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

RESOLUTION NO. 03-59

WHEREAS, the Central Texas Regional Mobility Authority ("CTRMA") is pursuing the development of the US 183-A turnpike project; and

WHEREAS, the CTRMA has approved work authorizations for its General Engineering Consultant ("GEC") to pursue work necessary for the development of US 183-A; and

WHEREAS, the CTRMA has received an unsolicited proposal for the development of US 183-A through a comprehensive development agreement and has authorized the issuance of a request for competing qualifications ("RFCQ"); and

WHEREAS, the GEC has presented US 183-A Work Authorization No. 3.4 (copy attached as Exhibit A) which covers additional work necessary for US 183-A as well as work related to the issuance of a RFCQ in connection with the unsolicited proposal; and

WHEREAS, the CTRMA Board of Directors must approve US 183-A Work Authorization No. 3.4 before the GEC may proceed with work thereunder; and

WHEREAS, the GEC has represented to the Board of Directors that the work reflected in US 183-A Work Authorization No. 3.4 is necessary and appropriate to pursue the development of US 183-A and the RFCQ.

NOW THEREFORE, BE IT RESOLVED, that the Board of Directors approves US 183-A Work Authorization No. 3.4 in the form attached as Exhibit A, provided that (a) no work may be undertaken that is not within the scope of what TxDOT approves as being reimbursable under the previously awarded toll-equity funds for US 183-A; and (b) any work commenced under US 183-A Work Authorization No. 3.4 be subject to the contract to be executed by the CTRMA and the GEC.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 5th day of November, 2003.

Submitted and reviewed by:

C. Brian Cassidy
General Counsel for the Central
Texas Regional Mobility Authority

Approved:

Robert E. Tesch
Chairman, Board of Directors
Resolution Number 03-59
Date Passed 11/05/03

EXHIBIT B

WORK AUTHORIZATION

Work Authorization No. 3.4

This Work Authorization is made as of this 5th day of November, 2003, 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). This Work Authorization is made for the following purpose, consistent with the services defined in the Agreement:

Technical Services for US 183A

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.

N/A

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 shall be complete within 12 months from the date this Work Authorization becomes effective.

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 $3,488,862, based on Attachment B -Fee Estimate. 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. 3.4

SERVICES TO BE PROVIDED BY THE GENERAL ENGINEERING CONSULTANT (GEC) - PART A (PROCURMENT) AND PART B (TECHNICAL)

PART A - US 183A Procurement Management Services

This scope of services includes the providing of those professional services and deliverables required to plan for and prepare a request for competitive qualifications from consortia aspiring to enter into comprehensive development agreements (CDA) with the Central Texas Regional Mobility Authority (CTRMA) to develop and potentially operate US 183A. Such consortia should consist of participating firms whose abilities, professional skills, and experience qualify them to develop and potentially operate US 183A for the CTRMA. One consortium will be selected.

US 183A is planned to be a new tollway from SH 45 at US183 to a connection with US 183, north of Leander, a distance of approximately 11 miles.

CTRMA's US 183A will hereinafter be collectively referred to as the "US 183A". The firm with which the CTRMA contracts for providing procurement management services (PMS) hereinafter will be referred to as the General Engineering Consultant (GEC).

All documents, records of meetings, faxes, e-mail and correspondence are subject to review, editing, and approval by appropriate staff of the GEC. The GEC shall provide a scribe to record proceedings of meetings, interviews, workshops, discussions, and evaluations of responses among the respondents. The CTRMA may on occasion choose to retain a court reporter and authorize transcripts.

The GEC engaged by the CTRMA will not be eligible to participate with any team responding to any Requests for Competing Qualifications (RFCQ) or Requests for Detail Proposals (RFDP) requested for the US 183A during the term of the agreement between the GEC and the CTRMA.

The PMS includes the following:

1.0 REQUEST FOR COMPETING QUALIFICATIONS (RFCQ) SERVICES

1.1. Working jointly with CTRMA General Counsel and Financial Advisors, the GEC will develop a RFCQ for US 183A, post the RFCQ as required by CTRMA rules, and provide responses to questions/modifications as may be required during the process. RFCQ provisions shall include at a minimum:

- General Understanding of the Project
- Scope of Services to be requested
- Developer Team and Personnel requirements
- Financial statements and requirements
- Bonding and Insurance information
- General Disclosures

1.2. Divide responses to the RFCQ for the US 183A into the several qualifying/measurable components as posed in the RFCQ. Evaluate the measurable qualifications of each component utilizing the evaluation procedures and formulae provided by the GEC or CTRMA approved modifications thereto as might be suggested by the GEC. Provide summaries of strengths and weaknesses of all respondents for each component. Participate in meetings with CTRMA staff to discuss evaluations of RFCQ and to explain the positions and reasonings of the GEC applicable to each component.

1.3. Prepare and distribute agenda for oral presentations/briefings/discussions (the "orals") by and with the respondents if requested by the CTRMA. Prepare questions to be asked by the CTRMA at the orals. Assist and advise the CTRMA in planning and managing the orals. Assist the CTRMA in answering questions at the orals. Prepare written answers to respondent questions posed at the orals for consideration by the CTRMA.

1.4. Participate with the CTRMA in discussions and reviews of the respondents' comments and answers to CTRMA questions post orals. Prepare final written synopses of those responses in a style and format suitable for review and evaluation by the CTRMA Staff Selection Committee (the "Committee") (the Committee may be composed of CTRMA staff members and non-voting representatives of the GEC and other CTRMA advisors and consultants). Document for the record the review and short list selection procedure followed.

1.5. Assist the CTRMA staff in preparing for and presenting the recommendations of the Committee to the CTRMA Board of Directors (the "Board"). Prepare and organize all documents, exhibits, and visual aids helpful to the comprehension and supportive of the presentation to the Board.

1.6. Prepare, submit for review by the CTRMA, and implement for the CTRMA a document classification and identification system, a document distribution policy with recorded verification of receipt, and a permanent document filing system, both hard copy and computerized. Review all documents circulated prior to the execution of the agreement for PMS and tailor those documents to fit the document handling/filing systems adopted under the PMS.

1.7. Prepare correspondence for consideration of execution by the CTRMA.

PART B - US 183A Technical Development Services

The scope of services for this work authorization shall include engineering services for technical development of US 183A from near SH 45 North (RM620) to the connection with US 183, north of Leander just south of the San Gabriel River, a distance of approximately 11 miles. The tasks shall include route and design studies, evaluation of the existing US 183A Schematic, revisions to schematic to modify the plan as appropriate, project phasing studies, assessment of the environmental document, environmental services, right-of-way (ROW) services, utility services, surveying services, aerial mapping services, toll road operational studies, and drainage studies.

1) ROUTE AND DESIGN STUDIES FOR THE DEVELOPMENT OF US 183A

a) US 183A Design Schematic review and evaluation.

i) Review and update where appropriate the design criteria for the US 183A to meet current TxDOT standards.

ii) The GEC will review and where appropriate revise horizontal and vertical alignments and proposed ROW limits for the proposed US 183A facility. Roadway geometry will be based on the criteria and requirements set forth in Part IV of the TxDOT Roadway Design Manual.

(1) Design speed.

(a) Mainlanes: 70 mph.

(b) Ramps and Frontage Roads: 40 mph.

(c) Cross streets consistent with all locally applicable major thoroughfare plans, including those of Austin, Cedar Park, and Leander.

(2) The horizontal alignment will show bearings in the tangent sections and complete curve data including delta angles, PI stations, tangent lengths, length of curve, and radii. The plan views will show the center-line, edge of pavement, striping, lane widths, shoulder widths, cross slopes, superelevations with transitions, direction of traffic flow, and layouts for all speed change lanes. The GEC will provide horizontal alignments as follows:

(a) Mainlane horizontal alignment.

(b) Frontage road horizontal alignment.

(c) Entrance and exit ramps horizontal alignments for both south and north bound directions.

(d) Cross street horizontal alignments, best fit of the existing cross street between the frontage roads.

(e) ROW limits.

(3) The GEC will review and where appropriate develop horizontal turnarounds at existing grade separation structures. Acceleration and deceleration lanes will be provided for on all turnarounds as appropriate.

(4) The vertical alignment will show existing and proposed elevations at 100-foot intervals, vertical curve VPI stations, curve lengths, superelevation rates and transitions, design speeds, "K" values (evaluation to obtain minimum "K" values), and tangent grades. The GEC will assess the changes made to the TxDOT Design Manual to see if cost saving can be made by adjusting the vertical alignment. The GEC will provide vertical alignments as follows:

(a) Main lane vertical alignment.

(b) Frontage road vertical alignment.

(c) Entrance and exit ramps vertical alignments.

(d) Cross road vertical alignments.

(e) Turnaround vertical alignments, straight grade alignments between the frontage roads.

(5) The schematic will be prepared in US Customary units with MicroStation J and GEOPAK 2000.

(6) The GEC will provide up to 10 senior technical staff to participate in a series of schematic workshops. The GEC will provide a color schematic on roll plans to be used in the schematic workshops.

The GEC will prepare for the schematic workshops by developing a cost estimate matrix for the schematic including cost per section, cost per major bid item, cost per interchange etc. This will be done to better determine where cost savings can be found or where value can be added to the facility.

(7) The GEC will assess the currently proposed retaining walls required as part of the project. Geotechnical evaluation of the preferred type will not be completed under this Work Authorization.

iii) The GEC will evaluate and revise typical sections on the schematic drawing using sections approved by CTRMA. Typical sections for reworking crossroads

will also be developed by the GEC and shown on the schematic. The typical sections will also show the intermediate phases of construction related to the construction phasing.

iv) The GEC will review the earthwork cross-sections and evaluated how to improve sections to minimize costs and maintain a safe facility.

v) The GEC will develop line diagrams for multiple options to be used in developing the construction phasing.

vi) GEC will re-evaluate the capacity and level of service analysis based on any revisions to the traffic information provided by the Traffic and Revenue Consultant. The scope of services and related fee for the Traffic and Revenue Consultant is not included in this Work Authorization.

vii) The GEC will prepare the schematic drawing using the same scale, legend and symbol as the existing US 183A Schematic.

viii) GEC will review the locations of guide signs and pavement markings in compliance with Texas Manual for Uniform Traffic Control Devices (TMUTCD). The GEC will update any signs due to revisions made to the geometric design. Guide signs will be included on the schematic.

ix) The GEC shall provide to CTRMA, as a final product, three (3) Color copies of the schematic. The final schematic shall also be provided in a digital format. CADD Files shall be provided for Document and Information Exchange. Schematic will include the items included in the CTRMA checklist. The updated final schematic will included the following:

(1) The location of all main lanes, grade separations, frontage roads, and ramps.

(2) Vertical profiles for mainlanes, frontage and ramps.

(3) Traffic flow direction on all roadways.

(4) Right of Way and Control of Access lines.

(5) Geometric typical sections (including pavement cross slopes, lane and shoulder widths, and slope intercept lines for cuts and fills) for proposed mainlanes, ramps, frontage roads, and cross streets.

(6) Toll Plaza footprints and layouts.

(7) Current and projected traffic volumes as provided by CTRMA (20-year projections, unless determined otherwise by the CTRMA).

(8) Guide signs.

(9) Toll signs.

(10) Geometry of speed change (acceleration, deceleration, climbing, etc.) lanes.

(11) Location of proposed structures, including pertinent dimensions, lanes on roadways and bridges, directions of travel and preliminary vertical clearances for grade separations.

x) Additional copies of schematics to be provided include:

(1) Draft Preliminary Schematic, three copies, for review by CTRMA.

(2) Preliminary Schematic, three copies, for CTRMA and FHWA review.

b) Preliminary pavement sections for the all roadways within 183A: Main lanes, Frontage Roads, Ramps, and Cross streets within the US 183A ROW. Detailed pavement design and associated geotechnical services are not included in this work authorization.

c) Evaluation will be completed for splitting of the project into multiple construction projects in order to develop the facility in phases. The basis for the construction phasing will be to create an efficient project to build as a toll facility that is financially viable and minimizes traffic delays.

d) The GEC will develop a construction estimate for each phase of the construction detailed in the construction phasing.

2) ENVIRONMENTAL SERVICES FOR THE DEVELOPMENT OF US 183A

The GEC will provide a preliminary inventory of any outstanding environmental issues that need to be addressed as described in the Environmental Impact Statement (EIS) and the corresponding Record of Decision (ROD) for the US 183A project. The GEC will draft a memorandum outlining the outstanding issues including appropriate discussions of how these issues will be completed and resolved, and will provide the services required to complete these tasks. These following issues are anticipated to be discussed within the memorandum and addressed by the GEC:

i) Cultural Resources & Surveys

ii) Biological Resources

iii) Water Quality Impacts

iv) Noise and Air Quality Analysis

v) Wetland investigations

vi) Hazardous Materials

vii) Endangered Species Coordination/Mitigation

The GEC believes that these environmental tasks can be completed without a significant re-evaluation of the EIS. However, if potential significant issues are discovered during this process, or the project right-of-way significantly encroaches beyond the limits shown in the current EIS, then a significant re-evaluation may be triggered. This scope, schedule, and budget does not include these more extensive services that may be required if a significant re-evaluate of the EIS should be required. These services could however be provided under future work authorizations.

3) RIGHT-OF-WAY (ROW) SERVICES FOR THE DEVELOPMENT OF US 183A

a) The GEC will prepare a Right of Way and Control of Access map in order to determine the correct ROW needed. The GEC will modify the ROW map as necessary to provide the most efficient design. Previously establish ground control for the project will be used to document changes to the ROW. Specific attention will be paid to the frontage road side slopes, drainage requirements and conformance with reasonable access where access is allowed. The GEC will evaluate and incorporate ROW previously acquired by other entities.

b) The GEC will determine any changes to existing ownership information for property adjoining CTRMA Right of Way.

c) Assess alternate access to adjacent property to determine, costs, impacts to development of the frontage roads.

d) Acquisition of parcels needed for US 183A right-of-way. This scope and fee includes the administration costs of right-of-way acquisition. The cost of purchasing the land is not included.

4) UTILITY SERVICES FOR THE DEVELOPMENT OF US 183A

a) Utility Services.

i) Identification of existing utility locations and potential utility conflicts.

ii) Estimate of probable construction costs for utility relocation.

iii) Initiate coordination with utility companies regarding the needed adjustment of conflicting utilities.

5) SURVEYING AND MAPPING FOR THE DEVELOPMENT OF US 183A

a) Provide baseline and project control for the US 183A project limits.

b) GEC will develop planimetric mapping, digital terrain models, and ortho-digital photos of the project to be used in the preliminary and detailed design of the project.

c) Obtain right of entry for all field activities associated with the project.

d) Topographic information to supplement the project development includes the following:

i) Procurement of low-level aerial photography of the corridor to assist in the development of the topographic and planimetric mapping of the project.

ii) Field surveying near drainage outfalls to develop properly sized drainage easements.

e) Provide any temporary traffic control such as signs, flags, flaggers, and safety equipment that may be required for the field surveying.

6) TOLL OPERATIONAL STUDIES FOR THE DEVELOPMENT OF US 183A

a) Complete line diagrams for various options to be studied by the Traffic and Revenue Consultant to be used to assess appropriate phasing and toll facility locations. The scope of services and associated fee for the Traffic and Revenue Consultant is not included in this Work Authorization.

b) Review and assess existing schematic toll collection facilities. Develop recommendations for alternate or interim toll facilities. Revise schematic drawing to show appropriate toll facilities to maximize toll revenues.

c) Assess the impacts of current location of main lane toll plaza relative to existing residential neighborhoods and assess if better location for main lane toll plaza can be developed.

d) Where necessary modify ramp locations on schematic design to maximize toll revenue.

7) DRAINAGE STUDIES FOR THE DEVELOPMENT OF US 183A

a) Place locations of existing outfalls for cross drainage and storm sewer systems on schematic.

b) Develop preliminary report for hydrology and hydraulics to determine appropriate drainage outfall sizes and develop reasonable opinions of probable drainage costs.

c) Existing hydrology or hydraulic studies will be reviewed to evaluate the 100 year storm elevations. The GEC will determine the approximate limits of the 100-year flood boundary based on current FEMA Flood Insurance Rate Maps for inclusion on the roadway schematic. GEC will evaluate the 100-year storm elevation with the main lane vertical profile.

d) Develop a preliminary water quality plan including an implementation plan for water quality facilities including basins, filters, ponds, etc.

DELIVERABLES FOR THE DEVELOPMENT OF US 183A

Design Summary Report
Draft Preliminary Schematic
Preliminary Schematic
Schematic Workshop Report
Conceptual Construction Phasing Plan
Opinion of Probable Construction Cost
ROW Map and required parcel descriptions
Opinion of Probable Utility Relocation Costs
Updated planimetric, topographic mapping, and digital terrain model
Line Diagrams for Toll Assessment
Preliminary Hydrology and Hydraulics Report
Preliminary Water Quality Plan
Aerial Mapping
RFCQ Document

NOTES:

1) All design shall be in accordance with TxDOT design criteria, except where variances are permitted in writing by CTRMA.

2) The GEC is responsible for purchasing all references, which are required for the project.

CTRMA GEC & US 183A
Summary - MANHOUR BREAKDOWN
November 5, 2003

CTRMA

WORK AUTHORIZATION NO. 3.4

Work Order 3.4 Part A - US 183A RFCQ Procurement Management Services			
	Total Cost - Procurement Services		**$243,563**
		Subtotal Part A	**$243,563**
Work Order 3.4 Part B - US 183A Technical Development Services			
	Total Cost - Route and Design Studies		**$899,776**
	Total Cost - Environmental Services		**$299,216**
	Total Cost - Right-of-Way Services		**$1,098,826**
	Total Cost - Utility Services		**$425,452**
	Total Cost - Survey & Mapping Services		**$319,300**
	Total Cost - Toll Operational Studies		**$48,684**
	Total Cost - Drainage Studies		**$154,045**
		Subtotal Part B	**$3,245,299**
TOTAL Work Order 3.4 Parts A & B			**$3,488,862**

CTRMA GEC & US 183A
Summary - MANHOUR BREAKDOWN
November 5, 2003

CTRMA

WORK AUTHORIZATION NO. 3.4

Task	Work Description	Procurement (Rates)	MANHOURS A $ 70.00	B $ 60.00	C $ 50.00	D $ 36.00	E $ 30.00	F $ 20.00	TOTAL HRS
	Part I - RFCQ Procurement Services		0	120	1120	0	0	0	1240
			0	0	0	0	0	0	0
			0	0	0	0	0	0	0
			0	0	0	0	0	0	0
			0	0	0	0	0	0	0
	TOTAL DIRECT LABOR HOURS		0	120	1120	0	0	0	1240
	% Total by Classification		*0.00%*	*9.68%*	*90.32%*	*0.00%*	*0.00%*	*0.00%*	
	Labor Costs		$ -	$ 7,200	$ 56,000	$ -	$ -	$ -	$63,200
	Overhead Costs		$ -	$ 11,737	$ 91,291	$ -	$ -	$ -	$103,029
	Profit	15.0%	$ -	$ 2,841	$ 22,094	$ -	$ -	$ -	$24,934
	Total Loaded Labor		$ -	$ 21,778	$ 169,385	$ -	$ -	$ -	**$191,163**
	Expenses								
	Plotting and Reproduction		$ 40,000						
	Mail and Deliveries		$ 10,000						
	Travel and Field Expenses		$ 2,400						
	Total Expenses		**$ 52,400**						
	Total Cost - Procurement Services		**$ 243,563**						

CTRMA GEC & US 183A
Summary - MANHOUR BREAKDOWN
November 5, 2003

CTRMA
WORK AUTHORIZATION NO. 3.4

Task	Route and Design Studies / Work Description	(Rates)	MANHOURS A $ 70.00	B $ 60.00	C $ 50.00	D $ 40.00	E $ 30.00	F $ 20.00	TOTAL HRS
1	Develop Roadway Design Criteria		-	-	-	-	-	-	0
2	Typical Sections		-	-	-	-	-	-	0
	Horizontal Alignments (5 rolls - 100:1)								
3	Centerline		-	-	-	-	-	-	0
4	Frontage Roads		-	-	-	-	-	-	0
5	Ramps		-	-	-	-	-	-	0
6	Cross Streets		-	-	-	-	-	-	0
	Vertical Alignments (5 rolls-100:1)								
7	Mainlanes		-	-	-	-	-	-	0
8	Frontage Roads		4	12	24	160	80	-	280
9	Ramps		4	12	40	140	80	-	276
10	Cross Streets		4	12	40	100	60	-	216
	Turnaround Evaluation/Design								
11	Horizontal		-	-	-	-	-	-	0
12	Vertical		-	-	-	-	-	-	0
13	Schematic Annotation (5 rolls)		4	12	24	120	180	-	340
14	Value Engineering Preparation		4	8	20	40	40	8	120
15	Value Engineering Study		40	40	80	60	-	-	220
16	Value Engineering Report		4	8	16	40	15	10	93
17	Retaining Wall analysis		84	268	340	340	152	24	1208
18	Typical Section Analysis and revision		8	32	32	80	32	-	184
19	Cross Section and Earthwork Analysis and Revisions		8	32	84	320	140	-	584
20	Traffic Line Diagrams		4	16	-	-	-	-	20
	Level of Service Analysis (mainlanes & Ramps only)								
21	Mainlanes		-	8	40	120	16	-	184
22	Ramps & weaving		-	8	40	120	16	-	184
23	Traffic Signal Warrants		-	4	30	60	24	16	134
24	Guide Sign Review and Revisions		2	8	-	-	-	-	10
25	Schematic submittal		8	8	8	20	40	20	104
26	Preliminary Pavement Section Studies		8	32	60	50	20	-	170
27	Preliminary Quantities		8	12	36	40	48	-	144
28	Preliminary Cost Estimate		12	12	24	48	56	-	152
29	Evaluation of Construction Sequencing		6	28	96	120	76	16	342
30	Exhibits of elements in construction sequence		8	16	60	150	140	-	374
31	Design Exception Evaluation		6	12	24	28	40	-	110
32	Certified Construction Estimate		12	28	104	184	104	48	480
33	QA/QC - Route and Design Studies		44	96	-	-	-	-	140
	TOTAL DIRECT LABOR HOURS		282	724	1222	2340	1359	142	6069
	% Total by Classification		*4.65%*	*11.93%*	*20.14%*	*38.56%*	*22.39%*	*2.34%*	
	Labor Costs		$ 19,740	$ 43,440	$ 61,100	$ 93,600	$ 40,770	$ 2,840	$261,490
	Overhead Costs		$ 32,578	$ 72,298	$ 102,824	$ 157,833	$ 68,104	$ 4,678	$438,315
	Profit	15.0%	$ 7,848	$ 17,361	$ 24,589	$ 37,715	$ 16,331	$ 1,128	$104,971
	Total Loaded Labor		$ 60,165	$ 133,098	$ 188,512	$ 289,148	$ 125,206	$ 8,646	$804,776
	Expenses								
	Plotting and Reproduction		$ 90,000						
	Milage		$ 5,000						
	Total Expenses		$ 95,000						
	Total Cost - Route and Design Studies		$ 899,776						

CTRMA GEC & US 183A
Summary - MANHOUR BREAKDOWN
November 5, 2003

CTRMA

WORK AUTHORIZATION NO. 3.4

Task	Environmental Services / Work Description	(Rates)	MANHOURS A $ 70.00	B $ 60.00	C $ 50.00	D $ 40.00	E $ 30.00	F $ 20.00	TOTAL HRS
1	**Investigation of Outstanding Evironmental Issues**		4	16	16	40	40	20	136
2	**Memo regarding Environmental Issues**		60	74	72	40	24	40	310
3	**Cultural Resources Services**		0	28	76	200	200	168	672
4	**Noise and Air Quality Services**		0	8	40	120	120	8	296
5	**Wetland Investigations**		0	8	16	48	20	16	108
6	**Hazardous Materials Services**		0	8	12	40	20	20	100
7	**Endangered Species Coordination/Mitigation**		66	78	172	140	120	52	628
8	**QA/QC - Environmental Studies**		8	24	0	0	0	0	32
	TOTAL DIRECT LABOR HOURS		138	244	404	628	544	324	2282
	% Total by Classification		*6.05%*	*10.69%*	*17.70%*	*27.52%*	*23.84%*	*14.20%*	
	Labor Costs		$ 9,660	$ 14,640	$ 20,200	$ 25,120	$ 16,320	$ 6,480	$92,420
	Overhead Costs		$ 17,894	$ 25,796	$ 35,949	$ 41,607	$ 26,850	$ 10,540	$158,638
	Profit	15.0%	$ 4,133	$ 6,065	$ 8,422	$ 10,009	$ 6,476	$ 2,553	$37,659
	Total Loaded Labor		$ 31,688	$ 46,502	$ 64,572	$ 76,736	$ 49,646	$ 19,573	**$288,716**
	Expenses								
	Maps and data		$ 6,000						
	Travel, field expenses		$ 4,500						
	Total Expenses		**$ 10,500**						
	Total Cost - Environmental Services		**$ 299,216**						

CTRMA GEC & US 183A
Summary - MANHOUR BREAKDOWN
November 5, 2003

CTRMA
WORK AUTHORIZATION NO. 3.4

Task	Work Description	(Rates)	ROW Services MANHOURS A $ 70.00	B $ 60.00	C $ 50.00	D $ 40.00	E $ 30.00	F $ 20.00	TOTAL HRS
1	**ROW Research, Right of Entry, Parcel Mapping**		2	8	40	120	90	16	276
2	**ROW Surveys, Maps and Plats**		4	24	800	1800	1600	200	4428
3	**ROW Monumentation**		4	20	80	600	600	200	1504
4	**ROW, Access Management,Control of Access assessments**		2	4	0	20	20	8	54
8	**ROW Acquisition Services**		4	8	1000	600	660	900	3172
9	**QA/QC**		8	48	0	0	0	0	56
	TOTAL DIRECT LABOR HOURS		24	112	1920	3140	2970	1324	9490
	% Total by Classification		*0.25%*	*1.18%*	*20.23%*	*33.09%*	*31.30%*	*13.95%*	
	Labor Costs		$ 1,680	$ 6,720	$ 96,000	$ 125,600	$ 89,100	$ 26,480	$345,580
	Overhead Costs		$ 2,579	$ 10,729	$ 160,500	$ 216,028	$ 152,826	$ 43,606	$586,269
	Profit	15.0%	$ 639	$ 2,617	$ 38,475	$ 51,244	$ 36,289	$ 10,513	$139,777
	Total Loaded Labor		$ 4,898	$ 20,067	$ 294,975	$ 392,872	$ 278,215	$ 80,598	**$1,071,626**
	Expenses								
	Mail, Deliveries, Materials		$ 3,800						
	Plotting and Reproduction		$ 1,900						
	Travel, Field Supplies		$ 21,500						
	Total Expenses		**$ 27,200**						
	Total Cost - Right-of-Way Services		**$ 1,098,826**						

CTRMA GEC & US 183A
Summary - MANHOUR BREAKDOWN
November 5, 2003

CTRMA
WORK AUTHORIZATION NO. 3.4

Utility Services

Task	Work Description	(Rates)	MANHOURS A	B	C	D	E	F	TOTAL HRS
			$ 70.00	$ 60.00	$ 50.00	$ 40.00	$ 30.00	$ 20.00	
	Utility Coordination								
5	**Identify Potential Conflicts**		4	8	40	140	240	420	852
6	**Update to current cost estimates**		4	8	40	40	120	40	252
7	**Coordination with Utility Companies**		4	26	40	60	120	12	262
9	QA/QC		8	16	0	0	0	0	24
	TOTAL DIRECT LABOR HOURS		20	58	120	240	480	472	1390
	% Total by Classification		*1.44%*	*4.17%*	*8.63%*	*17.27%*	*34.53%*	*33.96%*	
	Labor Costs		$ 1,400	$ 3,480	$ 6,000	$ 9,600	$ 14,400	$ 9,440	$44,320
	Overhead Costs		$ 2,149	$ 5,575	$ 10,500	$ 16,800	$ 25,200	$ 16,520	$76,744
	Profit	15.0%	$ 532	$ 1,358	$ 2,475	$ 3,960	$ 5,940	$ 3,894	$18,160
	Total Loaded Labor		$ 4,082	$ 10,413	$ 18,975	$ 30,360	$ 45,540	$ 29,854	**$139,224**
	Expenses								
	Mail, Deliveries, Materials, Plotting, Reproduction		$ 2,300						
	Subsurface Utility Exploration		$ 273,428						
	Travel, Field Supplies		$ 10,500						
	Total Expenses		**$ 286,228**						
	Total Cost - Utility Services		**$ 425,452**						

CTRMA GEC & US 183A
Summary - MANHOUR BREAKDOWN
November 5, 2003

CTRMA
WORK AUTHORIZATION NO. 3.4

Survey & Mapping Services

Task	Work Description	(Rates)	MANHOURS A $ 70.00	B $ 60.00	C $ 50.00	D $ 40.00	E $ 30.00	F $ 20.00	TOTAL HRS
1	Review Existing Survey, dtm and Topographic data		4	16	4	12	48	4	88
2	Baseline and Project Control		4	16	50	380	320	580	1350
4	Survey drainage easements and additional topo features		4	16	20	80	60	8	188
40	QA/QC		16	48	24	0	0	0	88
	TOTAL DIRECT LABOR HOURS		28	96	98	472	428	592	1714
	% Total by Classification		*1.63%*	*5.60%*	*5.72%*	*27.54%*	*24.97%*	*34.54%*	
	Labor Costs		$ 1,960	$ 5,760	$ 4,900	$ 18,880	$ 12,840	$ 11,840	$56,180
	Overhead Costs		$ 3,009	$ 9,049	$ 8,575	$ 33,040	$ 22,470	$ 20,720	$96,864
	Profit	15.0%	$ 745	$ 2,221	$ 2,021	$ 7,788	$ 5,297	$ 4,884	$ 22,957
	Total Loaded Labor		$ 5,715	$ 17,031	$ 15,496	$ 59,708	$ 40,607	$ 37,444	**$176,000**
	Expenses								
	Plotting and Reproduction		$7,500						
	Low-Level Aerial Mapping		$122,800						
	Travel and Field Expenses		$13,000						
	Total Expenses		**$ 143,300**						
	Total Cost - Survey & Mapping Services		**$ 319,300**						

CTRMA GEC & US 183A
Summary - MANHOUR BREAKDOWN
November 5, 2003

CTRMA
WORK AUTHORIZATION NO. 3.4

Toll Operational Studies

Task	Work Description	(Rates)	MANHOURS A $ 70.00	B $ 60.00	C $ 50.00	D $ 40.00	E $ 30.00	F $ 20.00	TOTAL HRS
1	Line Diagrams for Toll options		0	0	0	0	0	0	0
	Review existing Toll Plan and Revise		0	0	0	0	0	0	0
	Assess Current ML Toll Plaza location / relocate		0	0	0	0	0	0	0
	Assess and revise current ramp locations to max efficiency		8	32	60	120	60	0	280
2	QA/QC		16	24	0	0	0	0	40
	TOTAL HNTB DIRECT LABOR		24	56	60	120	60	0	320
	% Total by Classification		*7.50%*	*17.50%*	*18.75%*	*37.50%*	*18.75%*	*0.00%*	
	Labor Costs		$ 1,680	$ 3,360	$ 3,000	$ 4,800	$ 1,800	$ -	$14,640
	Overhead Costs		$ 2,579	$ 5,159	$ 4,606	$ 7,369	$ 2,764	$ -	$22,477
	Profit	15.0%	$ 639	$ 1,278	$ 1,141	$ 1,825	$ 685	$ -	$ 5,568
	Total Loaded Labor		$ 4,898	$ 9,796	$ 8,747	$ 13,995	$ 5,248	$ -	**$42,684**
	Expenses								
	Plotting and Reproduction		$3,600						
	Mail and Deliveries		$1,200						
	Travel		$1,200						
	Total Expenses		**$ 6,000**						
	Total Cost - Toll Operational Studies		**$ 48,684**						

CTRMA GEC & US 183A
Summary - MANHOUR BREAKDOWN
November 5, 2003

CTRMA

WORK AUTHORIZATION NO. 3.4

Drainage Studies

Task	Work Description	(Rates)	MANHOURS A $ 70.00	B $ 60.00	C $ 50.00	D $ 40.00	E $ 30.00	F $ 20.00	TOTAL HRS
1	**Locate Outfalls for drainage systems**		0	8	8	40	32	0	88
2	**Develop preliminary Hydrology and Hydraulic Report**		0	16	120	120	32	40	328
3	**Assess Toll Facility with Hydrology & Hydraulics Report**		0	16	60	80	120	0	276
4	**Develop a water Quality plan**		4	16	200	160	120	40	540
40	**QA/QC**		16	12	0	0	0	0	28
	TOTAL HNTB DIRECT LABOR		20	68	388	400	304	80	1260
	% Total by Classification		*1.59%*	*5.40%*	*30.79%*	*31.75%*	*24.13%*	*6.35%*	
	Labor Costs		$ 1,400	$ 4,080	$ 19,400	$ 16,000	$ 9,120	$ 1,600	$51,600
	Overhead Costs		$ 2,149	$ 6,264	$ 29,785	$ 24,565	$ 14,002	$ 2,456	$79,221
	Profit	15.0%	$ 532	$ 1,552	$ 7,378	$ 6,085	$ 3,468	$ 608	$ 19,623
	Total Loaded Labor		$ 4,082	$ 11,896	$ 56,563	$ 46,650	$ 26,590	$ 4,665	**$150,445**
	Expenses								
	Plotting and Reproduction		$1,500						
	Mail and Deliveries		$900						
	Travel		$1,200						
	Total Expenses		$ 3,600						
	Total Cost - Drainage Studies		$ 154,045						