

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

RESOLUTION NO. 06-42

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, in a minute order approved on August 25, 2005, the Texas Transportation Commission authorized the CTRMA to pursue the development of the US 290 East Toll Project (the Project); and

WHEREAS, the General Engineering Consultant retained by the CTRMA (the "GEC") has developed a scope of work and proposed budget for work necessary for the continuation of those professional services and deliverables required to complete the procurement of a development team to enter into a comprehensive development agreement (CDA) with the CTRMA to design and construct the Project; and

WHEREAS, a copy of that proposed scope of work and budget is contained in Work Authorization No. 5.4, attached hereto as Attachment "A"; and


WHEREAS, the CTRMA Board of Directors must approve Work Authorization No. 5.4 before the GEC may proceed with work thereunder; and

WHEREAS, the GEC has represented to the staff of the CTRMA that the work reflected in Work Authorization No. 5.4 and the cost thereof is necessary and appropriate to pursue the development of the Project.

NOW THEREFORE, BE IT RESOLVED, that the CTRMA Board of Directors approves Work Authorization No. 5.4, attached hereto as Attachment "A", provided that any work commenced under Work Authorization No. 5.4 be subject to the Agreement for General Consulting Civil Engineering Services between the CTRMA and the GEC.

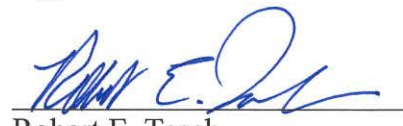
Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 26th day of July, 2006.

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 06-42
Date Passed 07/26/06

ATTACHMENT "A"
To
Resolution No. 06-42
GEC Work Authorization 5.4 for Continuation of Procurement Process
for the US 290 East Toll Project

EXHIBIT B**WORK AUTHORIZATION****Work Authorization No. 5.4**

This Work Authorization is made as of this 26th day of July, 2006, under the terms and conditions established in the AGREEMENT FOR GENERAL CONSULTING ENGINEERING SERVICES, dated as of September 1st, 2003 (the Agreement), between the Central Texas Regional Mobility Authority (Authority) and HNTB Corporation (GEC). The contract award amount of this Work Authorization is **\$2,018,078.00**. This Work Authorization is made for the following purpose, consistent with the services defined in the Agreement:

US 290E CDA Procurement & Technical Services

Section A. - Scope of Services

A.1. GEC shall perform the following Services:

Refer to Attachment A – Scope of Work

A.2. The following Services are not included in this Work Authorization, but shall be provided as Additional Services if authorized or confirmed in writing by the Authority.

Refer to Attachment A – Scope of Work

A.3. In conjunction with the performance of the foregoing Services, GEC shall provide the following submittals/deliverables (Documents) to the Authority:

Refer to Attachment A – Scope of Work

Section B. - Schedule

GEC shall perform the Services and deliver the related Documents (if any) according to the following schedule:

Services under this Work Authorization are expected to be substantially complete within **12 months** from the date this Work Authorization becomes effective. This Work Authorization will not expire until all tasks associated with the Scope of Services are complete.

Section C. - Compensation

C.1. In return for the performance of the foregoing obligations, the Authority shall pay to the GEC the amount not to exceed **\$2,018,078.00** based on Attachment B-Fee Estimate and Attachment C-Fee Schedule. The Authority and the GEC agree that the budget amounts contained in Attachment B-Fee Estimate for the various companies and firms composing the GEC are estimates and that these individual figures may be redistributed and/or adjusted as necessary over the duration of this Work Authorization.

The GEC may alter the compensation distribution between tasks or work assignments to be consistent with the Services actually rendered within the total Work Authorization amount.

The GEC shall not exceed the maximum amount payable without prior written permission by Owner.

Compensation shall be in accordance with the Agreement.

C.2. Compensation for Additional Services (if any) shall be paid by the Authority to the GEC according to the terms of future Work Authorizations.

Section D. - Authority's Responsibilities

The Authority shall perform and/or provide the following in a timely manner so as not to delay the Services of the GEC. Unless otherwise provided in this Work Authorization, the Authority shall bear all costs incident to compliance with the following:

N/A

Section E. - Other Provisions

The parties agree to the following provisions with respect to this specific Work Authorization:

N/A

Except to the extent expressly modified herein, all terms and conditions of the Agreement shall continue in full force and effect.

Authority: Central Texas Regional Mobility Authority

GEC: HNTB Corporation

By: _____

By: _____

Signature: _____

Signature: _____

Title: _____

Title: _____

Date: _____

Date: _____

CENTRAL TEXAS RMA**ATTACHMENT A – SCOPE OF WORK****WORK AUTHORIZATION NO. 5.4****SERVICES TO BE PROVIDED BY THE GENERAL ENGINEERING CONSULTANT (GEC)**

This scope of services includes the provision of professional services and deliverables for various tasks related to the study of tolling projects.

Task 1: CDA Procurement

This scope of work includes the continuation of those professional services and deliverables required to complete the procurement of a development team to enter into a comprehensive development agreement (CDA) with the Central Texas Regional Mobility Authority (CTRMA) to design and construct the US 290E Toll Project (the Project). The selected development team should consist of participating firms whose abilities, professional skills, and experience qualify them to design and construct the Project for the CTRMA. Only one development team will be selected to enter into the CDA for the Project.

In summary, this scope will entail those services required to assist the CTRMA in: the preparation & issuance of a Request of Detailed Proposals (RFDP); the issuance of clarification and addenda; the attendance at meetings; the receipt and assessment of submitted Detailed Proposals; and the presentation of final recommendations.

RFDP Phase

- ▣ Working jointly and cooperatively with the CTRMA, compile industry review comments and meeting documentation. The GEC will prepare correspondence for execution by the CTRMA distributing the Final RFDP to shortlisted proposers.
- ▣ Plan, organize, and administer a series of workshops to be attended by CTRMA staff, legal counsel, financial advisers, GEC staff, and shortlisted respondents. These workshops will be held to allow shortlisted proposers the opportunity to ask questions / request clarifications on the Final RFDP; it will also provide the shortlisted proposers the opportunity to solicit preliminary feedback regarding potential Alternative Technical Concepts they intend to include in their Technical Proposals. The GEC will solicit information from the shortlisted proposers such that agendas and related documents / exhibits can be prepared and distributed prior to the workshops; minutes of all workshops will also be prepared by the GEC. The GEC will evaluate questions (oral and written) posed at the workshops (and submitted later in writing) and draft answers for consideration by the CTRMA. Upon receipt of CTRMA approval, the GEC will assemble and distribute CTRMA answers to questions.

- Prepare and issue all addenda to the Final RFDP, if required, suggested by meetings, discussions, workshops, questions posed by potential respondents, and clarifications suggested and / or approved by the CTRMA; addenda will also include status updates on Reference Documents originally included in the RFDP, if required.
- Working with the CTRMA staff and counselors, develop a detailed and thorough two (2) part procedure and methodology for evaluating the Proposals to be submitted by the shortlisted proposers, as follows:
 - Initial Proposals, which include conceptual information pertaining to Alternate Technical Concepts (ATCs) will be evaluated. The evaluation procedure and methodology for the Initial Proposals will include a detailed review by a Technical Subcommittee approved by the CTRMA; this review will be completed such that recommendations of “Accepted”, “Conditionally Approved” or “Rejected” will be made for each component of the Initial Proposal.
 - Technical Proposals, which include detailed information pertaining to the development of the minimum interim build scenario of the Project as defined in the Final RFDP, innovative financing plans, opening schedule, and overall approach to the project will be evaluated. The evaluation procedure and methodology for the Technical Proposals will utilize the “Best Value Concept” process and will include detailed reviews by a series of specialized Technical Subcommittees approved by the CTRMA. The findings of each Technical Subcommittees’ review will be documented for presentation to the Detailed Proposal Evaluation Committee (appointed by the CTRMA) such that an objective evaluation process can be completed by each Committee member for each proposal. Upon completion of the individual Committee member evaluation / scoring, an average of all scores will be prepared for each Proposal.

Upon receipt of CTRMA approval on the evaluation procedures and methodologies, a workshop will be held to convey this information to the Detailed Proposal Evaluation Committee appointed by the CTRMA.

- Develop a secure system for receiving, handling, distributing, tracking, storing, and dating all documents, correspondence, facsimile transmissions, and other telecommunications after the date of acceptance of the Final RFDP. Search and locate a secure site acceptable to the CTRMA to store all documents and correspondence received and created on and after the date of receipt of the Final RFDP. With the assistance of the CTRMA staff, create and maintain a list of parties who have been authorized access to the secured data by the CTRMA staff. Create a controlled system in which the evaluators must check out, check in, and be recorded as holding the secured data.
- Perform detailed reviews of Alternative Technical Concepts (ATCs) submitted by the shortlisted proposers. These ATCs will include proposed changes to the minimum project requirements set forth in the Final RFDP. The GEC will establish an ATC Review Core Team composed of senior level staff to lead the review of these Concepts. Upon completion of the GEC review, recommendations will be made to the CTRMA

regarding which ATCs should be accepted, conditionally approved, or rejected. Upon acceptance of the GEC's recommendations by the CTRMA, the GEC will assist the CTRMA in obtaining necessary agency approvals, including Texas Department of Transportation (TxDOT) and Federal Highway Administration (FHWA), if required. The GEC will attend meetings with the CTRMA to present and discuss the selected ATCs with TxDOT and FHWA; written comments will be formally requested from both agencies.

- Prepare correspondence for execution by the CTRMA transmitting the findings of the CTRMA's evaluation of the Initial Proposals (as defined in Tasks 2.7 and 2.8). This correspondence will be utilized by the shortlisted proposers during their preparation of their Technical Proposals.
- Receive and commence detailed reviews of the Technical Proposals submitted by the shortlisted proposers, which include detailed information pertaining to the development of the minimum interim build scenario of the Project as defined in the Final RFDP, innovative financing plans, opening schedule, and overall approach to the project; review of the associated price proposals submitted by the shortlisted proposers defining their maximum price for the aforementioned minimum interim build scenario of the Project will also be reviewed. The GEC will establish a series of specialized Technical Subcommittees approved by the CTRMA to evaluate the thoroughness and quality of the Technical Proposal responses to each inquiry item contained in the Final RFDP utilizing the evaluation procedures and formulae adopted by the CTRMA. There may be other unsolicited technical, contractual or financial proposals in addition to the base guidelines provided by the CTRMA in the Final RFDP; such alternate responses also shall be evaluated and reported by the GEC. The GEC will prepare documentation of the findings resulting from the Technical Subcommittee evaluations; meetings with CTRMA staff, legal counsel, and financial advisors will also be held to discuss same.
- Assist the CTRMA in the identification and selection of the "Best Value" Proposal. An evaluation outline will be prepared which documents the procedure followed during the evaluation of the Proposals, indicating what measurable developer performance categories were identified and individually analyzed. Using the outline, a detailed summary report of the review and analysis process followed by the GEC will be prepared, describing how the evaluators used the analytical work performed by the GEC to rank the responses in a best value order.
- Serve as a resource participant with the evaluators and the CTRMA staff in delivering final reports and recommendations for best value developer selections and designations to the Committee and to the Board. GEC will also prepare final reports summarizing the deliberations, actions, and recommendations of the Committee and the Board relative to the review and consideration of the Proposals and their final selection and designation of the developer for the Project based on the "Best Value" evaluations.

Post RFDP Phase

- ▣ Assist CTRMA in identifying Proposer commitments and negotiating the final agreement language.
- ▣ Assist CTRMA in reviewing insurance and bond documents for inclusion in the conformed CDA.
- ▣ Assist CTRMA in preparing the final conformed CDA document for execution.
- ▣ Conduct debriefings on behalf of the CTRMA, under the guidance of general counsel of the CTRMA, for respondents to the RFDP that were not selected to enter CDA with the CTRMA.
- ▣ Final filing and documentation.

Task 2: Pavement Design

The project will involve the reconstruction of US 290E from East of US 183 to East of Parmer Road. The pavement reconstruction will include main lanes, ramps, and frontage roads. All pavement designs will be prepared to TxDOT Pavement Design Report standards. The purpose of this investigation is to provide pavement cross section designs for inclusion in the Request for Detailed Proposals to be distributed to the short listed developers for the Comprehensive Development Agreement (CDA). Proposed pavement section cross sections and pavement thickness designs will be based on traffic data provided by URS according to the TxDOT Traffic Analysis Report for pavement design from Transportation Planning and Programming Division (TP&P).

Rigid Portland cement concrete pavements will be designed using the AASHTO Design and Rehabilitation for Windows program, DARWIN. Flexible hot mix asphalt concrete pavements will be designed using the TxDOT Flexible Pavement Design System for Windows program, FPS19W. A pavement design report for all identified sections will be prepared and submitted to TxDOT for review.

Review Current Conceptual Design:

- ▣ Hold kickoff meeting TxDOT Austin District staff.
- ▣ Review current design concept including preliminary planned pavement cross-section materials & thickness.
- ▣ Identify possible different pavement design section limits based on traffic levels, soil conditions, and construction phasing (to be provided by others).
- ▣ Develop a pavement type alternative matrix for analysis and discuss with TxDOT.

Develop Design Inputs For New Pavement Design Based on Geotechnical Investigations by others

- ▣ Identify final pavement design section limits (based on traffic levels, soil conditions, and construction phasing)
- ▣ Estimate modulus values for design (subgrade and new pavement layers)
- ▣ Define current design constraints and performance requirements

Develop New Pavement Designs using FPS 19W or DARWIN

- ▣ Identify new pavement design section limits (based on subgrade support, traffic level, and alternative materials)
- ▣ Design up to 16 new pavement cross sections using AASHTO and/or TxDOT design methods and provisional traffic data. These sixteen (16) alternatives are summarized as follows:
 - Main Lanes – Assume two (2) different cross sections are needed due to a change in traffic level or soil conditions and that the cross sections are Rigid pavement on non-erodable base, either cement treated base or hot mix asphalt base. This is a total of four (4) cross section alternatives to analyze.
 - Frontage Roads – Assume two (2) different cross sections are needed due to a change in traffic level or soil conditions and that the cross sections at the intersections are Rigid pavement on non-erodable base, either cement treated base or hot mix asphalt base and that the cross sections on tangents between intersections are Flexible pavement on either hot mix asphalt concrete base or flexible base. This is a total of eight (8) cross section alternatives to analyze.
 - Ramps – Assume two (2) different cross sections are needed due to a change in traffic level or soil conditions and that the cross sections are Rigid pavement on non-erodable base, either cement treated base or hot mix asphalt base. This is a total of four (4) cross section alternatives to analyze.
 - Design one (1) overlay and maintenance strategy for each of the six (6) design cross sections to achieve the desired ultimate life as specified by the Comprehensive Development Agreement (CDA)

Prepare Report

- ▣ Prepare draft TxDOT pavement design report summarizing new pavement designs.
- ▣ Provide table of cross section thicknesses for main lanes, frontage roads, and ramps.
- ▣ Provide table of final design assumptions including required material strengths and the correlated TxDOT design specification, with notes about material types to provide the assumed design strengths

- ▣ Update and Prepare Final TxDOT Pavement Design Report based on TxDOT / CTRMA comments and final pavement designs

Assumptions

- ▣ TxDOT will provide GEC with preliminary planned cross section information from TxDOT records, requested TxDOT traffic data projections, copies of previous geotechnical reports and any available materials testing reports.
- ▣ No pavement life cycle cost analysis is included in this scope of work.
- ▣ TxDOT will advise GEC of any changes in the future roadway improvements related to major fills or cuts, which would affect the pavement subgrade design parameter.
- ▣ GEC is not planning to obtain any FWD non-destructive testing. Such testing would be additional scope. FWD testing and analysis can be added to the project scope if in the future if cross sections of the existing US 290E needed to be evaluated for incorporation into the design. Under that scenario the existing cross section and be tested with FWD and the remaining life estimated. For example, this would apply if the existing west bound main lanes of US 290E would become the new west bound frontage road lanes of the final reconstructed US 290E.
- ▣ Scope does not include steel reinforcement design.
- ▣ Changes in provided traffic projections will require additional services to re-run pavement thickness designs.

Task 3: Project Development Support

The Consultant will provide continued support to the CTRMA as required during the project development process. Specific efforts will include:

- ▣ TIFIA Loan Application: Assist the CTRMA in the development of the TIFIA loan application for the project. This will include preparation of various elements of the TIFIA loan form & associated documentation; will also include participation in the coordination efforts as directed by the CTRMA.
- ▣ Engineering and Technical Support: Provide various engineering and technical tasks as requested by CTRMA including but not limited to: horizontal and vertical alignment refinements, environmental efforts, reports and research, presentations and meetings.
- ▣ TxDOT Coordination: Provide appropriate staff as part of the continued coordination efforts between the CTRMA and TxDOT. Consultant will provide coordination efforts on the CTRMA's behalf at the direction of the CTRMA.
- ▣ T&R Consultant Coordination: Provide continued coordination & support of the CTRMA T&R Consultant as directed by the CTRMA.

- ▣ Project Development Agreement (PDA): Continue to assist in the development of the PDA, generation of PDA exhibits, review of PDA drafts, and TxDOT coordination support.
- ▣ Project Cost Estimate, schedule, update financial feasibility calculations & provide Official Statement Support: Perform updates to preliminary cost estimate, schedule, and financial analysis necessitated by the ongoing project scoping / sizing process. Develop and certify the engineers report for OS. Review and comment on the OS as requested by CTRMA.
- ▣ Provide DBE outreach and Public Involvement support as requested by CTRMA.

Task 4: Utility Coordination

Continue planning and coordination efforts associated with relocation of utilities on the project. This will include:

- ▣ Attending meetings and coordinating with TxDOT representatives
- ▣ Reviewing Level B SUE information provided by TxDOT
- ▣ Meeting with Utility Owners
- ▣ Update utility relocation cost estimate based on Level B SUE information
- ▣ Develop master list of utilities based on Level B SUE information
- ▣ Attend One –on –one meetings with Developers
- ▣ Prepare for and conduct Utility Workshop for all Developers
- ▣ Review and Evaluate Project Proposals

Task 5: Traffic Analysis

The GEC will provide a traffic analysis for inclusion in the Project RFDP which will provide the appropriate number of lanes and lane configuration for the Project. The analysis and report will indicate the following:

- ▣ Signal Warrants at all signal locations based on opening year volumes
- ▣ Ultimate and interim intersection configuration including number and length of storage bays
- ▣ Ultimate and Interim number of lanes on the mainlanes including aux lanes and merge/diverge lanes

- ▣ Ultimate and Interim number of lanes on the frontage roads including aux lanes and merge/ diverge lanes

The following tasks will support this effort:

- ▣ Review Toll Traffic Forecasts for US 290 East: Review daily toll forecasts from URS Investment Grade T&R study, available traffic counts and forecasts from other sources, and develop traffic flow diagrams to assess differences among data from different sources.
- ▣ Conduct Forecast Validation Checks and Adjust for Concept Refinements: Apply rational adjustments to daily traffic forecasts derived for financial analysis (T&R) for use in project design. Conduct validation of forecasts against available traffic counts and other available project forecasts based on comparison data from Task 3.1. Adjust traffic patterns to match any recent changes in the project concept plan.
- ▣ Development of Design Year AM and PM Turning Movement Volumes: Based on information collected, develop design year AM and PM peak hour traffic forecasts for the years 2010 and 2030 based on the adopted project concept plan. Document design hour forecasts on conceptual diagrams of the project. Coordinate with TxDOT Transportation Planning & Programming Division (TPP) regarding project forecast refinement efforts and necessary forecast approvals.
- ▣ Intersection Operations Analysis and Optimization: The Consultant will apply traffic signal timing and optimization software to develop optimal traffic signal timing plans, specify turn lane use assignments at signalized intersections, and develop intersection design recommendations for the highway design team. Specific efforts will include:
 - Conduct Signal Warrant Analysis: Based MUTCD guidelines, signal warrants will be developed for all intersections on the project using opening day volumes.
 - Code Roadway Network and Signal Timing: Code roadway network consisting of frontage roads, cross roads, slip ramp terminals and significant minor streets and driveways that intersect with frontage roads and crossroads using the SYNCHRO traffic signal analysis and timing optimization software. Add traffic signals and traffic control devices to at-grade intersections.
 - Code AM and PM Design Hour Traffic Forecasts: Code AM and PM peak hour traffic forecast for years 2010 and 2030 into copies of the SYNCHRO roadway network from Task 4.1. Modify traffic signal timing to optimize operations for each traffic forecast pattern.
 - Evaluate and Optimize Intersection Geometry: Evaluate and document turn lane assignments and intersection geometric improvement requirements for both 2010 and 2030 conditions. Identify geometric deficiencies that may require a change in the intersection design for each year. Document findings and design recommendations including intersection lane assignments for pavement marking design, and turn bay storage length requirements to provide acceptable operations under tolled traffic conditions.
 - Develop Optimized AM and PM Peak Hour Signal Timing: Develop opening and horizon year traffic signal phasing, timing and coordination plans for AM and PM

- peak conditions. Recommend optimal off peak timing plan to minimize delay under lower traffic flows.
- Summarize and Document AM & PM Peak Hour Intersection Level of Service: Summarize intersection performance measures and level of service from the SYNCHRO software analysis results for inclusion in the study report. Document key findings and recommendations.
- Freeway & Frontage Road Systems Operations Analysis: The Consultant will evaluate lane capacity and configuration on mainlanes, ramps, and frontage roads using highway capacity manual criteria. Recommendations on required number of interim and ultimate lanes, auxiliary lanes, and merge and diverge areas will be presented. In addition to HCM capacity analysis the Consultant will develop a traffic operations simulation model of the project and significant connecting roadways to assess the operations of both highway and urban street elements of the project, and apply the model to evaluate the performance of the project as a whole. The consultant will prepare videos of animated traffic simulation model runs to demonstrate project performance at stakeholder meetings. Specific efforts will include:
- Code Roadway Network Geometry and Traffic Signals: Code roadway geometry and basic traffic control characteristics into the VISSIM traffic simulation model.
 - Develop Design Year AM and PM Peak Hour Traffic Simulation Models: Code AM and PM peak hour traffic forecasts for year 2010 and 2030 conditions into copies of the VISSIM model for the project. Import or code optimized traffic signal timing and coordination from the SYNCRHO software into the VISSIM model. Refine and validate simulation model control parameters to ensure realistic traffic flow performance. Evaluate peak hour performance of the highway elements of the project (main lanes, ramp junctions, weaving areas, ramp roadways, direct-connect ramps). Test and document recommended design enhancements to address noted operational issues on the highway elements of the project.
 - Conduct Traffic Operations Analysis, MOE Estimation and Animation: Generate and summarize traffic operations performance measures from VISSIM simulation model runs. Estimate and document level of service of project roadway elements for the study report. Develop video files of animated traffic simulation activity for use in stakeholder meetings to discuss performance issues and/or demonstrate the projected performance of the project concept.
- Report Preparation: The Consultant will develop a draft report summarizing the results of the traffic forecasting and analysis tasks conducted for the study, and address comments to finalize the report for delivery to CTRMA. Reports will be delivered in both hard copy and electronic formats. Specific efforts will include:
- Create Draft Report: Assemble traffic forecasts, performance measures, level of service, and design recommendations into a report outline. Develop a concise discussion of the study efforts and results. Conduct quality assurance review of draft document and publish for delivery to CTRMA & TxDOT.

- Refine Traffic Analysis Results: Refine traffic forecasts and/or analysis results based on CTRMA & TxDOT comments regarding the analysis and recommendations from the draft report.
- Revise Draft Report into Final Report: Address comments from project stakeholders. Finalize changes to draft. Conduct final quality assurance review and publish for delivery to CTRMA and inclusion in the RFDP documents.

Attachment B - Fee Estimate

290 East Toll Project		CTRMA
HNTB Corporation - Fee Summary- WA 5.4		
DRAFT		
Summary		
Task 1 - CDA Procurement		\$ 1,310,766
Task 2 - Pavement Design		\$ 52,877
Task 3 - Project Development Support		\$ 407,427
Task 4 - Utility Coordination		\$ 99,377
Task 5 - Traffic Analysis & Simulation		\$ 147,631
		\$ 2,018,078

Attachment B - Fee Estimate

CTRMA

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Task 1 - CDA Procurement

TASK / WORK DESCRIPTION	MAN-HOURS						TOTAL
	A	B	C	D	E	F	
Industry review RFDP Phase							
Industry Review RFDP							
Compile Industry Review RFDP			40	80			120
Transmit Industry Review RFDP			8				8
Receive / review Industry Review Comments			80	80			160
Industry Review Meetings (1 per proposer; 3 total)							
Meeting Preparations	8	8	40				56
Meeting Participation	24	12	24				60
Meeting Documentation	12	12	40				64
Incorporate Comments from Industry Review			80	80			160
TxDOT & FHWA Approval Process							
Agency Review Meetings (1 per Agency; 2 total)							
Meeting Preparations	24						24
Meeting Participation	16						16
Meeting Documentation	16						16
Incorporate Comments from Agency Review	8		40				48
RFDP Phase							
Compile Final RFDP	8		80	40			128
Develop Secure Document Storage / Handling System	4	4	80				88
RFDP Workshops (3 workshops)							
Meeting Preparations	8	8	40	40			96
Meeting Participation	24	24	48	40			136
Meeting Documentation		8	24				32
Follow-up Documentation		8	24				32
Responses to questions/ Clarifications							
Assemble Questions	20	100	100				220
Formulate response	40	80	80	20			220
Transmit response			16				16
One on ones (3 per proposer; 9 total)							
Meeting Participation	2	8	2				12
Attendance	80	120	40				240
Follow-up documentation		9	9				18
RFDP Addenda (Assume 2 total)							
Preparation of Addenda	40	40	200	120			400
Issuance of Addenda		4	28	60			92
Develop Evaluation Procedure / Methodology							
ATC/VAC Evaluation Manual	20	20	20				60
Technical Proposal Evaluation Manual	20	20	20				60

Attachment B - Fee Estimate

CTRMA

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Task 1 - CDA Procurement	MAN-HOURS						TOTAL
	A	B	C	D	E	F	
TASK / WORK DESCRIPTION							
Value Added Concept Reviews	40	200	200	120			560
Alternative Technical Concepts (ATCs) Review	120	400	200	200			920
Issuance of Comments On ATC and VAC review	24	24	80	80			208
Technical Proposal Evaluation	160	1200	1000	600			2960
Final Meetings / Deliberations	80	80	80				240
Assist in "Best Value" Selection	80	24	8				112
Assist in Recommendation to CTRMA Board	80	24	8				112
Post RFDP Phase							
Conforming/ final Negotiations	80	40					120
Insurance and Bond reviews	40	40					80
Conduct Debriefings of Non-Selected Proposers	16	16					32
Filing and documentation	16	80					96
General Admin	8	48		100	240		396
TOTAL HNTB DIRECT LABOR	1118	2661	2739	1660	240	0	8418
<i>% Total by Classification</i>	13.28%	31.61%	32.54%	19.72%	2.85%	0.00%	
Total Loaded Labor	\$ 227,049	\$ 463,209	\$ 397,322	\$ 173,377	\$ 20,889	\$ -	\$1,281,846
Direct Expenses							
Plotting and Reproduction	\$ 7,200						
Mail and Deliveries	\$ 2,720						
misc expenses/ office space	\$ 4,000						
Travel and Field Expenses	\$ 15,000						
Total Direct Expenses	\$ 28,920						
Task 1 - CDA Procurement	Total \$			1,310,766			

Attachment B - Fee Estimate

CTRMA

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Task 2 - Pavement Design

TASK / WORK DESCRIPTION	MAN-HOURS						TOTAL
	A	B	C	D	E	F	
Pavement Design							
1 Review/ Identify Pavement limits/ sections	6	2	8				16
2 Develop design Inputs	4	2	8	8			22
3 FPS 19W or Darwin Pavement Design		2	40	80	60		182
4 Report Preparation			10	20	60		90
5 Meetings and Coordination/ Admin	8	8	12			10	38

TOTAL HNTB DIRECT LABOR	18	14	78	108	120	10	348
<i>% Total by Classification</i>	5.17%	4.02%	22.41%	31.03%	34.48%	2.87%	
Labor Costs	\$ 1,260	\$ 840	\$ 3,900	\$ 3,888	\$ 3,600	\$ 200	\$ 13,688
Overhead Costs	1.5228 \$ 1,919	\$ 1,279	\$ 5,939	\$ 5,921	\$ 5,482	\$ 305	\$ 20,844
Profit	15.0% \$ 477	\$ 318	\$ 1,476	\$ 1,471	\$ 1,362	\$ 76	\$ 5,180
Total Loaded Labor	\$ 3,656	\$ 2,437	\$ 11,315	\$ 11,280	\$ 10,445	\$ 580	\$39,712

Direct Expenses

Sulfate Test (7@\$25)	\$ 175
Chloride Test(7@\$25)	\$ 175
pH Test (7@\$25)	\$ 175
Texas Triaxial (5 @ \$2400)	\$ 12,000
Plotting and Reproduction	\$ 300
Mail and Deliveries	\$ 40
Travel and Field Expenses	\$ 300
Total Direct Expenses	\$ 13,165

Pavement Design Total \$ 52,877

Attachment B - Fee Estimate

CTRMA

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Task 3 - Project Development Support

TASK / WORK DESCRIPTION	MAN-HOURS						TOTAL
	A	B	C	D	E	F	
TIFIA APPLICATION							
Draft application							
Compile Data	20	40	20	80	20	8	188
Develop Exhibits					40		40
2 Meetings with FHWA	8	8		8			24
Finalize Application							
Incorporate Comments from Agency Review	8	8	20	20	10	5	71
Incorporate EA		2			4		6
Incorporate T&R		2			4		6
2 Meetings with FHWA	8	8		8			24
Engineering and Technical Support							
Engineering and Technical Support	60	100	300	200	60		720
Misc Coordination							
TxDOT meetings and Coordination	80	80					160
T&R Consultant Coordination	8	40		40			88
Project Development Agreement	16	16			40		72
Cost Estimates and Bond Sale Support							
Cost Estimates and Schedule updates	16	40	80	160			296
Misc Financial Analysis for alternative Phase II options	80	90	120			20	310
Financial Analysis Updates	16	40	40	80			176
Engineering report for POS	16	80	80	100			276
Public Involvement/ DBE outreach							
Public Involvement/ DBE outreach	40	40	140	140		12	372
<hr/>							
TOTAL HNTB DIRECT LABOR	376	594	800	836	178	45	2829
<i>% Total by Classification</i>	13.29%	21.00%	28.28%	29.55%	6.29%	1.59%	
Total Loaded Labor	\$ 76,360	\$ 103,399	\$ 116,049	\$ 87,315	\$ 15,493	\$ 2,611	\$401,227
<hr/>							
Direct Expenses							
Plotting and Reproduction	\$	4,000					
Mail and Deliveries	\$	200					
Travel and Field Expenses	\$	2,000					
Total Direct Expenses	\$	6,200					
Task 3 - Project Development Support	Total \$	407,427					

Attachment B - Fee Estimate

CTRMA

DRAFT

Task 4 - Utility Coordination

TASK / WORK DESCRIPTION	MAN-HOURS						TOTAL
	A	B	C	D	E	F	
Utility Coordination							
1 Meetings with TxDOT	8			80			88
2 Review of SUE	2			140			142
3 Meetings with Utility Owners	8	16		80			104
4 Detailed Cost Estimates	8	40		260			308
5 Attend One on One meetings				40			40
6 Prepare for / Conduct Workshop				20			20
7 Review / Evaluate Proposals				40			40
8 Meeting minutes, records, admin,	2			60	40	60	162
<hr/>							
TOTAL HNTB DIRECT LABOR	28	56	0	720	40	60	904
<i>% Total by Classification</i>	3.10%	6.19%	0.00%	79.65%	4.42%	6.64%	
Total Loaded Labor	\$ 5,686	\$ 9,748	\$ -	\$ 75,200	\$ 3,482	\$ 3,482	\$97,597

Direct Expenses

Plotting and Reproduction	\$ 200
Mail and Deliveries	\$ 80
Travel and Field Expenses	\$ 1,500
Total Direct Expenses	\$ 1,780

Task 4 - Utility Coordination Total \$ 99,377

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Task 5 - Traffic Analysis & Simulation

MAN-HOURS

TASK / WORK DESCRIPTION

	A	B	C	D	E	F	TOTAL
Traffic Analysis & simulation							
Review URS volumes		8	16	16			40
Develop Peak Hour volumes/ Turning Movements	2		16	16	70		104
Signal Warrant	1	8	16	40	40		105
Intersection Model and optimization	8	10	16	20	150		204
Mainlane / Ramp / Fr RD LOS	2		16	40	40		98
Simulations using VISSIM	2	8	50	80	350		490
Produce Report	8	20	50	8	40		126
Meetings, Admin	16	70	16	16	16	32	166
TOTAL HNTB DIRECT LABOR	39	124	196	236	706	32	1333
<i>% Total by Classification</i>	2.93%	9.30%	14.70%	17.70%	52.96%	2.40%	
Total Loaded Labor	\$ 7,920	\$ 21,585	\$ 28,432	\$ 24,649	\$ 61,448	\$ 1,857	\$145,891

Direct Expenses

Plotting and Reproduction	\$ 1,000
Mail and Deliveries	\$ 40
Travel and Field Expenses	\$ 700
Total Direct Expenses	\$ 1,740

Task 5 - Traffic Analysis & Simulation **Total \$ 147,631**