements.

Revise / Update Cross Sections to reflect 2 plan sets, and having the first plan set reflected as an existing facility on the second plan set.

Revise and add Cross Section sheets for the additional portion of Eastbound Mainlanes that will be constructed with Project 1 as a result of the revised long-term temporary tie to existing eastbound US 290.

2. *No changes in scope.*
3. *No changes in scope.*
4. *No changes in scope.*
5. *No changes in scope.*

1.10 Drainage Design

- A. Review Conceptual Drainage Analyses prepared by the GEC.

Coordinate Drainage items with K Friese & Associates

- B. Drainage Impact Study: Engineer will perform all drainage design with a specific hydrologic and hydraulic study. Engineer will design and construct outfalls to not have any adverse impacts as defined below. Engineer will provide hydraulic drainage mitigation measures to reduce impact into receiving streams, if deemed necessary by the GEC. The criteria below are meant to clarify and supplement but not supersede the TxDOT Hydraulic Design Manual. Should any apparent conflicts arise, the Engineer should consult the GEC for clarification.

The Drainage Impact Study will include the following:

1. *No changes in scope.*
2. *No changes in scope.*
3. *No changes in scope.*
4. *No changes in scope.*
5. *No changes in scope.*
6. *No changes in scope.*
7. *No changes in scope.*
8. *No changes in scope.*
9. Engineer will support the GEC in coordination with the Corps of Engineers, FEMA, TxDOT and COA for any approvals and permits required.

EXHIBIT B-1
SEGMENT #1 – Jacobs Carter Burgess

Attend/Facilitate additional coordination meetings with GEC, Prime and Agencies (3 Additional Meetings)

10. *No changes in scope.*

C. Bridge and Culvert Plan Sheets

1. *No changes in scope.*
2. *No changes in scope.*
3. *No changes in scope..*
4. **Bridge Class Culvert Sheets: The Engineer will prepare Bridge Class Culvert Sheets, Standards, and Special Culvert and Headwall/Wingwall details as necessitated by adjustments to the design.**

D. Storm Drain Plan Sheets

The Engineer will address the required project storm drain systems as follows:

1. *No changes in scope.*
2. *No changes in scope.*
3. **Drainage Plan and Profile Sheets: The Engineer will prepare drainage plan and profile sheets depicting locations of inlets, manholes, storm drains, culverts, utilities, channel improvements, ditch locations, cross-sections and flowlines as required. These sheets will be prepared at a scale of 1"=50'. Storm drain profiles will be prepared at a scale of 1"=50' H and 1"=10' V. Enclosed storm drain plans and profiles will show pipe size and type, slope, existing and proposed ground lines above the pipe, pertinent hydraulic information, and locations and sizes of inlets and junctions**

Prepare additional sheets for 2nd plan set and to reflect temporary ties in drainage network that will be in place until all of Segment 1 is constructed.

Prepare additional sheets and revise existing sheets as necessary to include the Eastbound Mainlanes with Project 1. Previously all mainlane construction was to occur with Project 2. Additional Temporary ties to the proposed storm sewer system will need to be designed.

4. *No changes in scope.*
5. *No changes in scope.*
6. **Drainage Detail Sheet(s) for two (2) plan sets: The Engineer shall use TxDOT standard details where practical. The Engineer shall provide drainage design details for "non-standard" drainage structures in instances where TxDOT standard details cannot be utilized.**
7. **Temporary Drainage Facilities: The Engineer will develop temporary drainage**

EXHIBIT B-1
SEGMENT #1 – Jacobs Carter Burgess

facilities plans necessary to allow staged construction of the project. The Engineer will design required temporary drainage structures for a 5-year frequency event, and include structure size, flow line elevations and approximate structure location in the plan sheets. The Engineer will evaluate temporary drainage ditches between temporary drainage structures and outfall locations and designate a typical ditch section in the plans along with plan notes for the contractor to maintain positive drainage for these temporary ditches.

Coordinate Temporary Drainage Items with Gray Jansing & Associates, Inc.

8. *No changes in scope.*

E. Scour Analysis

No changes in scope.

F. Storm Water Pollution Prevention Plan (SW3P)

1. Erosion and Sediment Control Plans: Temporary storm water management devices will be needed to minimize the sediment runoff during construction of this project. The Engineer will develop a temporary erosion and sediment control plan for the length of the project that complements the design and construction phasing of the project, and will include notes that indicate the contractor is responsible for detailed sequencing of the devices. The Engineer will consider the following design components: non-disturbance area delineation (preserving existing vegetation), temporary and permanent seeding or sodding, erosion control blankets, diversion dikes or swales, temporary mulch, silt fence, sand bags, rock filter dams, sediment traps, and construction exits. Permanent erosion control measures will be included on these sheets if needed.

Prepare Temporary / Permanent Erosion and Sediment Control Plans for second (2nd) Plan Set.

Modify Temporary / Permanent Erosion and Sediment Control Plans to accommodate the addition of the Eastbound Mainlanes back into Project 1.

2. *No changes in scope.*

3. Erosion and Sediment Control Details: The Engineer will prepare Erosion and sediment control details for any related items that are not covered by TxDOT standard details.

Prepare Temporary / Permanent Erosion and Sediment Control Details for second (2nd) Plan Set.

Modify Temporary / Permanent Erosion and Sediment Control Details to accommodate the addition of the Eastbound Mainlanes back into Project 1.

4. *No changes in scope.*

EXHIBIT B-1
SEGMENT #1 – Jacobs Carter Burgess

- G. National Flood Insurance Program (NFIP) Coordination
No changes in scope.
- H. Deliverables
No changes in scope.
- 1.11 Structural Design
- The Engineer will use Load and Resistance Factor Design (LRFD) for all new bridges on this project and will design all bridge structures for HL 93 loading.
- A. Bridge Layouts: *No changes in scope.*
- B. Final Design Calculations and Details: *No changes in scope.*
- C. Summary of Bridge Quantities: The Engineer shall provide at 60%, Pre-Final and Final Plan submittals. **This will be performed for two (2) plan sets.**
- D. The Engineer shall provide abutment details, interior bent details, framing plan, and a slab plan. *No changes in scope.*
- E. Drainage Details: *No changes in scope.*
- F. Miscellaneous Details: The Engineer shall provide for the proposed bridges.
The Engineer will evaluate and provide gore details in the event that only one DC from each Direct Connector pair is constructed.
The Engineer will prepare separate miscellaneous details for the possibility of constructing Direct Connectors in multiple projects.
The Engineer will assemble plans such that individual direct connectors could be constructed as separate projects. This will include preparation of additional submittals for 60%, Pre-final, and Final Plans.
- G. Standard Details: The Engineer will use the latest TxDOT standard details for beams, diaphragms, railings, expansion joints, riprap, etc. when possible.
Duplicate Standards and Details for option of constructing direct connectors as separate projects.
- H. Demolition: *No changes in scope.*
- I. Analyze existing footings and to the fullest extent possible, use existing foundations in final design plans. *No changes in scope.*
- J. Provide any design/details necessary to allow for existing foundations to be used. This could include any details necessary to provide access at retaining wall locations. *No changes in scope.*

1.12 Retaining Wall Design

EXHIBIT B-1
SEGMENT #1 – Jacobs Carter Burgess

No changes in scope.

1.13 Signing, Markings and Signalization

- A. Review the Preliminary Signage Concept Plan prepared by the GEC.

Coordinate Project changes with RJ Rivera Associates.

Review/Revise additional Signing Concept Plans as revised by the GEC based on TxDOT Comments.

- B. Signing and Pavement Marking Layouts: The Engineer shall prepare layouts, specifications, and details for pavement markings. The Engineer shall prepare drawings, specifications and details for all signs. The Engineer shall coordinate with the GEC (and other Engineers as required) for overall temporary and final signing strategies including toll signing and placement of signs outside contract limits. Sign detail sheets shall be prepared for large guide signs showing dimensions, lettering, shields, borders, corner radii, etc., and shall provide large sign summary sheets and small sign summary sheets. The Engineer shall also designate the shields to be attached to guide signs. The proposed signs shall be illustrated and numbered on plan sheets. Sign foundation shall be selected from TxDOT Standards. Sign poles, attachments, and details shall be designed per the GEC recommendations and standards.

Signing Layout – Engineer shall design and provide signing layouts for two (2) plan sets (different concepts); the first depicting the Direct Connectors Open to Traffic (Tolled) with temporary ties to both US 183 S and US 290 E, the second to reflect the ultimate signing concept for 290E with temporary ties to the southern leg of US 183 S.

Sign Details – Engineer shall design and provide sign details for two (2) plan sets (different concepts).

Pavement Marking Layout and Details – Engineer shall design and provide pavement marking layouts and details for two (2) plan sets (different concepts).

Pavement Marking Sheets – Engineer shall design and provide pavement marking sheets for two (2) plan sets (different concepts).

Miscellaneous Sign/Pavement Marking Details – Engineer shall design and provide miscellaneous Sign/Pavement Marking details for two (2) plan sets (different concepts).

- C. Overhead Sign Structures Elevations: Engineer shall provide overhead sign structure elevations including walkway and electrical service for future ITS facilities for two (2) plan sets (different concepts).

- D. Compute and Summarize Quantities - *No changes in scope.*

- E. Signing Summaries: *No changes in scope.*

- F. Large Signing Details: *No changes in scope.*

EXHIBIT B-1
SEGMENT #1 – Jacobs Carter Burgess

- G. Compute and Summarize Quantities - Signing, Pavement Markings: Engineer shall provide quantity summary sheets at the 60%, Pre-Final and Final Plan submittals for two (2) plan sets (different concepts).

1.14 Traffic Control Plan

The Engineer will:

- A. Review the Preliminary Construction Sequencing Concept Plan prepared by the GEC.
Revise Preliminary Construction Sequencing Concept Plan based on concept of constructing as two separate projects.
Revise Preliminary Construction Sequencing Concept Plan to reflect the construction of the eastbound mainlanes with the Project 1.
- B. Prepare Traffic Control Typical Sections for each stage of the construction sequence to clearly delineate the position of the existing traffic with respect to the proposed construction. Temporary traffic barriers and pavement markings will also be shown and dimensioned.
Revise Typical Sections to reflect tying to existing US 183 S versus the Proposed US 183 S project currently being developed by the Austin District.
Revise Typical Sections to reflect addition of eastbound mainlanes back into the construction of Project 1.
- C. Develop TCP Overview Plans for two (2) separate plan sets to reflect each stage of traffic control. These plans will act as key maps for each phase of TCP and shall be developed at a 1"=400' scale.
- D. Prepare Advanced Warning Sign Layouts for two (2) separate plan sets at a 1"=400' scale for the 290 East Toll Project and all cross streets.
- E. Prepare Detailed Traffic Control Plan Sheets at a scale of 1"=100'. This plan will describe the maintenance of traffic and sequence of work for each phase of the proposed construction. Detour alignments, location of work areas, temporary paving, temporary shoring, signing, barricades and other details will be required to describe the traffic control plan. The Engineer will be required to ensure that proper drainage can be maintained during each phase of construction.
Revise Detailed Traffic Control Plan Sheets based on concept of constructing as two separate projects and tying to Existing US 183 S.
Revise Detailed Traffic Control Plan Sheets to incorporate the construction of the eastbound mainlanes back into Project 1.
- F. Prepare a detailed Sequence of Construction narrative for two (2) separate plan sets and submit it to the GEC for review. The Engineer will revise and incorporate the narrative into the plans. The narrative will include a phase-by-phase, step-by-step written account

EXHIBIT B-1
SEGMENT #1 – Jacobs Carter Burgess

of the proposed activities throughout the construction process. This is intended to be a narrative account of the activities shown in the traffic control plan layouts.

- G. Prepare Detour Layout Sheets showing plan & profiles where required to define the geometry for detours required in the traffic control plans. Detour layouts will be prepared at a scale of 1"=100' H and 1"=10' V. The GEC will provide the pavement design section for temporary detours.

Revise Detour Plan and Profile sheets, including horizontal and vertical geometry, for long-term temporary ties to existing to eastbound US 290.

- H. Temporary Shoring Profiles: *No changes in scope.*
- I. Traffic Control Details: *No changes in scope.*
- J. Attend **two (2)** Safety Review Meeting(s) to present the proposed traffic handling scheme to the TxDOT's Safety Review Committee. The Engineer will incorporate the comments from the Safety Review Committee into the traffic control plans.
- K. Prepare an Engineer's Opinion of Construction Schedule for **two (2) separate plan sets** to determine an approximate duration for each phase of construction. These schedules will be prepared using Primavera and delivered at 90% and Final submittals.
- L. TCP Detours:

Revise long-term temporary asphalt tie to existing eastbound US 290.

- M. Temporary Retaining walls: *No changes in scope.*
- N. Advanced Signing Layouts. *No changes in scope.*
- O. Compute and Summarize Quantities - TCP.

Revise TCP Quantity Summary based on revised tie to existing eastbound US 290.

1.15 Traffic Management System

No changes in scope.

1.16 Illumination

The Engineer will design and provide plans and details for continuous lighting at main lanes and direct connectors, supplemental lighting at underpasses, and safety lighting at ramp locations and intersections based on the illumination assemblies specified in the 290 E Landscape and Aesthetic Requirements. The Engineer will coordinate illumination design of roadway with toll facility illumination. The Segment 1 Engineer will provide Illumination plans and details for Segment 1, Segment 2 and Segment 3 as a single set of illumination plans for the entire corridor.

Coordinate with Segment Designers and Illumination Consultant regarding changes in project scope and status updates.

EXHIBIT B-1
SEGMENT #1 – Jacobs Carter Burgess

- A. Lighting Layouts: The Engineer shall provide continuous roadway lighting layout for the mainlanes and direct connectors for the entire corridor. Lighting layouts shall include safety lighting at ramps and intersections. The Engineer shall coordinate with the Segment Engineers for Segments 2 and 3 and provide illumination plan drawings that show the locations of the roadway and other facilities designed for those segments.

Coordinate with Segment 1 Segment Design Consultant and revise lighting layouts to reflect change to two plan sets for separate projects.

- B. Circuit Layouts: The Engineer shall provide electrical circuit plans, voltage drop calculations, and details for continuous roadway lighting system for the entire corridor for **4 plan sets, originally 3 sets.**

- C. Pole Elevations: The Engineer shall provide pole elevations on plans for construction of roadway illumination. *No changes in scope.*

- D. Coordinate with the utility and GEC and identify power sources, conduit runs, and will show them on the project plans. In addition, the Engineer will prepare Electrical Summary Data Tables. The Illumination Electrical Service Summary Table shall include the electrical services for the entire corridor, namely include the electrical services for all three segments in one single table.

Engineer will attend three (3) additional meetings with GEC and/or Segment Design Consultants.

- E. Identify potential overhead utility conflicts, and coordinate with the GEC and the utility company to help resolve the conflicts. *No changes in scope.*

- F. Compute and Summarize Quantities – Illumination for two (2) illumination concepts: The Engineer shall provide summary of quantities at the 60%, Pre-Final and Final plan submittals. The Illumination Quantities Summary sheet shall be for the entire corridor in a single table.

1.17 Toll Facility Design

The Toll facility design documents will be prepared by the Segment 3 Consultant and incorporated into the PS&E package. The Engineer shall coordinate and provide plan drawings showing the locations of roadway and other facilities designed for Segment 1.

Revise eastbound frontage road, eastbound exit ramp and shared use path alignments to accommodate toll gantry for the eastbound direct connector. Revise westbound mainlanes and westbound direct connector tie in to accommodate toll gantry for westbound direct connector.

1.18 Miscellaneous

- A. Quantities and Summary Sheets

The Engineer will tabulate quantities and prepare Summary Sheets for two (2) sets of plans for the following: **Traffic Control (per phase), Earthwork, Roadway, Retaining**

EXHIBIT B-1
SEGMENT #1 – Jacobs Carter Burgess

Walls, Removals, Pavement markings, Small / Large Signs, Illumination, Erosion Control and SW3P, Drainage related items including inlets, manholes and storm drain pipes.

B. Standards, Specifications and Estimate

No changes in scope.

C. Deliverables

No changes in scope.

1.19 Coordination, Meetings & Invoicing

A. The Engineer will need to participate and attend project workshops with other segment design consultants, specialty consultants, TxDOT, Corridor GEC, and CTRMA to establish the project issues, concerns, and objectives of the project that will influence the location and configuration of the proposed project and further define the scope of services to be provided by the Engineer. *No changes in scope.*

B. The Engineer will need to participate and attend monthly and bi-weekly design coordination meetings and production meetings as further detailed in the 290 E Project Manual.

Attend three (3) revised project Kick-Off Meetings at the request of the GEC.

Attend five (5) additional bi-weekly design coordination meetings.

Attend five (5) additional meetings with Segment 2 for coordination of 2nd Plan Set.

Facilitate seven (7) additional internal coordination meetings.

Coordinate TCP and revised tie to existing US 290 with Segment 2 Segment Designer.

C. The Engineer will need to participate in the review process and attend comment resolution meetings for the various submittal milestones. The Engineer will respond to reviewer comments in tabular format for each submittal with explanations included for any items in disagreement. The Engineer will then attend a comment resolution meeting following each submittal to discuss review comments.

Conduct Additional Plan Review for Plan Set 2 (60%, Pre-Final, and Final)

D. All team members involved in the preparation of engineering plans, studies and reports shall have established QA/QC procedures and shall conform to those procedures during the life of the project. Engineering schematics, final design plans, calculations and cost estimates prepared by the Corridor GEC, TxDOT, Specialty Consultants, and Segment Design Consultants are to be thoroughly reviewed and checked before submittal to the Corridor GEC or CTRMA for review. The Segment Design Consultants have total responsibility for the accuracy and completeness of the plans and related designs prepared under this project and shall check all such material accordingly. The plans will be reviewed by the Corridor GEC and TxDOT for conformity with the CTRMA's

EXHIBIT B-1
SEGMENT #1 – Jacobs Carter Burgess

procedures and the terms of the project, as well as continuity with adjacent design segments. To ensure that adequate procedures will be employed to provide quality products and uniformity between project Segments, each Specialty and Segment Design Consultant will submit for approval it's proposed QA/QC Plan to be used on this program. CTRMA will provide independent QA/QC audits to **verify** project compliance with this plan. The Specialty and Segment Design Consultants shall have a quality control plan in effect during the entire time work is being performed under this project.

Conduct Additional QA/QC for Plan Set 2 (60%, Pre-Final, and Final)

- E. The Engineer shall provide assistance to the GEC during the **bidding** process. *No changes in scope.*
- F. Follow invoice procedures as described in the 290 E Project Manual.
Prepare additional Invoices and Progress Reports due to extension in time.
- G. The engineer shall attend pre-bid meeting. *No changes in scope.*
- H. The engineer shall attend pre-construction meeting. *No changes in scope.*

1.20 Construction Phase Services

No changes in scope.

EXHIBIT C-1
WORK SCHEDULE

The Engineer will perform engineering services as described in this Work Authorization and will submit deliverables to the Authority based on the following work schedule:

- Transmittal of 90% Complete Submittal.....May 18, 2009
- Transmittal of 60% Complete WS & NE DCs Submittal.....August 07, 2009
- Transmittal of 100% Complete Submittal.....September 18, 2009
- Transmittal of 100% Complete Submittal.....December 31, 2009
(Plan Set 2, Elements to be included in Segment #2)

EXHIBIT D-1
FEE SCHEDULE

FOR
Carter & Burgess, Inc.

290 EAST TOLL PROJECT - SEGMENT #1
Supplemental Work Authorization #1
to Work Authorization #1

For services describe in the Exhibit B-1, we request the compensation as detailed below. Cost breakdowns for engineering services and explanation of expenses are shown on the following pages.

TOTAL COMPENSATION

Segment 1 - PS&E Design Items	\$	696,916.00
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EXHIBIT D-1
Fee Schedule Summary
Carter & Burgess, Inc.
290E Toll Project - Segment #1

Description of Work or Task	JCB (65.6%)	FUG (1.7%)	KFA (7.9%)	MB (2.2%)	RJRA (17.9%)	SAM (4.6%)	Cost / Task Totals	
1.01 Design Features								
1.02 Governmental Agency Coordination								
1.03 Data Collection	\$2,305.88				\$1,629.90		\$3,835.78	
1.04 Geotechnical Investigations	\$2,198.76	\$12,187.40					\$14,386.16	
1.05 Supplemental Surveying	\$3,709.70					\$32,000.00	\$35,709.70	
1.06 ROW Mapping	\$4,121.28						\$4,121.28	
1.07 Utility Coordination and Design								
1.08 Initial Design and Design Concept Conference								
1.09 Roadway Design	\$71,770.28						\$71,770.28	
1.10 Drainage Design	\$16,637.26		\$55,136.98				\$71,774.24	
1.11 Structural Design	\$90,255.68						\$90,255.68	
1.12 Retaining Wall Design								
1.13 Signing, Markings and Signalization	\$3,388.34				\$87,423.81		\$90,812.15	
1.14 Traffic Control Plan	\$175,807.99						\$175,807.99	
1.15 Traffic Management System								
1.16 Illumination	\$3,388.34			\$15,378.60			\$18,766.94	
1.17 Toll Facility Design	\$8,919.06						\$8,919.06	
1.18 Miscellaneous	\$6,212.91						\$6,212.91	
1.19 Coordination, Meetings and Invoicing	\$68,525.10				\$36,019.09		\$104,544.19	
1.20 Construction Phase Services								
FEE SCHEDULE SUMMARY	\$467,240.68	\$12,187.40	\$55,136.98	\$15,378.60	\$124,972.80	\$32,000.00	\$696,916.36	
					JCB - Carter & Burgess, Inc. (Jacobs)		\$467,240.68	
						FUG - Fugro Consultants		\$12,187.40
						KFA - K Friese & Associates, Inc. (DBE)		\$15,378.60
						MB - Maldonado-Burkett (DBE)		\$55,136.98
						RJRA - RJ Rivera Associates, Inc. (DBE)		\$124,972.80
						SAM - Surveying & Mapping, Inc.		\$32,000.00
						PROJECT TOTAL		\$696,916.36

EXHIBIT D-1
Summary of Manhours by Classification & Major Task Analysis
Carter & Burgess, Inc.
290E Toll Project - Segment #1

FeeRate Subcode	Labor Rate Per Hour		Principle	Senior Project Manager	Senior Engineer	Senior Bridge Engineer	Project Engineer	Design Engineer	Engineering Intern (ETI)	Senior Engineering Technician	Engineering Technician	CAD Operator	Adults / Clinical	Rudf Hrs. Totals	CH RATE	PROJECT MULTIPLIER
	Unloaded Rate	Loaded Rate														
1.02 Data Collection	\$190.80	\$27.00	\$253.70	\$240.25	\$186.41	\$186.41	\$186.41	\$186.41	\$44.00	\$38.00	\$33.00	\$28.00	\$24.00	\$171.51	\$171.51	2.819
A) Data Collection																
1. Review / Evaluate Existing Data																
2. Review / Evaluate Proposed Data																
3. Review / Evaluate Field Data																
4. Review / Evaluate Data Provided by GEC (Bridges Project and Sub-Projects)																
B) Project Site Visit and Field Investigation																
Verify / Adjust Electronic Project Files Received by Others																
Convert Symbolic for Existing Electronic Project Files Received by Others																
Data Collection Subtotal:																
1.04 Geotechnical Investigations																
A) Review / Evaluate Proposed Data																
B) General Requirements (Review proposed boring locations)																
C) Bridge Design																
Sign Structure Design																
D) Retaining Wall Design																
E) Geotechnical Report (Review Report 92 and merge with Segment 2)																
F) Geotechnical Deliverables																
Geotechnical Investigations Subtotal:																
1.05 Supplemental Surveying																
A) Survey Coordination with SAM, Inc.																
B) Project Control																
C) Topographic Survey																
D) Survey Deliverables																
E) Coordinate Additional Survey Needs on EB ML's beyond limits of Survey																
Supplemental Surveying Subtotal:																
1.06 ROW Mapping																
A) Review / Evaluate Proposed ROW and Easements																
B) Additional ROW and Easement Acquisition																
C) Coordinate ROW Mapping Revisions by GEC																
Review ROW Base Files for 2 Plan Sets																
ROW Mapping Subtotal:																
1.09 Roadway Design																
A) Prepare Base Plan Sheets																
1. Title Sheet (3 Sheets)																
2. Sheet Index (2 Sets)																
3. Project Layout Sheets (2 Sets)																
4. Benchmark Layout Sheets																
5. Create drawings from 1 to 4 projects then back to 3 projects																
B) Prepare Roadway P&E Sheets																
1. Proposed Typical Section Sheets (2 Sets, Station Changes, Post Design)																
Proposed Typical Section ("Credit 95/R and being withdrawn")																

EXHIBIT D-1
Summary of Manhours by Classification & Major Task Analysis
Carter & Burgess, Inc.
200E Toll Project - Segment #1

Institute Schedule	Labor Rate Per Hour	Labor Rate	Principle	Senior Project Manager	Senior Engineer	Senior Bridge Engineer	Project Engineer	Design Engineer	Engineering Interns (EI)	Senior Engineering Technician	Engineering Technician	CAD Operator	Aide / Clerk	Staff H.	OH RATE	MARGIN RATE	PROJECT MULTIPLIER
				\$253.70	\$108.41	\$108.41	\$124.41	\$101.48	\$84.07	\$135.33	\$142.00	\$78.93	\$67.00		\$12.50%	\$12.50%	2.00
			Description of Work at Task														
			2. Existing Typical Section Sheets (Water Existing US 103 vs. Proposals US 103)														
			3. Plan and Profile Sheets - Mainstem / Overlaid Connections / Temp. Connections														
			P & P Sheets - Adjust HDSB & WBSB to fit Existing US 103 S														
			P & P Sheets - Add CD Hardness back to Project 1														
			4. Plan and Profile Sheets - Frontage Roads														
			P & P Sheets - Frontage Roads (2 Duplicate Sheets for Segment 2)														
			-- P & P Sheets - Frontage Roads ("Credit 807R and using Water#1")														
			5. Plan and Profile Sheets - Cross Streets														
			Intersection Details - Cross Streets														
			6. Plan and Profile Sheets - Interchanges														
			7. Ramp Cross Layouts														
			8. Horizontal Alignment Data Sheets (Aligned Links to West, North and South)														
			R. Supplemental Data Sheets (2 Sets)														
			10. Removal Peak Sheets														
			11. Station / Design Problem and Design Elements														
			Plan and Profile Sheets - Shared Use Path														
			C) Grading Details														
			1. Inverse Design Cross Sections														
			Review / Update X Sections for 2 sets, was existing on other														
			Review / Update X Sections for adding CD ML's, Back to Project 1														
			2. Prepare Drainway Detail Sheets														
			3. Prepare Crossroad Profile Sheets														
			4. Prepare Mainstem Highway Outside														
			5. Landscape Coordination														
			Prepare Hydrographs / Infiltration Details														
			Roadway Design Subtotal	18	37	0	94	22	276	9	54	113	4	724	\$1,776.28	0	0
			1.10 Drainage Design														
			A) Review Conceptual Drainage Analysis Report (See Item 1.03 - Data Collection)														
			Coordinate Drainage Items with X-Friese & Associates														
			B) Prepare Drainage Impact Study														
			1. Identify Existing Drainage Outfalls														
			Determine Existing Cross Drainage Boundaries														
			Measure Existing Impervious Cover														
			Compute Existing Time of Concentration														
			Analyze Existing Cross Drain Systems														
			2. Complete Existing Constraint Form														
			Determine Proposed Drainage Outfalls														
			Determine Proposed Drainage Boundaries														
			Compute Proposed Time of Concentration														
			Analyze Proposed Cross Drain Systems														
			4. Complete Proposed Constraint Form														
			Determine Proposed Hydrologic Impacts														
			Determine Proposed Hydraulic Impacts														
			Determine Mitigation Alternatives														
			8. Decrement Paved														
			9. Project Planning Contribution														

EXHIBIT D-1
Summary of Manhours by Classification & Major Task Analysis
Carter & Burgess, Inc.
290E Toll Project - Segment #1

Description of Work or Task	Principle		Senior Project Manager		Senior Engineer		Senior Bridge Engineer		Project Engineer		Design Engineer		Engineering Station (EIT)		Senior Engineering Technician		Engineering Technician		CAD Operator		Adjuster/Checker		Start / End Task Totals		MARKER RATE		PROJECT MULTIPLIER			
	\$113.70/hr	\$245.70	\$187.00	\$44.00	\$160.40	\$44.00	\$160.40	\$160.40	\$160.40	\$160.40	\$160.40	\$160.40	\$160.40	\$160.40	\$160.40	\$160.40	\$160.40	\$160.40	\$160.40	\$160.40	\$160.40	\$160.40	\$160.40	\$160.40	\$160.40	\$160.40	\$160.40	\$160.40		
NO Report Preparation For A Report (Final Design Submittal) Final Report (60% Design Submittal) C) Bridge and Culvert Plan Sheets 1. Prepare Hydraulic Data / Calculation Sheets 2. Prepare General Outline Area Maps 3. Prepare Culvert Layouts D) Storm Drain Plan Sheets 1. Prepare Storm Drain Computation Sheets 2. Prepare Internal Area Maps 3. Prepare Drainage Plan and Profile Sheets 4. Prepare Lateral Profile Sheets 5. Prepare Detail Layout Sheets 6. Prepare Miscellaneous Drainage Detail Sheets 7. Determine Temporary Drainage Facilities (Coord with Gray Jacking & Assess) Remove temporary drainage for adding EBMK link into Segment 1 Analyze Temporary Drainage Structures / Facilities Prepare Temporary Drainage Sheets 8. Determine Trench Excavation / Special Shoring Locations / Needs for Drainage E) Prelim Linear Analysis F) Storm Water Pollution Prevention Plan (SWPP) 1. Prepare Erosion and Sediment Control Plans (per TCP Phase) 2. Prepare SWPP Summary / Data Sheets 3. Prepare Erosion and Sediment Control Details 4. Integrate (BPC Sheet) (Provided by GEC) G) Internal Flood Insurance Program (IFIP) Coordination H) Prepare Drainage Deliverables 1. Submit Hydraulic Report and Documentation 2. Submit Hydraulic Report and Documentation Drainage Design Subtotal: 6	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.11 Structural Design A) Finalize Design Layouts Prepare Bridge Type and Cost Report WB to EB DC WB to EB OC WB to EB OC WB to EB OC WB to EB OC B) Prepare Final Design Calculations and Details 200E Laneshaig and Archhite Requirements - Structural Details (Coordinate with Segment 2) WB to EB DC WB to EB DC WB to EB DC WB to EB DC C) Prepare Summary of Bridge Questions (3 Sheet) D) Prepare Structural Details 1. Abutment Details 2. Interior Bent Details	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

EXHIBIT D-1
Summary of Manhours by Classification & Major Task Analysis
Carter & Burgois, Inc.
200E Tell Project - Segment #1

Feedline Schedule	Labor Rate Per Hour		Senior Project Manager	Senior Engineer	Senior Design Engineer	Project Engineer	Design Engineer	Engineering Intern (EI)	Senior Engineering Technician	Engineering Technicians	CAD Operator	Admin / Clerical	Staff Hrs. Total	Margin Rate	Project Multiplier
	Standard Rate	Overhead Rate													
	\$10.00	\$17.00	\$245.00	\$100.00	\$150.00	\$120.00	\$100.00	\$75.00	\$120.00	\$100.00	\$75.00	\$75.00	0	15.00%	2.019
	\$25.00	\$26.25	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	\$100.00	0	15.00%	2.019
Description of Work or Task															
	\$253.00	\$248.25	\$245.00	\$100.00	\$150.00	\$120.00	\$100.00	\$75.00	\$120.00	\$100.00	\$75.00	\$75.00	0	15.00%	2.019
3. Framing Plan Sheets															

EXHIBIT D-1
Summary of Manhours by Classification & Major Task Analysis
Carter & Burgess, Inc.
200E Toll Project - Segment #1

Forecast Schedule	Linear Hour Per Year		Rate		Rate		Rate		Rate		Rate		Rate		Rate		Rate	
	Principle	Senior Project Manager	Senior Engineer	Senior Bridge Engineer	Project Engineer	Design Engineer	Engineering Intern (EI)	Senior Engineering Technologist	Engineering Technician	GAGD Operator	Admin / Clerical	Staff Hr. Totals	Staff Cost / Task Totals	Staff Hr. Totals	Staff Cost / Task Totals	Plan Based Total		
4. Bid Plan Sheets																		
(E) Prepare Deck/Drainage Details																		
(F) Prepare Miscellaneous Details (Misc. Drainage Structures, Etc.)																		
Gate Details from only existing DC's in North																		
Separate Misc Details (2-4 sets)																		
Additional Submittals for 60k, Pre-Prod, and Final (2nd Set)																		
Deliverable TxDOT Bridge Standard Details																		
Duplicate standards and MOD Standard from 2 Set Option of 4 DC's																		
(H) Review and Coordinate Slab/Construction for Buckham																		
Prepare Phased Demolition Plan																		
(I) Analyze Existing Footings and abutts when possible																		
(J) Provide Supplemental Support for existing footings																		
Structural Design Subtotal:																		
1.13 Signage, Markings and Signalization																		
(A) Coordinate Signing and Pavement Markings with Rd Rivers																		
(B) Prepare Signing and Pavement Marking Layouts																		
Prepare Signed Layout and Draft																		
Prepare Sign Detail Sheets																		
Prepare Miscellaneous Signing and Pavement Marking Details																		
(C) Prepare Overhead Sign Structure Layouts and Design																		
(D) Prepare Summary of Overhead Sign Quantities																		
(E) Prepare Large / Small Sign Summaries																		
(F) Prepare Large Sign Structure Details																		
(G) Prepare Summary of Signing and Pavement Marking Quantities																		
Signing, Markings and Signalization Subtotal:																		
1.14 Traffic Control Plan																		
(A) Review Preliminary Construction Sequencing Concept (Provided by GEC)																		
Review Traffic Control Concept based on 2 sets																		
Review Traffic Control Concept - Add EIML's back to Segment 1																		
(B) Prepare Traffic Control Typical Sections																		
Adjust TCR To be US 123 B																		
Adjust TCR To be add back EB ML's																		
(C) Prepare Traffic Control Phasing Overview Sheets (2 Sets)																		
Prepare Advanced Warning Sign Layouts (2 Sets)																		
(E) Prepare Traffic Control Phasing Layouts																		
Adjust TCR To be US 123 B																		
Adjust TCR To be EB Markings																		
Prepare Traffic Control Phasing Color Schemes (Drawn Only)																		
(F) Prepare Sequence of Construction Narrative (2 Sets)																		
(G) Prepare Detail Plan and Profile Sheets																		
(H) Prepare Standard Signing Layouts (See Item 1.12 - Retaining Walls)																		
(I) Prepare Miscellaneous TCR Details																		
(J) Prepare and Advise Safety Review Meeting (1st)																		
(K) Prepare Opening of Construction Schedule (1st)																		
(L) Prepare plans for Temporary Detours																		

EXHIBIT D-1
Summary of Manhours by Classification & Major Task Analysis
Carter & Bypass, Inc.
250E Toll Project - Segment #1

Description of Work or Task	Labor Rate Per Hour										CH RATE	CH RATE	PROJECT MULTIPLIER		
	\$253.70	\$245.25	\$160.41	\$160.41	\$104.00	\$65.00	\$44.00	\$30.00	\$30.00	\$30.00					
1.16 Illumination															
A) Coordinate Illumination Design Issues															
1.17 Toll Facility Design															
A) Coordinate Toll Facility Items / Prepare Bid Plan															
B) Adjust EBFA, Shared Use Pkwy, WB MA's and EB E&H Ramps for Toll Items															
C) Prepare Summary of TCP Quantities Clear Item 1.18 - Miscellaneous															
Traffic Control Plan Subtotal:															
1.18 Miscellaneous															
A) Develop General Quantity Summary Sheets															
Prepare Summary of TCP Quantities (2 Sets)															
Prepare Summary of Earthwork Quantities															
Prepare Summary of Removal Quantities															
Prepare Summary of Retaining Quantities (2 Sets)															
Prepare Summary of Drainage Quantities															
Prepare Summary of Retaining Wall Quantities															
Prepare Signs / Road Sign Surveys															
Prepare Summary of Signing and Permitting Meeting Quantities															
Prepare Summary of SVCP Quantities															
Prepare EGO Sheets															
B) Prepare Standards, Specifications, and Estimates															
1. Identify and Incorporate Applicable TxDOT Standards															
2. Prepare Modified Standard Detail Sheets															
3. Submit to Specifications and Provisions															
4. Review per E&H General Notes															
5. Prepare Quantities of Construction Costs (90%, Pre-Final and Final)															
C) Prepare Plan Deliverables (90%, Pre-Final and Final)															
Prepare Electronic Deliverables (90%, Pre-Final and Final)															
Appointments Subtotal:															
1.19 Coordination, Meetings and Modeling															
A) Prepare and Attend Initial Project Meetings															
B) Participate in Coordination Meetings															
Participate in Monthly Production Coordination Meetings (12 Meetings)															
Participate in Bi-Weekly Design Coordination Meetings (24 Meetings)															
Participate in Invoiced Coordination Meetings (12 Meetings)															
Attend Review Project Kick-Off Meetings (3)															
Bi-Weekly Design Coordination Meetings (5 Additional Meetings)															
Coordinate with Segment 2 for Second Plan Set (5 Meetings)															
Coordinate with LJA & Subcontractors for Stimulus EB01, activities															
C) PS&I Plan Review Coordination (90%, Pre-Final and Final)															
Clearance Response Preparation															

EXHIBIT D-1
Summary of Manhours by Classification & Major Task Analysis
Carter & Burgess, Inc.
280E Toll Project - Segment #1

Footnote Reference	Labor Rate Per Hour		Senior Project Manager	Senior Engineer	Senior Design Engineer	Design Engineer	Engineering Intern (EI)	Senior Engineering Technician	Engineering Technician	CAD Operator	Admin / Clerical	OH RATE	MARGIN RATE	PROJECT MULTIPLIER
	2009	2010												
	\$11.00	\$17.25	\$24.50	\$44.30	\$44.00	\$20.00	\$30.00	\$48.00	\$45.00	\$34.00	\$24.00	104.00%	12.10%	2.810
	\$253.70	\$243.25	\$100.41	\$100.41	\$134.00	\$64.57	\$112.31	\$146.00	\$146.00	\$74.50	\$67.00			
Description of Work or Task	Principle													
General Breakdown Meetings (3 Meetings)	\$253,700	\$243,250	\$100,410	\$100,410	\$134,000	\$64,570	\$112,310	\$146,000	\$146,000	\$74,500	\$67,000			

EXHIBIT D-1
Summary of Manhours by Classification & Major Task Analysis
Carter & Burgess, Inc.
290E Toll Project - Segment #1

FourPlace Schedule	Labor Rate Per Hour		Senior Project Manager	Senior Engineer	Senior Bridge Engineer	Project Engineer	Design Engineer	Engineering Intern (EI)	Senior Engineering Technician	Engineering Technician	CADD Operator	Admin / Clerical	Staff Hr. Totals	Staff Cost / Task Totals	PROJECT MULTIPLIER
	Lessed Rate	Lessed Rate													
	\$18.00	\$17.50	\$64.50	\$54.50	\$44.00	\$39.50	\$34.00	\$31.00	\$26.50	\$24.00	\$22.00	\$20.00	\$19.00	\$17.00	2.01x
	\$233.79	\$245.25	\$1493.41	\$381.43	\$324.03	\$291.68	\$245.37	\$155.31	\$135.00	\$98.00	\$76.83	\$67.00	\$62.00	\$56.00	
	\$233.79/hr	\$245.25/hr	\$160.41/hr	\$160.41/hr	\$160.41/hr	\$134.03/hr	\$101.40/hr	\$84.87/hr	\$115.31/hr	\$88.64/hr	\$76.93/hr	\$67.50/hr		\$5.00	
D) Conduct QA/QC Procedures (Initial, 50%, Pre-Final and Final)															
E) Prepare QA/QC Documentation (Initial, 50%, Pre-Final and Final)															
F) Conduct QA/QC Procedures (50%, Pre-Final and Final) [Segment 2]	70	23	47			34									
G) Provide Assistance During Initial Process															
H) Project Administration, Correspondence and Production Management															
I) Provide Monthly Progress Reports															
J) Involving and Progress Reports (July, August 2004)															
K) Project Accounting															
L) Attend Pre-Bid Meetings															
M) Attend Procurement Meeting															
N) Basic General Expenses															
	70	73	87	0	0	90	0	0	0	3	10	21	153	\$4,170.00	0
JOB SUMMARY	70	209	197	112	692	308	107	112	132	310	783	48	2809	\$492,246.16	0

EXHIBIT D-1
Summary of General Expenses
Carter & Burgess, Inc.
290E Toll Project - Segment #1

Item Description	Unit	Quantity	Unit Cost	Total Cost
Basic General Expenses				
I. Travel - Mileage	Miles	400	\$0.55	\$220.00
II. Basic Printing and Reproduction				
A. Photo Copies (B/W) (8 1/2" x 11")	EA	800	\$0.10	\$80.00
B. Photo Copies (B/W) (11" x 17")	EA	1,800	\$0.25	\$450.00
C. Photo Copies (B/W) (11" x 17") (From Mylar)	EA	800	\$0.40	\$320.00
D. Photo Copies (Color) (8 1/2" x 11")	EA	0	\$0.20	\$0.00
E. Photo Copies (Color) (11" x 17")	EA	0	\$0.25	\$0.00
F. Photo Copies (Color) (8 1/2" x 11") (Outside)	EA	0	\$1.00	\$0.00
G. Photo Copies (Color) (11" x 17") (Outside)	EA	0	\$1.50	\$0.00
H. Color Plot (Schematic Layout)	SF	0	\$2.00	\$0.00
I. Paper Plot	SF	100	\$1.00	\$100.00
J. Mylar Plots (11" x 17")	EA	100	\$2.00	\$200.00
K. Manuals/Binders	EA	0	\$10.00	\$0.00
L. Document Assembly	Plan Set	6	\$30.00	\$180.00
III. Overnight Deliveries (FedEx) (2/mo. X 12 mo.)	EA	4	\$20.00	\$80.00
IV. Landscapa services (Remove and Replace Pavers for Footing Survey)	LS	1	\$2,500.000	\$2,500.00
Total Basic General Expenses				\$4,130.00

EXHIBIT D-1
Summary of Manhours by Classification & Major Task Analysis
Fugro Consultants
290E Toll Project - Segment #1

Fee/Rate Schedule							OH RATE	MARGIN RATE	PROJECT MULTIPLIER						
Loaded Rate							\$155.00	\$146.00	\$121.75	\$62.75	\$48.70	\$58.40	N/A	N/A	N/A

Description of Work or Task	Project Principal \$155.00/Hr	Senior Project Manager \$146.00/Hr	Project Engineer \$121.75/Hr	Graduate Engineer \$62.75/Hr	Word Processor \$48.70/Hr	Drafting \$58.40/Hr	Staff Hr. Totals	Staff Cost / Task Totals	Plan Sheet Total
1.04 Geotechnical Investigations									
A) Review Pavement Design Report	0	0	0	0	0	0	0	\$0.00	0
B) General Requirements	0	0	0	0	0	0	0	\$0.00	0
C) Bridge Borings (Determine proposed boring locations for structural design)	0	0	0	0	0	0	0	\$0.00	0
D) Retaining Wall and Sign Borings ((Determine proposed boring locations for structural design)	0	0	0	0	0	0	0	\$0.00	0
E) Geotechnical Report (Divide Project into 2 Phases with Separate Deliverables)	6	32	40	60	16	19	173	\$17,325.80	0
F) Geotechnical Deliverables	0	0	0	0	0	0	0	\$0.00	0
Eliminate 6 Borings to 35' at Drilled Pier Wall & Lab Testing								(\$17,904.40)	0
Additional 6 Borings to 25' for Slope Stability Analysis & Lab Testing								\$12,946.00	0
Geotechnical Investigations Subtotal:	6	32	40	60	16	19	173	\$12,187.40	0
FUGRO SUMMARY	6	32	40	60	16	19	173	\$12,187.40	0

EXHIBIT D-1
Summary of General Expenses
Fugro Consultants
290E Toll Project - Segment #1

Item Description	Unit	Quantity	Unit Cost	Total Cost
Expenses				
I. Eliminate 6 Borings to 35' at Drilled Pier Wall & Lab Testing				
A. Borings	FT	-210	\$63.09	-\$13,248.90
B. Lab Testing	FT	-210	\$5.29	-\$1,110.90
C. Related Technical Services	FT	-210	\$2.74	-\$575.40
D. Related Engineering Services	FT	-210	\$14.52	-\$3,049.20
			Sub-Total	-\$17,984.40
II. Additional 6 Borings to 25' for Slope Stability Analysis & Lab Testing				
A. Borings	FT	150	\$63.09	\$9,463.50
B. Lab Testing	FT	150	\$5.29	\$793.50
C. Related Technical Services	FT	150	\$2.74	\$411.00
D. Related Engineering Services	FT	150	\$14.52	\$2,178.00
			Sub-Total	\$12,846.00
Total Basic General Expenses				-\$5,138.40

EXHIBIT D-1
Summary of Manhours by Classification & Major Task Analysis
K Friese & Associates, Inc.
290E Toll Project - Segment #1

Fee/Rate Schedule	Billing Rate	\$50.50	\$44.50	\$36.00	\$28.50	\$28.50	\$26.00	\$19.50	OH RATE	MARGIN RATE	PROJECT MULTIPLIER
	Loaded Rate	\$104.44	\$129.51	\$104.78	\$82.95	\$82.95	\$75.67	\$56.75	159.80%	12.00%	2.910

Description of Work or Task	Senior Project Manager	Senior Engineer	Engineer	Engineering Intern (EIT)	Sr. Engineering Technician	Engineering Technician	Clerical	Staff Hr. Totals	Staff Cost / Task Totals	Plan Sheet Total
	\$104.44/Hr	\$129.51/Hr	\$104.78/Hr	\$82.95/Hr	\$82.95/Hr	\$75.67/Hr	\$56.75/Hr			
1.10 Drainage Design										
A) Review Conceptual Drainage Analyses Report	0	0	0	0	0	0	0	0	\$0.00	
B) Prepare Drainage Impact Study	0	0	0	0	0	0	0	0	\$0.00	
1. Identify Existing Drainage Outfalls	0	0	0	0	0	0	0	0	\$0.00	
Delineate Existing Drainage Boundaries	0	0	0	0	0	0	0	0	\$0.00	
Analyze Existing Storm Drain Systems	0	0	0	0	0	0	0	0	\$0.00	
Measure Existing Impervious Cover	0	0	0	0	0	0	0	0	\$0.00	
Compute Existing Time of Concentration	0	0	0	0	0	0	0	0	\$0.00	
2. Compute Existing Condition Flows	0	0	0	0	0	0	0	0	\$0.00	
3. Identify Proposed Drainage Outfalls	0	0	0	0	0	0	0	0	\$0.00	
Delineate Proposed Drainage Boundaries	0	0	0	0	0	0	0	0	\$0.00	
Measure Proposed Impervious Cover	0	0	0	0	0	0	0	0	\$0.00	
Compute Proposed Time of Concentration	0	0	0	0	0	0	0	0	\$0.00	
Analyze Proposed Storm Drain Systems	0	0	0	0	0	0	0	0	\$0.00	
4. Compute Proposed Condition Flows	0	0	0	0	0	0	0	0	\$0.00	
5. Determine Proposed Hydrologic Impacts	0	0	0	0	0	0	0	0	\$0.00	
6. Determine Proposed Hydraulic Impacts	0	0	0	0	0	0	0	0	\$0.00	
7. Determine Mitigation Alternatives	0	0	0	0	0	0	0	0	\$0.00	
8. Preferred Mitigation Design	0	0	0	0	0	0	0	0	\$0.00	
9. Coordination with GEC, Prime, Agencies (3 Additional Meetings)	12	0	12	0	0	0	3	27	\$3,400.89	
10. Report Preparation	0	0	0	0	0	0	0	0	\$0.00	
Draft Report (Initial Design Submittal)	0	0	0	0	0	0	0	0	\$0.00	
Final Report (60% Design Submittal)	0	0	0	0	0	0	0	0	\$0.00	
C) Bridge and Culvert Plan Sheets	0	0	0	0	0	0	0	0	\$0.00	
1. Prepare Hydraulic Data / Calculation Sheets	0	0	0	0	0	0	0	0	\$0.00	
2. Finalize External Drainage Area Maps	0	0	0	0	0	0	0	0	\$0.00	
3. Prepare Culvert Layouts	0	0	0	0	0	0	0	0	\$0.00	
4. BCS, Standard & Special Culvert and Headwall/Wingwall Details	2	0	0	6	8	8	0	24	\$2,095.54	
D) Storm Drain Plan Sheets	0	0	0	0	0	0	0	0	\$0.00	
1. Prepare Storm Drain Computation Sheets	0	0	0	0	0	0	0	0	\$0.00	
2. Finalize External Internal Area Maps	0	0	0	0	0	0	0	0	\$0.00	
3. Prepare Drainage Plan and Profile Sheets (Additional Sheets for 2nd Set/Temp Ties)	4	0	4	4	12	0	0	24	\$2,404.08	2
Prepare Drainage Plan and Profile Sheets (Stimulus Project Revision)	8	40	40	40	80	40	0	248	\$23,967.92	2
4. Prepare Lateral Profile Sheets	0	0	0	0	0	0	0	0	\$0.00	
5. Prepare Ditch Layout Schedule	0	0	0	0	0	0	0	0	\$0.00	

EXHIBIT D-1
Summary of Manhours by Classification & Major Task Analysis
K Friese & Associates, Inc.
290E Toll Project - Segment #1

Facilities Schedule	Billing Rate		\$26.00	\$28.50	\$20.00	\$23.50	\$28.50	\$20.00	\$23.50	\$19.50	PROJECT MULTIPLIER
	\$50.50	\$44.50									
	Loaded Rate		\$104.78	\$82.95	\$104.78	\$82.95	\$104.78	\$82.95	\$104.78	\$82.95	12.00%
	Description of Work or Task	Senior Project Manager	Senior Engineer	Engineer	Engineer Intern (EIT)	Sr. Engineering Technician	Engineering Technician	Checklist	Staff Hr. Totals	Staff Cost / Task Totals	Plan Sheet Total
		\$164,440/hr	\$120,510/hr	\$104,780/hr	\$82,950/hr	\$82,950/hr	\$75,870/hr	\$56,760/hr	34	\$2,910.48	
	6. Prepare Miscellaneous Drainage Detail Sheets, Standard & Quantity Sheets (2nd Set)	2	0	0	12	10	10	0	0	\$0.00	
	7. Determine Temporary Drainage Facilities	0	0	0	0	0	0	0	0	\$0.00	
	Analyze Temporary Drainage Structures / Ditches	0	0	0	0	0	0	0	0	\$0.00	
	Prepare Temporary Drainage Sheets	0	0	0	0	0	0	0	0	\$0.00	
	8. Determine Trench Excavation / Special Shoring Locations / Needs	0	0	0	0	0	0	0	0	\$0.00	
	E) Perform Scour Analysis	0	0	0	0	0	0	0	0	\$0.00	
	F) Storm Water Pollution Prevention Plan (SWPPP)	0	0	0	0	0	0	0	0	\$0.00	
	1. Prepare Erosion and Sediment Control Plans	2	0	2	9	0	0	0	15	\$1,407.21	2
	Temporary / Permanent ESC Plans (2 Sets) (First reflected as edit in Second)	4	15	30	36	20	12	0	118	\$11,426.56	2
	Temporary / Permanent ESC Plans (Modify to include EB ML's in Seg 1)	0	0	0	0	0	0	0	0	\$0.00	
	2. Prepare SWPPP Summary / Data Sheets	0	0	0	0	0	0	0	0	\$0.00	
	3. Prepare Erosion and Sediment Control Details	2	0	4	8	0	0	0	20	\$2,319.04	
	Prepare Erosion and Sediment Control Details (2nd Set)	2	10	12	12	12	6	0	54	\$9,320.16	
	Prepare Erosion and Sediment Control Details (EBML included in Seg 1)	0	0	0	0	0	0	0	0	\$0.00	
	4. Incorporate EPC Sheet (Provided by GEC)	0	0	0	0	0	0	0	0	\$0.00	
	G) National Flood Insurance Program (NFIP) Coordination	0	0	0	0	0	0	0	0	\$0.00	
	H) Prepare Drainage Deliverables	0	0	0	0	0	0	0	0	\$0.00	
	1. Prepare Hydrologic Report	0	0	0	0	0	0	0	0	\$0.00	
	2. Prepare Hydraulic Report	0	0	0	0	0	0	0	0	\$0.00	
	Basic General Expenses	38	66	104	123	142	94	3	570	\$178.50	8
	Drainage Design Subtotal:	38	66	104	123	142	94	3	570	\$55,136.98	8
	KFA SUMMARY	30	60	104	123	142	94	3	570	\$55,136.98	8

EXHIBIT D-1
Summary of General Expenses
K Friese & Associates, Inc.
290E Toll Project - Segment #1

Item Description	Unit	Quantity	Unit Cost	Total Cost
Basic General Expenses				
I. CADD Time	HR.	0	\$0.00	\$0.00
II. Basic Printing and Reproduction				
A. Report Submittals 8.5" x 11"	EA.	0	\$0.10	\$0.00
B. 60% Submittal 11" x 17"	EA.	300	\$0.20	\$60.00
C. Pre-Final Submittal 11" x 17"	EA.	0	\$0.20	\$0.00
D. Final Submittal 11" x 17"	EA.	0	\$0.20	\$0.00
E. Final Submittal 11" x 17" Mylar	EA.	30	\$1.00	\$30.00
III. Overnight Deliveries (FedEx)	EA.	2	\$20.00	\$40.00
IV. Travel - Mileage	Miles	100	\$0.485	\$48.50
Total Basic General Expenses				\$178.50

EXHIBIT D-1
Summary of Manhours by Classification & Major Task Analysis
Maldonado-Burkett
290E Toll Project - Segment #1

Fee/Rate Schedule							OH RATE	MARGIN RATE	PROJECT MULTIPLIER
Billing Rate	\$55.00	\$48.00	\$28.00	\$28.00	\$36.00	\$36.00	154.46%	12.00%	2.550
Loaded Rate	\$156.75	\$136.80	\$79.80	\$79.80	\$102.60	\$102.60			

Description of Work or Task	Project Manager \$156.75/Hr	Senior Engineer \$136.80/Hr	Project Engineer \$79.80/Hr	EIT \$79.80/Hr	Senior Technician \$102.60/Hr	Senior CADD \$102.60/Hr	Staff Hr. Totals	Staff Cost / Task Totals	Plan Sheet Total
1.16 Illumination									
A) Prepare Illumination Layout and Design	0	0	0	0	0	0	0	\$0.00	
Coordinate Design with Drainage and Signage	0	0.5	0	0	0	6	6.5	\$684.00	
Coordinate Design with Guard Rail	0	0.5	0	0	0	6	6.5	\$684.00	
Coordinate Design with Structures	0	0	0	0	0	6	6	\$615.60	
Additional Plan Sheets for 2 Plan Sets	0	8	0	0	0	16	24	\$2,736.00	
B) Prepare Circuit Layout and Design	0	0	0	0	0	0	0	\$0.00	
Conduit and Conductor Run Tables (2 Sets)	0	4	0	0	0	8	12	\$1,368.00	
C) Prepare Pole Elevation Sheets	0	0	0	0	0	0	0	\$0.00	
D) Coordinate with Utility Providers and GEC (3 Additional Meetings)	12	4	0	0	0	0	16	\$2,428.20	
E) Identify Overhead Utility Conflicts	0	0	0	0	0	0	0	\$0.00	
F) Prepare Summary of Illumination Quantities(2nd Set)	0	4	0	0	0	8	12	\$1,368.00	
Prepare Standard Sheets (2nd Set)	0	2	0	0	0	2	4	\$475.80	
QA/QC Sheets (2nd Set)	24	0	0	0	0	0	24	\$3,762.00	
QA/QC Final Sheets (2nd Set)	4	0	0	0	0	0	4	\$627.00	
Sign/Seal Final Sheets (2nd Set)	4	0	0	0	0	0	4	\$627.00	
Basic General Expenses	0	0	0	0	0	0	0	\$0.00	
Illumination Subtotal:	44	23	0	0	0	52	119	\$15,375.60	0
MB SUMMARY	44	23	0	0	0	52	119	\$15,375.60	154

EXHIBIT D-1
Summary of Manhours by Classification & Major Task Analysis
RJ Rivera Associates, Inc.
290E Toll Project - Segment #1

Fee/Rate Schedule							OH	MARGIN	PROJECT
							RATE	RATE	MULTIPLIER
Billing Rate	\$56.00	\$52.00	\$46.00	\$29.00	\$26.00	\$23.00			
Loaded Rate	\$204.79	\$156.60	\$138.53	\$87.34	\$78.30	\$69.27	106.89%	12.00%	3.012

Description of Work or Task	Principal	Project Manager	Senior PE	Engineering Intern (EIT)	CADD Operator	Admin / Clerical	Staff Hr. Totals	Staff Cost / Task Totals	Plan Sheet Total
	\$204.79/Hr	\$156.60/Hr	\$138.53/Hr	\$87.34/Hr	\$78.30/Hr	\$69.27/Hr			
1.03 Data Collection									
A) Data Collection							0	\$0.00	
1. Review / Evaluate Existing Data	0	0	0	0	0	0	0	\$0.00	
2. Review / Evaluate Proposed Data	0	0	0	0	0	0	0	\$0.00	
3. Review / Evaluate Flood Plain Information	0	0	0	0	0	0	0	\$0.00	
4. Review / Evaluate Data Provided by GEC	0	0	0	0	0	0	0	\$0.00	
B) Project Site Visits and Field Investigations							0	\$0.00	
Additional Field Visits to verify existing Signs	0	0	6	8	0	0	14	\$1,529.90	
Data Collection Subtotal:	0	0	6	8	0	0	14	\$1,529.90	0
1.13 Signing, Markings and Signalization									
A) Review/Revise Preliminary Signage Concept (Provided by GEC)	0	0	12	32	32	0	76	\$6,962.64	
B) Prepare Signing and Pavement Marking Layouts								\$0.00	
Prepare Signing Layout and Design	0	0	16	34	32	0	82	\$7,691.64	
Prepare Sign Detail Sheets	0	0	40	88	80	0	208	\$19,491.12	
Prepare Layouts and Details for Pavement Markings	0	0	42	98	24	0	164	\$16,256.78	
Prepare Pavement Marking Sheets	0	0	20	42	128	0	190	\$16,461.28	
Prepare Miscellaneous Signing and Pavement Marking Details	0	0	7	14	22	0	43	\$3,915.07	
C) Prepare Overhead Sign Structure Layouts and Design	0	0	62	48	4	0	114	\$13,094.38	
D) Prepare Summary of Overhead Sign Quantities	0	0	0	0	0	0	0	\$0.00	
E) Prepare Large / Small Sign Summaries	0	0	0	0	0	0	0	\$0.00	
F) Prepare Large Sign Structure Details	0	0	0	0	0	0	0	\$0.00	
G) Prepare Summary of Signing and Pavement Marking Quantities	0	0	8	19	10	0	37	\$3,550.70	
H) Prepare Traffic Signal Warrant Studies	0	0	0	0	0	0	0	\$0.00	
I) Prepare Traffic Signal Plans	0	0	0	0	0	0	0	\$0.00	
1. Prepare Condition Diagram	0	0	0	0	0	0	0	\$0.00	
2. Prepare Signal Plan Sheets	0	0	0	0	0	0	0	\$0.00	
3. Prepare Plan Notes	0	0	0	0	0	0	0	\$0.00	
4. Prepare Phase Sequence Diagrams	0	0	0	0	0	0	0	\$0.00	
5. Prepare Construction Detail Sheets	0	0	0	0	0	0	0	\$0.00	
6. Prepare Marking Details	0	0	0	0	0	0	0	\$0.00	

EXHIBIT D-1
Summary of Manhours by Classification & Major Task Analysis
RJ Rivera Associates, Inc.
290E Toll Project - Segment #1

Fee/Rate Schedule							OH RATE	MARGIN RATE	PROJECT MULTIPLIER
Billing Rate	\$69.00	\$52.00	\$46.00	\$29.00	\$26.00	\$23.00			
Loaded Rate	\$204.79	\$158.60	\$138.53	\$87.34	\$78.30	\$69.27	168.89%	12.00%	3.012

Description of Work or Task	Principal \$204.79/Hr	Project Manager \$158.60/Hr	Senior PE \$138.53/Hr	Engineering Intern (EIT) \$87.34/Hr	CADD Operator \$78.30/Hr	Admin / Clerical \$69.27/Hr	Staff Hr. Totals	Staff Cost / Task Totals	Plan Sheet Total
7. Prepare Electrical and ITS Details	0	0	0	0	0	0	0	\$0.00	
J) Prepare Traffic Signal General Notes and Estimates	0	0	0	0	0	0	0	\$0.00	
K) Prepare Temporary Traffic Signal Plan Sheets	0	0	0	0	0	0	0	\$0.00	
Signing, Markings and Signalization Subtotal:	0	0	207	375	332	0	914	\$87,423.81	0
1.19 Coordination, Meetings and Invoicing									
A) Prepare and Attend Initial Project Workshops	0	0	0	0	0	0	0	\$0.00	
B) Participate in Coordination Meetings	0	0	0	0	0	0	0	\$0.00	
Participate in Monthly Production Coordination Meetings (X Meetings)	0	0	0	0	0	0	0	\$0.00	
Participate in Bi-Weekly Design Coordination Meetings (X Meetings)	0	0	0	0	0	0	0	\$0.00	
Participate in Internal Coordination Meetings(7 Additional Meetings)	3	30	10	4	16	0	63	\$8,299.83	
C) PS&E Plan Review Coordination (60%, Pre-Final and Final(2nd Set)	8	16	34	0	0	0	58	\$8,853.94	
Comment Response Preparation	0	0	0	0	0	0	0	\$0.00	
Comment Resolution Meetings	0	0	0	0	0	0	0	\$0.00	
D) Conduct QA/QC Procedures (Initial, 60%, Pre-Final and Final)	0	0	0	0	0	0	0	\$0.00	
Prepare QA/QC Documentation (Initial, 60%, Pre-Final and Final)	0	0	0	0	0	0	0	\$0.00	
E) Provide Assistance During Bidding Process	0	0	0	0	0	0	0	\$0.00	
F) Project Administration, Correspondence and Production Management	0	0	0	0	0	0	0	\$0.00	
Prepare Monthly Progress Reports & Invoices (Feb 09-Oct 09)	9	45	27	0	0	18	99	\$13,877.28	
Plans Production	0	9	0	0	18	12	39	\$3,650.04	
Project Accounting	0	0	0	0	0	0	0	\$0.00	
Basic General Expenses	0	0	0	0	0	0	0	\$1,338.00	
Coordination, Meetings and Invoicing Subtotal:	20	100	71	4	34	30	259	\$36,019.09	0
RJRA SUMMARY	20	100	284	387	366	30	1187	\$124,972.80	0

EXHIBIT D-1
Summary of General Expenses
RJ Rivera Associates, Inc.
290E Toll Project - Segment #1

Item Description	Unit	Quantity	Unit Cost	Total Cost
Basic General Expenses				
I. Basic Printing and Reproduction				
A. Copies 8.5" x 11"	EA	50	\$0.20	\$10.00
B. Copies 11" x 17"	EA	1,600	\$0.50	\$800.00
C. Final Submittal 11" x 17" Mylar	EA	150	\$1.50	\$225.00
II. Overnight Deliveries (FedEx)	EA	0	\$20.00	\$0.00
III. Travel - Mileage	Miles	600	\$0.505	\$303.00
Total Basic General Expenses				\$1,338.00

EXHIBIT D-1

**Summary of Manhours by Classification & Major Task Analysis
Surveying & Mapping, Inc.
290E Toll Project - Segment #1**

Fee/Rate Schedule				OH RATE	MARGIN RATE	PROJECT MULTIPLIER
Loaded Rate	\$140.00	\$85.00	\$120.00	N/A	N/A	N/A

Description of Work or Task	SUE Project Manager \$140.00/Hr	Project Field Coord \$85.00/Hr	2-Man Survey Crew \$120.00/Hr	Staff Hr. Totals	Staff Cost / Task Totals	Plan Sheet Total
1.05 Supplemental Surveying						
A) Survey Coordination	0	0	0	0	\$0.00	
B) Project Control	0	0	0	0	\$0.00	
C) Topographic Survey	0	0	0	0	\$0.00	
Level A SUE for Existing Foundation Locations	16	50	6	72	\$7,210.00	
D) Survey Deliverables	0	0	0	0	\$0.00	
Expenses (Level A SUE)	0	0	0	0	\$24,790.00	
Supplemental Surveying Subtotal:	16	50	6	72	\$32,000.00	0
SAM SUMMARY	16	50	6	72	\$32,000.00	0

EXHIBIT D-1
Summary of General Expenses
Surveying & Mapping, Inc.
290E Toll Project - Segment #1

Item Description	Unit	Quantity	Unit Cost	Total Cost
Basic General Expenses				
I. Mobilization	EA	1	\$500.00	\$500.00
II. Test Holes				
A. Depth 0-5'	EA	12	\$990.00	\$11,880.00
B. Depth 5.1'-12'	EA	3	\$1,970.00	\$5,910.00
III. Traffic Control (Highway Tech)	EA	3	\$1,500.00	\$4,500.00
IV. Police Escort	Hrs.	40	\$50.000	\$2,000.00
Total Basic General Expenses				\$24,790.00