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 <a href="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 SUP	PLEMENTAL	WORK AU	THORIZATIO	N is made pur	suant to the t	erms
and conditions of						
the Central Texas						
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

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.
 - 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)

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):

- 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.
- 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.
- Provide signed and sealed sheets of boring logs for insertion into the construction plan set(s).
- 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.

- 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).
- 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.
- 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:

 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.

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.

 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.

 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.
- 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:

 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.
- 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.
- Engineer will support the GEC in coordination with the Corps of Engineers, FEMA, TxDOT and COA for any approvals and permits required.

Scope of Services 5 of 14

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..
- 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.

- No changes in scope.
- 5. No changes in scope.
- 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.
- Temporary Drainage Facilities: The Engineer will develop temporary drainage
 Scope of Services

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.
- 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.

No changes in scope.

Scope of Services 7 of 14

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.
- 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

Scope of Services 8 of 14

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.

9 of 14

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

Scope of Services 10 of 14

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.
- 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.

11 of 14

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 Scope of Services

12 of 14

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

13 of 14

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.

Scope of Services 14 of 14

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(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

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
					10.01	18.00	
1.01 Design Features	7100	10119	100	000	20.00	10.00	
1.02 Governmental Agency Coordination	50.00	Arrigit	-10	(9:00)	\$1,529.90	00.60	\$3.835.78
1.03 Data Collection	\$2,305.88	201904			51,529,90	50.00	\$14,386.16
1.04 Geotechnical Investigations	\$2,198.76	\$12,187.40				\$32,000.00	\$35,709.70
1.05 Supplemental Surveying	\$3,709.70	0.00	1,100	WEEK-	EDAN		\$4,121,28
1.06 ROW Mapping	\$4,121,28	00.00	Mir. (III)	50.00	11111	Litterii 1	
1.07 Utility Coordination and Design	20.46	30.00	28 MI	152 1111	54,00	produ	Fish
1.08 Initial Design and Design Concept Conference	5(1,00	in, dip	13.79	2.00	-7.007	L. MILIPE	- 1/4
1.09 Roadway Design	\$71,770.28	0.199	19,01	71175		0.10	\$71,770.28
1.10 Drainage Design	\$16,637,26	50.00	\$55,136,98	Want.	100	0.00	\$71,774.24
1.11 Structural Design	\$90,265.68	201.00	174.00	20.00		147.177	\$90,255,68
1.12 Retaining Wall Design	607.00	100,00	20,00	95.00	58.00	\$41 (9)7	- Julia
1.13 Signing, Markings and Signalization	\$3,388,34	EM:081	30,00	10,00	\$87,423.81	July DiQ	\$90,812,15
1.14 Traffic Control Plan	\$175,807,99	320,000	10.00	195.00	50.00	36.00	\$175,807.99
1.15 Traffic Management System	50.00	150.00	59.00	50.00	50.00	30.00	10 to
1.16 Illumination	\$3,388.34	10 00	10.00	\$15,378.60	10.09	20.08	\$18,766.94
1.17 Toll Facility Design	\$8,919.08	10 00	10.03	2000	0.0007	00.06	\$8,919.06
1.18 Miscellaneous	\$6,212.91	10.70	10.00	1000	[M.(00)])	10.90	\$6,212.91
1,19 Coordination, Meetings and Invoicing	\$68,525.10	10 ort	50.561	40.00	\$36,019.09	100,00	\$104,544.19
1.20 Construction Phase Services	20,00	50 nu	att-00.	IIIEDU	(0.00)	(90,00)	ERON
FEE SCHEDULE SUMMARY	\$457,240.58	\$12,187.40	\$55,136.98	\$15,378.60	\$124,972.80	\$32,000.00	\$696,916.36
11111					ICB - Carter & Burge	nes Inc. (Jacobs)	\$457,240,58
					and the second section in the second section is the second section of the second section in the second section is the second section in the second section in the second section is the second section in the second section in the second section is the second section in the second section in the second section is the second section in the second section in the second section is the second section in the second section in the second section is the second section in the second section in the second section is the second section in the second section in the second section is the second section in the second section in the second section is the second section in the second section in the second section is the second section in the second section in the second section is the second section in the second section in the second section is the second section in the section is the second section in the section is the section in the section in the section is the section in the se	ugro Consultants	\$12,187.40
				W	FA - K Friese & Asso	And the second s	\$15,378.60
				N		ado-Burkett (DBE)	\$55,136.98
				D I	RA - RJ Rivera Asso		\$124,972.8
				140		ig & Mapping, Inc.	\$32,000.00
					THE RESERVE AND ADDRESS OF THE PARTY OF THE	PROJECT TOTAL	\$696,916.3

EXHIBIT D-1 Summary of Manhours by Chassification & Major Task Analysis Carter & Burgess, Inc. 2905 Toll Project - Begment #1

0 # # 0	HF			\$101.48	\$84.57	\$135.31	\$50.00	\$78.93	867.00	000000	4.6 (0.4)	0.000
Landon Rate Description of Warn or Task Endoard Distance Chairman of Warn or Task Endoard Distance Chairman of Warn or Task Endoard Displace Chairman or Task Delta Collection Service Chairman or Task Delta Collection Service Chairman or Task Task or Enstruct Shateness Propert From Received by Christ Task or Enstruct Shateness Propert From Received by Christ Task or Enstruct Shateness Propert From Received by Christ Task or Enstruct Shateness Propert From Received by Christ Task or Enstruct Shateness Propert From Received by Christ Task or Enstruct Shateness Propert From Received by Christ Task or Enstruct Shateness Propert From Received by Christ Task or Enstruct Shateness Propert From Received by Christ Task or Enstruct Shateness Propert From Received by Christ Task or Enstruct Shateness Propert From Received by Christ Task or Enstruct Shateness Propert From Received by Christ Task or Enstruct Shateness Propert From Received by Christ Task or Enstruct Shateness Propert From Received by Christ Task or Enstruct Shateness Propert From Received by Christ Task or Enstruct Shateness Propert From Received by Christ Task or Enstruct Shateness Propert From Received by Christ Task or Enstruct Shateness Propert From Received by Christ Task or Enstruct Shateness Propert From Received by Christ Task or Enstruct Shateness Propert From Received by Christ Task or Enstruct Shateness Property From Received by Christ Task or Enstruct Shateness Property Sha	-	1 [1.1								12.90%	2.819
Endante Chainte Description of Wars or Task State Chainte Chai	-		1									
Existent Existent Civilia Existent Proposed Existent Exi	dent Engineer	Engineer	Project	Design	Engineering Intern (EET)	Senior Engineering Technician	Englosering Technician	CADB	Admis / Clement	Btuff Ht.	Staff Gott / Task	Plan
Endeate Chaintery Drain Endeate Proposed Data Endeate Proposed Proceedings White Proposed Procedure Proposed Procedure By Others Anti-Activity for Endeate Proposed Procedure Procedure Procedure By Others Data Carlos and Proposed Endeate Proposed Procedure By Others Data Carlos and Procedure By Others Data Carlos and By Others The Brooking Procedure By Others Data Carlos and Reserved By Others Data Carlos and By Others The Brooking By Others By	\$246,255to \$180,45/00	1110.4101	STRABBILL	1551,4561r	\$84.571191	1138,3101	191,1631	878,8334	167,65919	Totals	Totals	Tetal
rep Crats Plans Internation Province I you Co. (Elevantes Project and Rub-Projects) Investigables: Specification Received by Obsert rest (Electronic Project From Received by Obsert Page (Electronic Project From Received by Obsert Report K. And reserge with Segment 20 Investigation Received (Co. (Co. (Co. (Co. (Co. (Co. (Co. (Co.				İ								
and Outs and Outs from the control of the control o										0	60.00	0
State Internation Financia of CILIA Financia of VICE (Elementers Project and Bulb-Projects) Financia of VICE (Elementers Project and Bulb-Projects) Solution Received by Cibers State Elementer Francia Flan Received by Cibers Solution Financia of Project Flan Received by Cibers Data Calibration Solutional Financia of Project Flan Received by Cibers Data Calibration Financia Cibers Data Calibration Financia Cibers Financia Cib					A	-				0	20.00	0
Please intermeted by QCC (Distriction Project and Bulb-Projecte)						-				0	\$0.00	0
Prevalent by CDC (Distriction Project and Bub-Projects) Investigation This Received by Cheek Spall Phile Received by Cheek Spall Phile Received by Cheek State Electronic Project Flan Received by Cheek Researt Researt Researt M. A and research scriptions Investigation of Management M. Spall Research M. Spall Research Investigation of Management M. Spall Research M. Spall				-		1	-	,		R	52,305,66	0
Horostigations open Time Received by Others stroy Electronic Propriet From Received by Others Dade Californian Settleded: 0 Togent Aries projected Martin Nacional Internet XX and menga with Segment 22	12		-				-			0	80.08	0
oped Fine Received by Ohms start Electronic Propert Film Received by Ohms Dald Collection Builtiest Days Collection Builtiest Days Collection New Propert XX and menge with Beginned 2)	+									0	80.00	0
stray Electronic Propert From Reserved by Obers Data Gallocition Softwood: Data Gallocition Softwood: Nagast Hopert XX and menge with Sequent 2)			-	-		-				0	\$0,00	0
Nepart Name proposed borring lecritoint) Interest Name (Name of Septemble 2)	= M	a	0	*		-	*	4	0	30	\$2,305,88	e
opened boring lectrione)	+							-	E	0	98.00	0
speced borry lecritors:	-	2 8			1				=		29.00	0
	1			1				-		0	20.00	
			1			-			-	0	80,00	
					0	1				0	10,00	
	-	9		1					2	42	12,196,76	0
	+	-	-					-		0	\$10,00	0
P) Januaristance Determinates Geologistical Investigations Guidatal: 0	9	-	•		ē		•	•	n	22	32,1992.76	*
	+	1			9	10	1	7	2	=	\$2,858.40	В
A) Survey Coordinator with \$AMI, line.										0	80.00	
D) Pruped Control	1							-		0	20,00	
C) Tapographic Survey				-	-					0	20.00	
O) Survey Deferention			*	1		=	24	a		-	\$6139	
rveying Subtotalt		۰	9	0	a	0	4			R	\$3,798,70	-
1.06 HOW Mapping	1									0	30.00	0
eleate Propured ROW and Exeminents											80.00	0
											80.08	0
1651	1	+			60		ŀ	18	-	7	\$4,121,26	
Rovins ROM Base Place for 2 Plan Bets ROW Marping Bathelali. 8		0		9	22	9	۰	91		7	64,121.20	
A) Pragare Steen Flan Shorts.		1					6	-			\$276.25	0
						-	1	10	7	90	\$3,653.30	
2. Sheet track (2 Bels)		1		-	-		-	-	-	H	\$3,956.25	0
- Sept			-			000			-	0	10.00	0
d, Denothman Layout Shrets				0	=	0	ev	20		п	\$1,776.92	
6. Greate directorys know 1 to 4 projects the back to 2 projects To Pressure Stadenty PMME Shorts										1	21 400 10	1
1. Proposed Typical Snotler Sheets (2 Seris, Stations Changes, Perit Design)		n *	= 1		2			4 0.		7.79	45,297.41	-

EXHIBIT D-1

Summary of Manthours by Classification & Major Task Analysis

Carter & Burgess, Ins.

290E Toll Project - Segment #1

1975 1975	Gefflate Scheidele		-	100000	100 500	414.00	618.70	\$10.00	\$48.00	436.00	30900	\$2400	HATE	HATE	WILTPLER
Exercised Particle	Labber Halle Por Hall	1000	80.08	104.00	- 104 00	2007 203	410140	\$84.07	\$126.31	340.05	578.93	\$07.08	164.034	12 345A	2,619
Execution (1980) (1984)	Landed Rate	1253.70	\$245.25	\$199,41	\$100.41	9124.83	810140								
10 10 10 10 10 10 10 10	Description of Work or Took	Primalgle	Service Project Manager	Serior Engineer	Engineer Cristics Engineer	Project Engineer \$124,000	Design Engineer STOLARITE	Engineering Intern (EII) 144, EII/11	Senior Engineering Technician STALTHIN	Engineering Tachnotan Staddin	CADD Operator \$78.93119	Autosia / Clarical 167 03011	Balf 91. Totals.	Staff Gost/Fesh Tistaft	Plan Plant
The control of the co		1000000	Dear Control			2					0		13	\$1,019.92	8
A video contact was a to be a contact with \$1.5 and \$1.5	 Employ Typical Bedden Breden (Match Extendeg US 103 vs., Propensio us 103) Place and Profes Bhaste. Mandamon / Drent Connection (Tamp. Certificher) 												0	\$0.00	е .
A contact the contact of the contact	P. A. P. Shaats - Adlast NEED A. Weing to be to Existing US 103 S							+		989			02	0010010	9 0
A	P. A. P. Shaots - Add ED Mainlanes least to Puppet 1		*	30		10	20			60	R		7	\$13,412,50	a :
1 1 1 1 1 1 1 1 1 1	4. Plan and Positio Shorts - Promage Reach.										177		= ;	10.00	0 0
A price to the state of the sta	P.B. P. Shaets - Frantago Roads (2 Duphasio Sheets for Segment 2)		*			-		-	1		0		3	46,499.79	0
Applies Appl	** p. A. P. Shaedis - Prantage Rasals ("Credit BBFR aut being Widered")		7	Q.		+18	9	-13	-	1				40.00	
A part of the control						Ī		=	181				9 6	20100	
15 15 15 15 15 15 15 15	Intersector Datals - Cross Strotts								31				2 8	411111	
1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	G. Han and Prolie Shorts - Bartos.													20,00	
1 1 1 1 1 1 1 1 1 1	7. Ravey Gare Layads						9				-07			10,10,00	
Decided by Company Decided	8. Hastantal Algerrant Data Streets Undered Limits to Virist, North and South						re				,			1000000	1
Section Property Section Sec	8. Supervisor Data Streeth (2 Sets)					3	-			ni	4		2	\$954.00	
1970 1970	10. Banaval Plas Shedh										-			20.00	
19 19 19 19 19 19 19 19	1. States J Description and Revite Retains												0	\$0.00	-
100 100	Character Company Posterior and Contract Comments				la la	t							0	10.00	D
100 100	Table and Plant Livers of the Control of the Contro														_
10 20 20 20 20 20 20 20	2) Graping Decides												0	30,00	9
100 201	1. Rabe Deagn Cross Sections		4			я		180			-		720	\$23,006,00	a
100 100	Ravius / Update X Sections for 2 bets, one easing on stror		1	9		710		100					777	\$22,968.90	0
Part Date	Revise / Updale X Sections for adding ES ML's Back to Project 1						l						0	\$0.00	0
Attacks Triangle State S	2. Projuma Dakwaray Datali Sheets			100									a	\$0.03	a
Contribution Co	3. Prepare Divinuary Profile Shares		-			1					ŀ	-	0	\$0.08	0
State Stat	4. Prepare Mecehineurs Rasering Details	ľ			-								9	20.00	
1972 1972	5. Landbouge Coordination	1						-	-	-			0	00'08	G)
Part				15		2	12	376	•	99	119	4	734	\$71,770,38	0
1992 1992 1993 1994 1995			:			55			38	7					
## 2 2 22 23 34,181.34	Draftmage Desirge A. Stocker, Consequent Createurs Analysis Report (See hair 1.03 - Data Collection)		-	9		4							۰	\$0.00	0
State Stat	Constitute Delicate House will M. Cristian B. Mandellein		-			¥	n			9		2	R	\$1,380.34	0
State Stat	D. Dunnan Drakons broad Bude	and delivery of the last													
Butterstates	1 Indeast Friends Drawain Outlate														
15.000 15.0000 15.0000 15.0000 15.0000 15.0000 15.0000 15.0000 15.0000 1	Outcome Dunies Cross Distante Balantitates	-											0	20.00	-
Section Sect	Usasade Engled Hoperhalt Cover													20.00	
Free Free Free Free Free Free Free Free	Concesso Essabro Three of Concessivation											į	•	30.00	
State	Assayan Essating Cross Draw Systems	-											0	80.08	0.1
Section	2. Consiste Enisted Contilled Plent												. 0	00 10	9
Harris	3. Ideally Proposed Districts Outsitiv													17200000	j
0 10,000 0 10,0	Delevania Proposed Orannea Boundarum	-												80.00	
0 2000 2000 2000 2000 2000 2000 2000 20	Manuale Prainted Improvents Cover												0	20,00	2
70 10 10 10 10 10 10 10 10 10 10 10 10 10	Contade Proposed Tans of Concentiation												0	30.00	0 1
1000 1000 1000 1000 1000 1000 1000 100	Audigze Proposes Crees Drain Systems									L			p (20.05	0.1
00 00 00 00 00 00 00 00 00 00 00 00 00	4. Campale Proposus Caration Flows												0	10.00	0- 1-
	5. Determine Proposed Pychologic Impacts													00/00	
10 10 10 10 10 10 10 10 10 10 10 10 10 1	G. Determine Proposed Hydrondie Impacts													100 000	1
mark a	7. Determine Megaker Alarruthers												0	20000	1
	8. Determen Pond												0	20.00	

EXHIBIT D-1
Summary of Manthours by Classification & Major Task Analysis
Carter & Surgess, inc.
2906 Toll Project - Segment #1

		100 000	444.60	464.00	644.10	CWINE	R20 00	849.00	\$35,00	820.00	\$34.00	RATE	RATE	MOLTPLIER
Labor Hate Par House	190.00	6346.36	8135.41	8180.43	8134.63	SYDIAM	\$54.57	1135.31	998.00	\$76.93	\$67.00	\$51.60%	42.0994	2.819
Catched Prince	Manage II	200000					1		П					
Description of Mark or Tank	Principle E253 Public	Senor Project Manager \$245.75Hr	Semine Engineer \$180.41019	Samire Bridge Engineer \$102.4181	Project Engisear \$124.63HY	Design Engineer \$103,4899	Engineering Soloco (ETT) \$84,0789	Sozior Enginemiog Testwoolan \$135,3104	Engineering Technician Meanini	CADO Operator STA STRITE	Admin f Clerical MEXITY	Staff für. Yedelb	Staff Cest / Task Takets	Plant Total
10, Hopert Preparation						-	I					D	\$6.00	0
Druk Report Gribal Duager Bulevetall								100					88.60	-
Fault Report (900% Degum Solarested)													and a	
C) Beage and Culred Plan Shrets													40.00	10
1. Physique Mydhade Data / Calculation Ehents	=		-			7	-	-					40.00	0
2. Feagin Externil Drainage Avea Maps					1			1					80.00	
3. Prepare Culvert Layouts					307	1)		1	i				-	,
D) Strum Drain Plan Sheets													44.00	6
1, Propare Stern Drain Computation Sharth	Married Married				1								20.00	
2. Prepare Merical Area Mays.	E.					1	1		1				40.00	
3. Prepare Disabace Plan and Profe Sheets	- 0						D (1)						200,000	
4. Posparu Laterd Posito Shaufa													40.00	
5. Prepare Otto Luyard Schoolske	4	1				-	0						1000	
G. Phapase Mincellaneous Chalstage Detail Sheets			1	1								-	2000	
7. Determin Temporary Cranage Facilities (Geord With Gray Janaing & Associ)	10.00			- H	,				0 1	-		44	40,000,00	
Revise bergatary dramage for publing CDM, back into Segment 1	- 60	Pi .	0	1	10	20	20	01	100	2			to the same	0
Analyze Temporary Drainage Stractures / Diletims	8 0	4			+			-					00.00	
Prosent Temperary Drainage Sheets	The second	- 10	7	4	1							0 0	20/00	1
R. Dubassan Tranch Excession / Special Shoring Lecidons / Needs for Drainese	1	1	100	0		-						0	10000	1
E) Perform Scour Analysis	100		-	0 .		=		=				0	\$0.00	-
F) Sharm Visitor Publisher Provention Plant (SWSP)								0				30	900 000	
1. Prepare Ereaus and Sedment Control Plans (per TOP Phase)			0	II								9 0	20,00	
2. Prepare DVSP Samesay / Data Sheets			#			- 88		Ì					40.00	
3. Prepare Erosian and Sediment Control Dotals	0	-	-										44.40	1
4. Neaspenda BPIC Sheet (Prorided by GEC)				-		0							20,00	
Gi Haland Moot Inturance Pregram (NFIP) Condinsion				١			-				-	0	90,00	2
H) Propare Disastage Dispretation			-	-	-							0	80.08	0
1. Submit Hydralogic Report and Documentation							-					0	\$0.00	0
2. Submit Hydraulic Report and Decommendation Dysology Design Bullystal		=		0	5	24	29	01	z	01	7	2	\$10,637,25	9
1.11 Stockland Denism														
At Foodra Balton Lavands				100				The state of the s				1	STATE OF THE PARTY OF	
Prepare Bridge Type and Cert Report	-	0				1						a	\$0.00	
VAI to Mili Dic							11		•	=	-	0	\$0.00	0 1
V/0 to 5.0 0d	7											0	80.08	
Material	1								100			0	90.00	
36 ta (1) DC	1					1							80'00	
\$1 Prepare Peral Design Calculations and Details													40.00	4
200E Landwayer and Aerbhats Requesioners - Structural Dutata (Countereds will operated 2)	1											-	20.00	1
Will to Net DC			1		=								2000	
WB to tile DC		+1	,										00.00	1
Me to till DC													40.00	0
38 to EB OC													84 908 38	-
C) Prepare Susemary at Bridge Quantities (2 Sets)													80.00	ļ
The Party of the case of Party and														
CO MINISTER STREETS CHICKEN						-			ŀ			0	40.05	

Exhibit D-1, Fee Echadule

EXHIBIT D-1 Summary of Manhours by Cleasification & Major Trak Analysis Carter & Burgoss, Inc. 200E Tell Project - Segment #1

												NO	MARKER	PROJECT
Militable Sichestfalls				-				-	-		200000	BATE	BATT	AMULTIPLED
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	830.00	1077.00	554.00	364.00	844.00	\$39,00	830.00	249.03	\$10.00	87.0.00	B.Ph. 70	-		
The state of the s	87.1369	82,995,26	\$169.41	\$180.41	\$124.00	5101.4B	384.57	\$136.31	399.00	878.83	307.65	101 02%	12,30%	2,819
LONDISTRIA	20000													
								-				ľ		
Committees of Ward or Tonk	Principle	Projent	Besir	Senior Bridge Engineer	Propert	Design	Engineering letters (EST)	Engineering Technician	Engineering Technisten	CADD	Admiss/ Cherical	Shaff 10.	Staff Lash	Plan
The state of the s	\$253,7094r	6246.350V	HIBANE	1180,4101	1124,1391	1101.4801	104.6784	1136,3110	110,40,017	178.0300	167,6500	Totals	Totals	Total
3. Francisco Plan Shouth												0	\$0.00	

Exhbit D-1, Fee Schedule

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

Conservation of Work or Test 4. State Plan Shouts 1. Present Deck Cranicos Divises 7. Present American Divises 7. Present American Divises Gave California only Building GC's in Nests	\$253.79	6346.36												
	6252.10	2000	4 100 00	SALAN AS	8174.00	4404.46	464 57	413638	\$10.00	\$78.93	507.66	151 00%	12-50%	2.819
		Benner	3180.41	3130,41	\$154.00	3101.43	2004.00	3340.01	*******					
4. Stati Plan Sheath Ell Primaini Deck Christope Okjeste Fij Prepare Macademon Decks (Dikta: Danape Shudures Els.) Gav Cestria's fann only skulden GC's to Neste	Primaple LISS-TOTE	Senior Propest Manapet SACLEME	Semiar Exginer \$130.4181	Service Bridge Engineer \$180,4181	Propest Engineer \$124.0381	Design Engineer \$101.0000	Conjumenting Intern (EET) 144.57719	Beniar Engineering Technician \$134,3100	Engineering Tothesisian \$30-55511	GAGD Operator \$78.83816	Admin / Clencal \$67.6Wit	Brait Hr. Totals	Most / Jack Totals	Plan Sheet Total
III Pimann Deck Drainop Delate F. Propins Macellensous Deckil (Max. Dravage Blucture: Els.) Gare Details from only building GC's to North		-		-								0 (20.00	
F) Program Macedamous Decail (Max. Dranage Bhacharet, Etc.) Gave Cetals from only building DC* to North													10.00	
Gare Details from only building DC's to North						A. Contract				***		100	400 787 003	. 0
				= 5		96 00			+ 9	2 8		99	10 414 00	. 0
Separate Misc Details (2-4 sets.)				2 1	0.0	444	000	P	2 10	1000		640	\$67 870 ZU	0
Additional Submittals for 50%, Pre-Final, and Final Circl Set)				9	and a	100	70		-			0	20.00	
O) Determine TeDOT Bridge Standard Details				-	100		100	1	Ī	- 1			65.676.50	
Duyllicate-standards and MOD Standard from 2 Set Option of 4 DC's				THE STREET	10		- 10		-	B		90	92,673.39	
FIT Review and Evaluate Stayed Custobuctor for Stauchards	-											9 1	20.00	
Proper Phased Demakun Plan				+									30.00	-
1) Analyze Existing Feotings and ublice whose panultile								N. S.				0	10.03	13
2) Provade Supplemental transfer for writing footness												0	30.00	
Seructural Design Dutherat	•	0	9	101	118	107	116	0	101	214	0	32	190,255.66	0.
13 Streets Markens and Saradkallon														
A) Constitute Eighing and Payment Markings with BJ Rivers		0			*	P4.			9.		24	22	\$3,368.34	0
O) Propare Supreng and Parement Mentano Layouts									1			100	CHOCK STATE	100
Present State Langual and Determ												0	20.00	0
Propose Ser Detail Diseas		1							ij			0	20.00	0
Person Parement Markett Sharks												o	20.00	D
Phenaire Macedaneous Signiery and Pavenners Markey Distalls					100							0	0000	
C) Prepare Overhead Bigs Structure Leyouth and Design	=					-		+				0	20.00	
Di Prepare Sunemary of Overhead Styn Quantiles		10.										0	\$10.00	
El Prepare Lerge / Small Sign Surrenaites						20			-		-	0	\$0.50	-
Fil Prepare Large Hgn Blockure Dotats							No. of Lines	-				0	\$0.00	3
smeet Ma			100	The state of						-		0	30.00	0
Biguing, Nanhings and Signalization Substant	7	-	•	•	4	**	0	D			re:	TI.	10,300,34	
1,14 Traffic Control Plan													60.00	ŀ
A) Ranew Politriesty Construction Sequentially Consept (Provided by GEC)					400		Aller.	1		900		533	\$67.147.00	
Revise Traffic Control Concept based on 2 sets.	-	200	-		100	-	30 00			45		90	88,781,70	0
Revise Traffic Control Concept - Add EDVL's back to Sepment 1	1	2					-						\$5,60	
B) Pyspina Triffic Corbol Typicol Bechlerin		9			2		n			0		12	32,021,50	0
Aquit Tof Tie to US 123 9			60		34	36	99	36	30	R		300	121,963.76	0
Adjust 107 Tim to and uses the Mark					es					9	b	2	\$818.95	
C. Propose Assessed Observed for Lance of Market	A CONTRACTOR OF THE PARTY OF TH				P		-			13		11	\$3,312.08	0
C. Drenner Dette Carter Heaville Investor												0	30.00	0
Advert TCP Tie to US NO S	-	re			55					9		22	\$3,940,00.	0
Adjust TCP Tie to EB Mandanes		4	12		X	60	15	20	30	R		298	\$22,810.00	٥
Pregare Tradic Cantal Physics Coss Sections (Deson Orly)					1							0	90'00	0
P) Programme of Commiscion Narradon (2 Sets)		ra.	rv		×	-						-	\$1,547.44	
G) Prepare Detaut Plan and Prable Sneets			=	-								0	30.00	0
Htt Prepare Operated Sharing Layouts (See Rem 1, 12 - Fortanding Welfs)							i					9 9	2000	0 0
() Prepare Misordianeous TCP Details			ALL STREET		-								20 274 03	
Ji Presare and Alberd Edivity Review Mediting (Alb					1	1						30	\$4,098,70	0
K) Prepare Cyanas at Candination Exhebite (XZ)	-	2			2 7	*	- 5	44	100	40		963	436.679.46	0

EXHIBIT D-1
Summary of Manhours by Classification & Itajor Tank Analysis
Carter & Burgess, Inc.
299E Toll Project - Segment #1

See/Rate Schedulo				444.04	000 000	4.00 000	00000	848.00	111,00	178.00	334.00	HAIR	RATE	MACTIPLIER
Lichar State Per Hoer.	8.90,00	207.00	104.00	200.00	6454.03	8101.48	534.67	\$135.31	\$90.00	870.93	\$67.05	411.1074	42 DOW	2.619
Leaded Rate	1253,70	1245.76	\$580.41	3160.41	\$124.03	3101.48	204.51	#193.31	80000					
Description of You's or Takk	Principle	Fraject Menager	Santos Enginear	Serier Bedge Engineer	Project Engleser 1134.0310	Design Engineer	Engineering locari (ET) SACTOR	Engineering Technisian SURAMIN	Engiamering Technician 165,6600	CALID Operator STA.STOR	Admin / Clarked 107,6410	Blaff Hr. Terlals	Braff Cost / Task Totals	Plan Bheet Total
	BADA. FBITT	8708.718114	100.011									0	26,00	0
A) Prepare Temporary Richaway Wall (Bhispy Layouts Ny TCP)	-		3		-			-	-			0	\$6,00	D
N) Propers Advanced Signate Layoure (Including Forte Signate)		D	9		- 10	12	R	10	10	3.0		00	\$4,001,42	13
C) Proper Summary of YCP Quantities Gee hem 1.18 - Ricotameury Teathe Centrel Plan Euthorish	0	113	40		324	110	344	123	117	300		1991	\$175,887,09	a
1,16 Bussination						1						400	14, 360 34	e
At Provident Manufacture Contact House	17		=		. 4	re					4.	1	200,000	
Numerous manufactures and the second	0		0	0	,		•	•	•		n	22	52,286.34	0
1,17 Toll Facility Design	-			0.0	man garagests		1					0	\$0.00	D
Al Coordingto Tel Facility lierni / Propose the Plant		7	,		34		10			20	-	63	94,919,06	9
of regard carry, asserts over 1605, the feet and 160 feetby Design Substitute.		*	d	0	24	0	2	9	•	n	0	82	98,919,06	*
A. Octobrio Chande Same Chante													-	
A Committee of The Committee of Balant			79		-	3	13	186				30	\$2,503,22	0
Propose numbered of the Comment of t	9	0	,		1	1	14	-	1		-	0	\$0,00	0
				-		- 18				San Taranta		0	80.00	-
Cepan unimary of notice in Alemania	-	2	0	-	-	A	2		7	- 42	rv.	33	\$3,709,69	В.
Propagal Saturation of Assessment Saturation of Saturation			0	6.	-							0	\$1,00	0
Propper adversary of Consensor Commerces	E		0		T.		4		8		3	0	\$6,60	-
Promote Lance / Bent Barmalini	1	0		T. T.	-	=	-	=	1			0	20.00	0
Present Summary of Sterring and Perement Mething Quertiliss		0	1		44.	=	1	=	- 11-	-		0	90.00	
Peacus fluorescy of SVGP Quantities		0	-	-	=	-		=				0	30.00	0
Posture GGD Sharts	-	17	,		The state of		SE			-	-	0	20,00	0
D) Prepare Standards, Specification, and Robinstes												-	44.00	1
1. Identify and Incepense Application ToDOT Standards	α.	1			2								2000	1
2. Propare Modified Standard Duted Sheeks	0	-	-									9 6	00.00	9
3. Susmanter Specifications and Provinces	0		-		2								80.00	
4. Neview and Edit Christial Nove	-	-		1								9	\$0.08	0
S. Prepare Opinien of Construction Cests (90%; Phy-Front and Phol)		-										0	\$0.00	0
C) Prepare Plan Deliveration (60%, Pre-Trail and Final)	0											0	\$9.00	
Prepare Dischool Deliverables (40%, Pre-Post and Final) Mescellaneous Bulletidi		2	-	0	*	+	2		-	a	X	8	16,212.91	
1.19 Charithution, Neotings and tavoicing												1	40.00	
As Prepare and Attend Initial Project Worldtheps	- 1	-		#		100000								1
B) Perfolpate in Coardination Meetings													40.00	
Participate in Monthly Production Coordination Meetings (12 Meetings)	=	J.			-								0000	
Participate in IB-Vineldy Denign Construitors (Meetings (24 Meetings))	±				-								0000	0
Participate in Internal Candentien Meetings (12 Meetings)		,									3	100	\$3.797.07	
Atland Nevland Project Moli-Orf Mestings (3)		0	,							10	90	60	\$6.942.70	9
BL/Weekly Casign Coordination Meetings (5 Additional Meetings)		96	9		22							1	46,424,93	-
Coordination with Segment 2 for Second Plan Set (5 Herstings)		27	-		2							9	\$4.796.DA	
Coordinate with L.A.A. Subcensuliants for Stimulus ESHL, revision		g	10		-									
The second secon														

Exhibit D-1, Fee Schedule

EXHIBIT D-1
Summary of Manhours by Chastillation & Major Task Analysis
Carter & Burgess, Inc.
290E Toll Project - Sogment 81

												E	MARKEN	PRODUCES
all and Residentials										and the	4 to 1 miles	BATE	PATE	MULTIPLER
CONTROL DESCRIPTION	000000	807.00	204.60	354.30	\$14.00	\$38,90	\$30.00	340.00	115.00	BULLIN	201,000	1		
Ladius Rade Park House	201700	20,000						84.10.46	909.00	678.63	847.48	101.60%	N. P. Stephen	2.849
	\$253.79	\$246.25	\$160.41	\$160.41	\$124.03	\$101,48	504.57	\$139,23	3040,03	910.77	400 000	20000	-	
Chestre Mare														
	-	Senior	Sessor	Durstav Driffger	Project	Dosign	Engineering	Engineering	Engineering	CADD	Chefcal		Staff	Plan
And in contrast of the last	Manager	The state of the s	Engineer	Engineer	_	Engment	Intern (121)	Yechnician		-		BEART HE.	COST/ Fash	Sheet
Description of very or seen		-	Access access			£501,4804v	\$84.8794r	\$135,31Hb	Spe.egair	\$78.938H	367,05817	Totale	Totals	Total
	\$255,707W	1240,2344	8100.01H	1								0	\$0.00	0
Continued Besitelian Mastergs (3 Mastergs)							1							

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

certifiate Schedule						4 444 444	0.01.00	Cot 000	0.00	678.00	824.00	RATE	KATE	MULTIPLIER
and Hard Hard	810.00	\$47.50	804.00	\$54.00	844,00	1,00,07	4.04.00	-						1
Located Date	\$253.70	\$245.25	\$180.41	\$330,41	\$124.03	\$301.48	\$94.67	\$195.31	298.00	\$78.93	\$67.03	111,507W	12,00%	4,019
Description of Work or Trak	Prinsiple	Servior Project Manager	Senior Engineer	Serior Bridge Engineer	Project Engineer	Design Engineer	Engineesing Intern (EIT) 184, 67814	Engineering Technician S135.31014	Engineering Technisian 195.56/19	CADD Operator 178,910fe	Admin / Clerical \$67.4509	Staff Hr. Tutah	Starf Coat / Tath Totals	Plan Blant Total
The state of the s	1283,709H	NACL PRINT	3100,41111	10000								U	\$6,00	9
D) Conduct QA/DC Precedures (MBIA, GDN, Pre-Pres) and Fault	2	111						-			111	0	60,00	9
Prepare OA/OC Seamentation (ISNI), 60%, Pre-Finit and Finit)		1			-		Carl Colonia					1990	N36 501 94	0
Construct QAUGC Processivers (50%, Pre-Final and Plent) (Segment 2)	7.0	13	47	-	X		The same					9	80.00	0
El Provien Assistance Dusing Disability Processi							1						80'08	
F) Project Administration, Commiscocheso and Production Naturgement	4	1				-						0	20.00	
Prepare Manthly Progress Reports		-				The passenger	-	-			g.	-	\$2,664,02	a
Invasibility and Progress Reports (July, August 2099)	0				-						-	0	99700	=
Project Accounting			-						0		1	0	\$0.00	0
Cli Aband Pre-Bid Melang	-							-				0	80.00	8
H) Attend Presentivation Meding	- 0			-	-								\$4,130,00	
Danic General Expenses			-							400	10	363	568 525.10	0
Coercination, Meetings and Involving Subtitual	1.0	12	ta e	a	00	0	0	•						
	7.0	260	161	112	603	358	423	132	310	781	48	3900	\$457,249,56	

EXHIBIT D-1 Summary of General Expenses Carter & Burgess, Inc.

290E Toll Project - Segment #1

	Unit	Quantity	Unit Cost	Total Cos
Item Description				
ssic General Expenses		400	\$0.55	\$220.00
I. Travel - Milaage	Miles	400	50,55	3220.00
II. Basic Printing and Reproduction			\$0.10	\$80.00
A. Photo Copies (B/W) (8 1/2" x 11")	EA	800	2.41.71	\$450.00
B. Photo Copies (B/W) (11" x 17")	EA	1,800	\$0.25	\$320.00
C. Photo Copies (B/W) (11" x 17") (From Mylar)	EA	800	\$0.40	
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. Landscape services (Remove and Replace Pavers for Footing Survey)	LS	1	\$2,500,000	\$2,500.0
IV. Landscape services (itemove and itemoses i area is 1999)				receive to
		Total Basic Ge	eneral Expenses	\$4,130.0

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

OH	MARGIN	PROJECT
RATE	RATE	MULTIPLIER

							LANGE.	PSP1150	HIGH IN HILL
Loaded Rate	\$155,00	\$146.00	\$121.75	\$82.75	\$48,70	\$58,40	N/A	N/A	N/A
LUBURA TORRE									
Description of Work or Task	Project Principal \$155,00/Hr	Senior Project Manager \$146.00/Hr	Project Engineer \$121.75/Hr	Gradusto Engineer \$82,75/Hr	Word Processor \$48.70/Hr	Drafting \$58,40/Hr	Staff Hr. Totals	Staff Cost / Tank Totals	Plan Sheet Total
1.04 Geotechnical Investigations					-			\$0,00	0
A) Review Pavement Design Report	-10	10.	(1)	0		- 10		\$0.00	0
B) General Requirements	- U	7:90	0-	. 0	-	- 1		\$0,00	0
C) Bridge Borings (Determine proposed boring locations for structural design)	.0.	- 1	l l	- 0	- 0		-	\$0.00	0
D) Retaining Wall and Sign Borings ((Determine proposed boring locations for structural design)	-0			- 0	- 0	- 0	173	\$17,325.80	0
E) Geotechnical Report (Divide Project into 2 Phases with Separate Deliverables)	- 6	32	40	60	16	.19	1174	\$0.00	0
F) Geotechnical Deliverables	0	0		. ()	.0	0.	- 4	and the second second second	0
Eliminate 6 Borings to 35' at Dritled Pier Walt & Lab Testing								(\$17,984.40) \$12,846.00	0
Additional 6 Borings to 25' for Slope Stability Analysis & Lab Testing						- 10	490		0
Geotechnical Investigations Subtotal:	6	32	40	60	16	19	173	\$12,187.40	
FUGRO SUMMARY		32	40	60	16	19	173	\$12,187.40	0

FUGRO SUMMARY

Fee/Rate Schedule

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

	Unit	Quantity	Unit Cost	Total Cost
Item Description	-			1/
Expenses.				
1. Eliminate 6 Borings to 35' at Drilled Pier Wall & Lab Testing			\$63.09	-\$13,248.90
A. Borings	FT	-210		
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
D. Reisled Engineering Services			Sub-Total	-\$17,984.40
II. Additional 6 Borings to 25' for Slope Stability Analysis & Lab Testing				en 463 EN
A. Borings	FT	150	\$83.09	\$9,463.50
B. Lab Testing	FT	150	\$5.29	\$793.50
C. Related Technical Services	FT	150	\$2.74	\$411.00
	FT	150	\$14.52	\$2,178.00
D. Related Engineering Services			Sub-Total	\$12,846.00
		Total Basic Ge	noral Expenses	-\$5,138.40

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

	1							OH	MARGIN	PROJECT
FoalRate Schodule			\$36.00	820.50	128.52	\$26.00	\$19.50	RATE	RATE	MULTIPLIER
Esting Rate				\$28.00	829.00	\$75,87	956.76		12.00%	
Loaded Rate	\$164,44	\$129.61	\$104.78	\$82.95	362.99	3/3,01	600,00	102.00/9	12.0016	

Description of Work or Task	Senior Project Manager	Senior Engineer	Engineer	Engineering Intern (EIT)	Sr. Engineering Technician	Engineering Technician	Cherical \$56,750-ir	Staff Hr.	Staff Coat / Task Totals	Plan Sheet Total
4500 AA2900 00 00 00 00 00 00 00 00 00 00 00 00	\$184.44/Hr	\$129.\$1/Hr	\$104.78/Hr	\$82.95/Hr	\$02.05/Hr	\$75.67/Hr	\$50.70035	1 Ocars	101816	19981
.10 Drainage Design				_				0	50.00	
A) Review Conceptual Drainage Analyses Report			- 0			- 1		0	\$0.00	-
D) Prepare Drainage Impact Study		. 0	()(()				-	0	\$0.00	
Identity Existing Drainage Outlatts	0.0	0		-				0	50.00	
Delineate Existing Drainage Boundaries	N N	F			- 11			0	\$0.00	
Analyze Existing Storm Drain Systems	7.0	1						0	30,00	
Measure Existing Impervious Cover	-0	10					- 1	0	50.00	
Compute Existing Time of Concentration	100	. 11				11	-	0	\$0.00	
2. Compute Existing Condition Flows		34			.0	- 8	- 0	0	\$0,00	-
3. Identify Proposed Drainage Outlalis	. 0		-0		- 10			0	50.00	
Delineate Proposed Drainage Boundaries	V			-	- 11	- 0.	- 4	0	\$0.00	
Measure Proposed Impervious Cover	0.			10	- 0			-	\$0.00	
Compute Proposed Time of Concentration	100	100						0		_
Analyze Proposed Storm Drain Systems	1		11		- 11	10		0	\$0.00	
Compute Proposed Condition Flows		2.0	. 0	(0)	(1)	JJ.	9.	0	\$0,00	
5. Determine Proposed Hydrologic Impacts	0.	N.	.0.	0	- 1		15	0	80.00	-
Determine Proposed Hydrausic Impacts	0:	14.75	10	11	4	- 0	U	0	\$0,00	
7. Determine Mitigation Alternatives			10.	0.7	.0.0	17	0.00	0	\$0,00	-
8. Preferred Mitigation Design	0.00		.0	90	-0	.0.	- 1	0	\$0,00	-
9. Coordination with GEC, Prime, Agencies (3 Additional Meetings)	12	1	12	1	- 1	- 11	3	27	\$3,400,89	-
10. Report Preparation	J. 11	1	.00	4.0	0.0	. 11	83	0	\$0.00	-
Draft Report (Initial Design Submittal)	(0)			11-	- 0			0	\$0.00	-
Final Report (60% Design Submittal)			11	0	- 4	- 0	11.	0	\$0.00	_
C) Bridge and Culvert Plan Sheets	. 0	.0.	-10	0.		19	41	0	\$0.00	-
Prepare Hydraulic Data / Calculation Sheets	0	196	0	0	10	10	1.0	0	50.00	-
Finalize External Drainage Area Maps	· · · · · · · · · · · · · · · · · · ·		4	U U	-0.	.0	100	0	\$0.00	_
Prepare Culvert Layouts	0	0	-0	0	0.95	.0	0	0	\$0.00	-
4. BCS, Standard & Special Culvert and Headwall/Wingwall Details	2	00	0	6	- 8	8		24	\$2,095,54	-
D) Storm Drain Plan Sheets	- 0	1	4.5	, u	11.	0.00	.0.	0	\$0.00	-
Prepare Storm Drain Computation Sheets	- 94	11.	0.0	- 0	0	- 0	- 1	0	\$0.00	-
2. Finalize External Internal Area Maps	10	9	. 0	. 0	9	- 4		0	\$0.00	-
Prepare Drainage Plan and Profile Sheets (Additional Sheets for 2nd Set/Temp Ties)	4	- 11	4	- 4	12	- 0	1 11	24	\$2,404,08	2
Prepare Drainage Plan and Profile Sheets (Stimulus Project Revision)	- 8	40	40	40	80	40	.0.	248	\$23,667,92	2
Prepare Lateral Profile Sheets	1.0		9	- 0	- 11	- 44		0	\$0,00	-
5. Prepare Ditch Layout Schedule	- 10	10	0.	30	17	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

Francis Colombia								5	MARGIN	- August
	659.50	524 555	836.00	\$28.50	\$28.50	\$20,00	\$19.50	RATE	RATE	MULTIPLIER
Coaded Rate	\$184.44	\$129.51	\$104.78	\$82.95	\$82.95	\$75.67	\$58,75	159.00m	12.00%	2,910
					à					
Description of Work or Task	Senior Project Manager \$164,44/Hz	Engineer \$120,5104r	Engineer \$104.78Mr	Engineering Intern (EIT) \$82.95/Hr	Engineering Technician \$82.95Hr	Engineering Technician \$75,67.Htr	Cherical SS6.76Hr	Staff Hr. Totals	Staff Cost / Task Totals	Sheet
A Standard Miscellandore Drabano Datal Standard & Cuantity Sheets (2nd Set)	2	0	0	12	10	10	a	34	\$2,910,48	
	0	-	7			0,	30	0	\$0.00	
Analose Tamponas Dalata Structura / Diches	-	-	0			0	=	0	\$0,00	
Principle Temporary Community Commun	3	4	0			19	-	0	20.00	
Propose (emperaty charage envisors		-		0	100	100	-	0	50.00	
8. Determine trends Excellent approximation of the second	0	-0.	-	100	0.0	16	77	0	\$0,00	
E) Storm Water Pollution Prevention Plan (SVSP)	0					0.00		0	\$0.00	
1 Presure Erosion and Segiment Control Plans	*	21	111	- II		0	0	0	\$0,00	
Temeurary / Permanent ESC Plans (2 Sets) (First reflected as exist in Second)	2	-	74	0	100	ю		15	\$1,407.21	PM.
Temporary / Permanent ESC Plans (Modify to Include EB ML's in Seg 1)	4	40	30	36	20	22		100	\$11,426,50	2
2. Prepare SW3P Summary / Data Sheets	2	- 00	0	9	-	=		0	90'00	
	0	- 10	- 10	0	.0		0	0	\$0,00	
Prepare Erosion and Sediment Control Details (2nd Set)	2	-	4	9	n.	12	2	R	\$2,319.64	
Prepare Erosion and Sediment Control Details (EBML Included in Sog 1)	84	10	12	27	12	9	0	54	\$5,326.16	
4. Incorporate EPIC Sheet (Provided by GEC)		11		=	e'	0	13	0	80,00	
G) National Flood Insurance Program (NPIP) Coordination	-		1	4	0			0	90,00	
H) Prepare Drainage Defiverables	0.7	=		-	-	-	0.	0	\$0,00	
1. Prepare Hydrologic Report	0.00	-	0	0.0	5	0		0	30,00	
2. Prepare Hydraulic Report	0		à	0.				0	20,00	
Basic General Expenses									00.071	ŀ
Drainage Design Subtotal	100	95	104	123	142	\$	n	570	309,136,98	0
200121110	an an	99	104	123	142	94	n	570	\$55,136,98	0

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

construction and a second construction	Unit	Quantity	Unit Cost	Total Cost
Item Description				
Basic General Expenses			****	\$0.00
I. CADD Time	HR.	0	\$0.00	\$0.00
II. Basic Printing and Reproduction				\$0.00
A. Report Submittals 8.5" x 11"	EA.	0	\$0.10	
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
	EA.	2	\$20.00	\$40.00
III. Overnight Deliveries (FedEx)	Miles	100	\$0.485	\$48.50
IV. Travel - Mileage	1 11000	200		
		Total Basic Ge	neral Expenses	\$178.50

Summary of Manhours by Classification & Major Task Analysis Maldonado-Burkett

290E Toll Project - Segment #1

	1						OH	MARGIN	PROJECT
FeelRate Schedule	\$55.00	\$48.00	\$28,00	\$28,00	\$36,00	\$36.00	RATE	RATE	MULTIPLIER
Billing Rate Loaded Rate	5156,75	\$136.80	379,80	\$79,80	\$102.60	\$102.60	184,46%	12.00%	2,850
Loaded Rate	@ 10-017 H								

Description of Work of Task	Project Manager \$156.75/Hr	Senior Engineer \$138,80/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
.16 Illumination A) Prepare Illumination Layout and Design	. 0	3.0	T ti	0.	0	q	100	\$0,00	
Coordinate Design with Drainage and Signage	N.	0,5		U	- 9	6	6,5	\$684,00	
CONTROL OF THE CONTRO	.0.	0,5	0.	11-	- 0	6	6,5	\$684,00	
Coordinate Design with Guard Rail	- 1	10	10	u .	10	0	6	\$615.60	
Coordinate Design with Structures	- 11	6		100	10	16	24	\$2,736.00	
Additional Plan Sheets for 2 Plan Sets		U	M	0.	10.	10.0	100	\$0,00	
B) Prepare Circuit Layout and Design		4	100	U	0	8	12	\$1,368,00	
Conduit and Conductor Run Tables (2 Sets)	-	10	0	-	0		· ·	\$0.00	
C) Prepare Pole Elevation Sheets	12	4	- 11	0	0	0	16	\$2,428,20	
D) Coordinate with Utility Providers and GEC (3 Additional Meetings)		-	- 0	0	0	0	ti.	\$0,00	n
E) Identify Overhead Utility Conflicts	- 11	4	0'	0	0	8	12	\$1,388.00	
F) Prepare Summary of Illumination Quantities(2nd Set)	- U			0	0	2	4	\$478.80	
Prepare Standard Sheets (2nd Set)	- 0	2	0.	-	-	-	- 7	\$3,762.00	
QA/QC Sheets (2nd Set)	24	.0	0.	- 0	. 0	0.	24	\$627,00	
QA/QC Final Sheets (2nd Set)	4	0.	10	- 0	- 11		4		_
Sign/Seal Final Sheets (2nd Set)	4	4	4	0	- 4		- 4	\$627.00	
Basic General Expenses								\$0,00	-
Illumination Subtotal:	44	23	0	0	0	52	119	\$15,378.60	0
MB SUMMARY	44	23	0	0	.0	52	119	\$15,375,60	164

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

							OH	MARGIN	PROJECT
Fee/Rate Schedule	200 Col	\$52,00	\$46.00	\$29.00	\$28.00	\$23.00	RATE	RATE	MULTIPLIER
Billing Rate	500.00					\$60.27	400 000	3.2 000	3.012
Loaded Rate	\$204.79	\$156.60	\$138,53	\$87,34	\$78.30	\$/39.27	100,89%	12,00%	0.016

Description of Work or Task	Principal \$204.79/Hr	Project Manager \$156,60/Hr	Senior PE \$138,537-tr	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
1.03 Data Collection									
A) Data Collection							0	\$0.00	
Review / Evaluate Existing Data	0.0	30	Ц	(0)	()		Ü	\$0.00	
Review / Evaluate Proposed Data	97	-15		Ü	- 1	1	D	\$0,00	
Review / Evaluate Flood Plain Information	0	TI TI	- 1#/-	0	- 0	U U	0	50.00	
Review / Evaluate Data Provided by GEC	0	- U	4.	- 0	.0		0	\$0,00	
B) Project Site Visits and Field Investigations	Ü.	30	11	(4/)	0.	7.0	0	\$0,00	
Additional Field Visits to verify existing Signs	0	.0	6	8		- 17	14	\$1,529,90	
Data Collection Subtotal	0	0	G	8	0	0	14	\$1,529.90	0
1.13 Signing, Markings and Signalization	.0		12	32	32	0	76	\$6,962.84	
A) ReviewRevise Preliminary Signage Concept (Provided by GEC)	-		14	-	-			\$0.00	
B) Prepare Signing and Pavement Marking Layouts	- 0	0	16	34	32	0	82	\$7,691,64	
Prepare Signing Layout and Design	0	-	40	88	80	0	208	\$19,491,12	
Prepare Sign Detail Sheets	1).	- 0	42	98	24		164	\$16,256,78	
Prepare Layouts and Details for Pavement Markings	- 0	- U		42	128		190	\$16,461.28	
Prepare Pavement Marking Sheets	1	- 2	20	14	22	10.0	43	\$3,915.07	
Prepare Miscellaneous Signing and Pavement Marking Details	- 0	- 1	-	48	4		114	\$13,094,38	
C) Prepare Overhead Sign Structure Layouts and Design	.0	- 0	62	40	- 3		0	\$0.00	
D) Prepare Summary of Overhead Sign Quantities	- 10			0	- 5		10	\$0.00	
E) Prepare Large / Small Sign Summaries		- 1			0	0	().	\$0.00	
F) Prepare Large Sign Structure Details	- 0	- 11	8	19	10	10	37	\$3,550,70	
G) Prepare Summary of Signing and Pavement Marking Quantities	- 0	- 0.2		_	.0		0	\$0.00	
H) Prepare Traffic Signal Warrant Studies	0	0		0	- 3	1	10	50.00	
1) Prepare Traffic Signal Plans	- 0	- 0		0		0	- u	\$0.00	
Prepare Condition Diagram	- 0	0.			0	0	0	\$0.00	
Prepare Signal Plan Sheets		- 0	0			10	10	\$0,00	
Prepare Plan Notes	- 30	0.	- 11	- 0			0	50.00	
Prepare Phase Sequence Diagrams	0.01	9/	- 0	. 9	- 0	_		\$0.00	-
5. Prepare Construction Detail Sheets		0.	- 0	- 0	- 1			\$0,00	1
6. Prepare Marking Details	U	. U	9	T III	U.		1	30,00	

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

Fee/Rate Schedule								
Eiting Rate \$58.00	\$52.00	\$46,00	\$29.00	\$26.00	\$23.00	RATE	RATE	MULTIPLIER
Limiting 1 to the	\$150.00	\$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 \$156.60/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	100	(1)			- 0	\$0.00	
J) Prepare Traffic Signal General Notes and Estimates	V	- 0		0.00				\$0.00	
K) Prepare Temporary Traffic Signal Plan Sheets	- 0		101	ii.	- 10	.0	.0.	\$0.00	
Signing, Markings and Signalization Subtotal:	0	0	207	375	332	0	914	\$87,423,81	o
A) Prepare and Altend Initial Project Workshops	- 0	0	14	ii ii	u u	11	0	\$0.00	
B) Participate in Coordination Meetings				0		10	0	\$0,00	
Participate in Monthly Production Coordination Meetings (X Meetings)	11	.0		0	11	Ψ.	0	\$0.00	
Participate in Bi-Weekly Design Coordination Meetings (X Meetings)	11	0	0	98	-0	0.0	0	\$0.00	
Participate in Internal Coordination Meetings(7 Additional Meetings)	3	30	10	4	16	17	63	\$8,299,83	
C) PS&E Plan Review Coordination (60%, Pre-Final and Final(2nd Set)	8	.16	34	0		D.	58	\$8,853,94	
Comment Response Preparation	0	100		0	0	- (0)	0	\$0.00	
Comment Resolution Meetings	- 0	10	0	0	0	(0	0	\$0,00	
D) Conduct QA/QC Procedures (Initial, 60%, Pre-Final and Final)		- 4	0:	0	U	0	0	\$0.00	
Prepare QA/QC Documentation (Initial, 60%, Pre-Final and Final)	11	0	1);	,U,	The second	(4)	0	\$0.00	
E) Provide Assistance During Bidding Process	100	.0	0.	0	D.	0	0	\$0.00	
F) Project Administration, Correspondence and Production Management	n	U	1)	- (4		U.	0	\$0,00	
Prepare Monthly Progress Reports & Invoices (Feb 09-Oct 09)	9	45	27	0	. 107	18	99	\$13,877.28	
Plans Production	.0	9	(1)	. 0	18	12	39	\$3,650,04	
Project Accounting	-0	0	11.	0	U	Dr.	D	50.00	
Basic General Exponses								\$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

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

Item Description	Unit	Quantity	Unit Cost	Total Cost
Basic General Expenses				
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 Ge	neral Expenses	\$1,338.00

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

Fee/Rate Schedule				ОН	MARGIN	PROJECT
T dell'itte dell'est				RATE	RATE	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	G	72	\$32,000.00	0
SAM SUMMARY	16	50	6	72	\$32,000.00	0

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 Ge	neral Expenses	\$24,790.00