

**JUNE 29, 2011 CTRMA BOARD OF DIRECTORS MEETING
Summary Sheet**

AGENDA ITEM # 10

Approve a work authorization under the GEC Master Contract with Atkins North America, Inc., for project specific services related to the development of the Oak Hill Expressway (at the US 290W / SH 71 interchange in Oak Hill).

Department: Engineering

Associated Costs: \$750,692

Funding Source: General Fund; Reimbursed with TxDOT Toll Equity Grant

Board Action Required: YES

Description of Matter:

The GEC will perform project management, administrative tasks and program oversight including: coordination with TxDOT Austin District, Consultants, Resource Agencies, TxDOT's Environmental Affairs Division, and the FHWA as required for permitting, environmental approval; Schematic Design Review; Context Sensitive Design to include assistance with the Sustainability Design Competition; Toll Systems/Facilities Design; public involvement support; and pre-CDA procurement management services support.

Attached documentation for reference:

Draft Resolution, including proposed Work Authorization No. 7

Contact for further information:

Wesley M. Burford, P.E., Director of Engineering

EXHIBIT D
WORK AUTHORIZATION

Work Authorization No. 7

This Work Authorization is made as of this 29th day of June, 2011, under the terms and conditions established in the AGREEMENT FOR GENERAL CONSULTING ENGINEERING SERVICES, dated as of January 4th, 2010 (the Agreement), between the **Central Texas Regional Mobility Authority** (Authority) and **Atkins North America, Inc.** (formerly Post, Buckley, Schuh & Jernigan, Inc.) (GEC). This Work Authorization is made for the following purpose, consistent with the services defined in the Agreement:

General Engineering Consultant Services Oak Hill Expressway

Section A. - Scope of Services

A.1. GEC shall perform the following Services:

Please reference Attachment A – Services to be Provided by the GEC

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.

Not applicable.

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

Please reference Attachment A – Services to be Provided by the GEC

Section B. - Schedule

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

Services defined herein are expected to be substantially complete by June 30, 2013. 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 \$750,692.00, 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 a future Work Authorization.

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:

Please reference Attachment A – Services to be Provided by the GEC

Section E. - Other Provisions

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

Not applicable.

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: Atkins North America, Inc.

By: Mike Heiligenstein

By: _____

Signature: _____

Signature: _____

Title: Executive Director

Title: _____

Date: _____

Date: _____

CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY

WORK AUTHORIZATION NO. 7

ATKINS

ATTACHMENT A

SERVICES TO BE PROVIDED BY GEC

GENERAL

This scope of services includes professional services and associated deliverables required by the Central Texas Regional Mobility Authority (the Authority) related to the study and development of the US 290 West / SH 71 West Project (the Project). The limits of the Project are from Circle Drive to East of Joe Tanner for US 290 West and from US 290W through Silvermine Drive for SH 71 West.

The scope of services to be performed by Atkins as the Authority's General Engineering Consultant (the GEC) will include, but not be limited to, those professional services required to assist the Authority in the project management and administration, project development, and environmental service efforts related to the Authority's development of the Project.

The tasks in this scope of services will not be performed or the funds utilized until directed by the Authority.

1.0 PROJECT MANAGEMENT & ADMINISTRATION

The GEC will perform project management, administrative and coordination duties, including contract administration, project management, reporting, meeting minutes of required meetings and telephone conversations, and other related administrative tasks (e.g.; direct costs) associated with the Project, including:

1.1 Coordinate, Procure, and Administer Work Authorizations

Prepare contracts as required between the GEC and the Authority and GEC and subconsultants. The GEC will also assist in the preparation of and/or review of contracts between the Authority and subconsultants. Monitor and supervise GEC subconsultant activities, review all work products prepared by subconsultant, review and approve subconsultant progress reports and invoices.

1.2 Progress Reports and Invoices

Prepare monthly invoices and progress reports for the work tasks, together with evidence of services accomplished during the time period since the previous report. Prepare a detailed schedule (provide in the Authority approved format) of anticipated monthly invoice billing linking to the project work authorization tasks. A monthly progress report will be submitted and will include: activities completed, initiated or ongoing, during the reporting period; challenges encountered and actions to remedy them; overall status, including a tabulation of percentage complete by task; updated project schedule; and DBE utilization status.

1.3 Record Keeping and File Management

Maintain records and files related to the Project throughout the duration of the Services. Uploading of project files to the Authority's Electronic Document Management System will be coordinated with the Authority.

1.4 Correspondence

Prepare written materials, memoranda, letters, survey forms, etc. used to solicit information or collect data for the project and submit them to the Authority for review and approval prior to its use or distribution. Copies of relevant outgoing correspondence and incoming correspondence will be provided to the Authority on a continuing basis.

1.5 Work Authorization Schedule

Prepare a detailed, graphic schedule linking work authorization tasks, subtasks, critical dates, milestones, deliverables, and the Authority/Texas Department of Transportation (TxDOT)/Federal Highway Administration (FHWA) scheduled review requirements. The project schedule will be in a format that depicts the order and interdependence of the various tasks, subtasks, milestones and deliverables for each of the tasks identified therein. Progress will be reviewed periodically, and should these reviews indicate a substantial change in progress, a schedule recovery strategy will be developed and implemented and the schedule will be revised accordingly.

1.6 Dashboard Update

Prepare and submit updated project information, including schedule and budget, for the Authority's dashboard on a monthly basis; provide QC review of revised information on website.

2.0 PROJECT DEVELOPMENT

This scope of services includes professional services and deliverables in support of the Authority's development of the Project.

2.1 Project Development Support

The GEC will provide support to the Authority as required during the Project Development process. Specific efforts will include

- 2.1.1 Loan and/or Grant Applications: Assist the Authority in the development of loan and/or grant applications for the project as required. This will include preparation of various elements of the loan and/or grant form & associated documentation for the Authority's review and approval; it will also include participation in the coordination efforts with State and/or Federal agencies as requested by the Authority.
- 2.1.2 Engineering and Technical Support: Provide various engineering and technical tasks as requested by the Authority including but not limited to: general engineering assistance, general technology assistance, general environmental coordination, reports, research, presentations, preparation of 3D video animation and meetings.
- 2.1.3 Traffic Modeling: Conduct a peer review of the CORSIM and/or VISSIM Traffic Models and provide summary of suggested revisions. Assist with coordination between consultants.
- 2.1.4 TxDOT Coordination: Provide appropriate staff as part of coordination efforts between the Authority and TxDOT. GEC will provide coordination efforts on the Authority's behalf at the direction of the Authority.
- 2.1.5 Traffic and Revenue (T&R) Consultant Coordination: Provide coordination and support to the Authority's T&R Consultant, as directed by the Authority.
- 2.1.6 Market Valuation: Assist in the development of the market valuation by providing industry knowledge and research for market valuation options.
- 2.1.7 Project Development Agreement (PDA): Assist in the development of the PDA, generation of PDA exhibits, review of PDA drafts, and TxDOT coordination support, as directed by the Authority.

- 2.1.8 CAMPO Coordination: Provide appropriate staff as part of coordination efforts between the Authority and CAMPO. GEC will provide coordination efforts on the Authority's behalf at the direction of the Authority.
- 2.1.9 Provide DBE Outreach and Public Involvement support as requested by the Authority.
- 2.2 Financial Planning Support
 - 2.2.1 Operation, Maintenance, and Renewal & Replacement Estimate Updates
 - 2.2.1.1 Develop and/or update GEC's opinion of probable operations cost estimates using either a Sketch Level approach (i.e., an assumed per transaction cost based on average operations costs of similar toll systems) or a Level 1 approach (i.e., estimate actual quantities for the various elements of the toll operations, enforcement and incident management and applying anticipated unit prices to same to develop an opening year cost estimate which can be escalated over time).
 - 2.2.1.2 Develop and/or update GEC's opinion of probable annual/routine maintenance cost estimates using either a Sketch Level approach (i.e., an estimated per centerline mile cost based on the facility type which considers the number of lanes, pavement material, and location) or a Level 1 approach (i.e., estimate actual quantities for the various elements of the maintenance efforts and applying anticipated unit prices to same to develop an opening year cost that can be escalated over time).
 - 2.2.1.3 Develop and/or update GEC's opinion of probable renewal & replacement budget cost estimates (non-routine maintenance estimates) using either a Sketch Level approach (i.e., an estimated per mile cost based on renewal & replacement budgets utilized on similar facilities) or a Level 1 approach (i.e., includes the identification of a long-term, periodic maintenance / replacement schedule, estimation of quantities for the associated elements, and inflated prices of same to assess the overall cost requirements of the system in the target years).
 - 2.2.2 Project Cost Estimate Updates

As directed by the Authority, GEC will provide opinion of probable project cost estimate updates for the project. GEC will prepare an estimate of probable construction costs which will include quantity/cost estimates for major components of work such as roadway paving, roadway earthwork, roadway drainage, bridge structures, retaining walls, other structures, signing and marking, lighting, and signalization. The estimate of probable construction costs will be used to estimate total project costs that will also include program management and oversight, preliminary engineering, final engineering, right-of-way (ROW) acquisition, environmental compliance/mitigation, construction, toll collection systems, utility relocation and construction engineering and inspection (CEI), and financing costs.

Provide updates to preliminary costs estimate, schedule, and financial feasibility analysis necessitated by the on-going project scoping/sizing process. GEC will develop and certify the Engineers Report for the Official Statement (OS) and, as requested, review and comment on the OS.

2.2.3 Toll Feasibility Analysis Updates

GEC will assist the Authority in updating toll feasibility analyses which includes the incorporation of traffic and revenue forecast updates (by others); operations, maintenance, and renewal & replacement estimates; and total project cost estimates to determine the financial feasibility of the project.

2.2.4 Financial Advisor Support/Financial Plan Development

GEC will provide financial advisor support necessary for the Authority to conduct financial programming of their system. This will include the development of cash flow analyses which contemplate implementation costs and schedules. GEC will also assist in the identification of priorities to support the determination of alternate project delivery scenarios. The tasks will include:

2.2.4.1 Develop GEC's opinion of probable project costs based upon alternative project delivery approaches.

2.2.4.2 Assess funding sources such as state funds, federal formula funds, federal discretionary funds, and toll revenues.

2.2.4.3 Assist with the assessment of financing techniques such as State Infrastructure Banks, the Transportation Infrastructure Finance and Innovation Act (TIFIA), Advanced Construction, Toll Revenue Bonds, TxDOT Toll Equity Grants, and other state bonds.

2.2.4.4 Develop and provide summary of revenue shortfall mitigation strategies to minimize impacts on scheduled project delivery and prepare a summary of cost increases or reductions that could affect the cost of the project.

2.2.4.5 Develop a Funding Contingency Plan should funding for the project as a whole not be provided and determine the impact of various design approaches on estimated project costs and project design life. GEC will:

- Develop a list of "reasonable" design options for consideration such as project length reductions, ramp reductions, and pavement structure modifications.
- Meet with the Authority to get concurrence regarding design options prior to additional analysis.
- Analyze and document the financial implications of the various design options considered and include such things as project cost, schedule impact, local economic impact, length of useful life, and impact on financing options.

2.3 Preliminary Design Services -- Toll Systems / Facilities Design

2.3.1 Preliminary Toll Schematic Development

The GEC will provide preliminary design services to develop a schematic for the toll collection system for the Project. It is anticipated the toll system will utilize an Electronic Toll Collection (ETC) System (cashless). The GEC will prepare a toll facilities preliminary design utilizing the roadway schematic prepared by others as a basis. Sufficient coordination efforts with the Authority, the Authority's System Integrator, and TxDOT will be included so that proper input is received regarding the schematic development. The toll schematic will be submitted to the Authority and TxDOT for approval. Toll Systems/Facilities Schematic Design will include:

- 2.3.1.1 Plan view depicting locations of toll systems/facilities.
- 2.3.1.2 Layouts for toll gantries
- 2.3.1.3 Outline Specifications
- 2.3.1.4 Opinion of Probable Construction Cost
- 2.3.1.5 Analysis of:
 - Toll Operations
 - Mechanical and Electrical Operations
 - Provisions for local utilities services
 - Facilities for surveillance, communication and control
 - Conceptual ITS interface and infrastructure

2.3.2 Context Sensitive Design
Support the Authority in activities associated with the Sustainability Design Competition.

3.0 ENVIRONMENTAL SERVICES

3.1 Agency Coordination

Support the Authority in coordination activities with TxDOT Austin District, Consultants, Resource Agencies, TxDOT's Environmental Affairs Division, and the FHWA, as required; including meeting preparation, meeting participation, public outreach support and attendance at public meetings, hearings, and noise workshops.

3.2 Environmental Program Management Schedule

Monitor the schedule and provide updates to the Authority on a monthly basis.

3.3 Document Review

3.3.1 Review draft and final Environmental Documents and provide written comments and recommendations on such documents.

3.3.2 Review draft and final schematic and provide written comments and recommendations on schematic.

3.3.3 Reviews shall be for conformance to the applicable requirements of TxDOT and FHWA. Sources of materials will include data received from TxDOT and other federal, state and local governmental and other agencies and field investigations.

**Attachment B - Fee Estimate
Summary**

CTRMA General Engineering Consultant
Atkins - Man-hour Breakdown & Fee Estimate
General Engineering Consultant Services Oak Hill Expressway

ATKINS WORK AUTHORIZATION #7

GENERAL ENGINEERING CONSULTANT SERVICES OAK HILL EXPRESSWAY

<u>TASK</u>	<u>SUBTOTAL</u>	<u>SUBTOTAL</u>	<u>TOTAL</u>
	Labor +		
	Overhead +	Direct	
	Profit	Expenses	
1.0 - Project Management & Administration	\$ 179,028	\$ 1,000	\$ 180,028
2.0 - Project Development	\$ 410,578	\$ 4,100	\$ 414,678
3.0 - Environmental Services	\$ 154,386	\$ 1,600	\$ 155,986
TOTALS	\$ 743,992	\$ 6,700	\$ 750,692

Attachment B - Fee Estimate

CTRMA General Engineering Consultant
 Atkins - Man-hour Breakdown & Fee Estimate
 General Engineering Consultant Services Oak Hill Expressway

ATKINS WORK AUTHORIZATION #7

GENERAL ENGINEERING CONSULTANT SERVICES OAK HILL EXPRESSWAY

1.0 - Project Management & Administration

TASK / WORK DESCRIPTION	(Estimated Average Labor Rates)						TOTAL HRS
	A	B	C	D	E	F	
	\$ 70.00	\$ 60.00	\$ 50.00	\$ 40.00	\$ 30.00	\$ 20.00	
1.1 Coordinate, Procure and Administer Contracts/Work Authorizations	80	100	60				240
1.2 Progress Reporting	80	100				400	580
1.3 Record Keeping & File Managment						200	200
1.4 Correspondence	40	60					100
1.5 Scheduling	24	24	120				168
1.6 Dash Board Updates		100					100

TOTAL DIRECT LABOR		224	384	180	0	0	600	1388
<i>% Total by Classification</i>		16.14%	27.67%	12.97%	0.00%	0.00%	43.23%	
Labor Costs		\$ 15,680	\$ 23,040	\$ 9,000	\$ -	\$ -	\$ 12,000	\$ 59,720
Overhead Costs	167.66%	\$ 26,289	\$ 38,629	\$ 15,089	\$ -	\$ -	\$ 20,119	\$ 100,127
Profit	12.00%	\$ 5,036	\$ 7,400	\$ 2,891	\$ -	\$ -	\$ 3,854	\$ 19,182
Total Loaded Labor		\$ 47,005	\$ 69,069	\$ 26,980	\$ -	\$ -	\$ 35,974	\$179,028

Direct Expenses	
Plotting and Reproduction	\$ 1,000
Mail and Deliveries	\$ -
Misc Expenses	\$ -
Travel and Field Expenses	\$ -
Total Direct Expenses	\$ 1,000

Total \$ 180,028

Attachment B - Fee Estimate

CTRMA General Engineering Consultant
 Atkins - Man-hour Breakdown & Fee Estimate
 General Engineering Consultant Services Oak Hill Expressway

ATKINS WORK AUTHORIZATION #7 GENERAL ENGINEERING CONSULTANT SERVICES OAK HILL EXPRESSWAY

2.0 - Project Development

TASK / WORK DESCRIPTION	(Estimated Average Labor Rates)						TOTAL HRS
	A \$ 70.00	B \$ 60.00	C \$ 50.00	D \$ 40.00	E \$ 30.00	F \$ 20.00	
2.1 Project Development Support							
2.1.1 Loan / Grant Applications	20	40	40			20	120
2.1.2 Engineering & Technical Support	20	40	200				260
2.1.3 Traffic Modeling	20	120	60	20	20		240
2.1.4 TxDOT Coordination	40	40					80
2.1.5 Traffic & Revenue Consultant Coordination	8	16					24
2.1.6 Market Valuation	40	160	40	40	20	10	310
2.1.7 Project Development Agreement		40					40
2.1.8 CAMPO Coordination	20	40					60
2.1.9 DBE Outreach & Public Involvement Support	40						40
2.2 Financial Planning Support							0
2.2.1 Operations & Maintenance Cost Estimates	40	80	200	40		10	370
2.2.2 Project Cost Estimates & Updates	20	80	200	20		10	330
2.2.3 Toll Feasibility Analysis	10	40	120	10		10	190
2.2.4 Financial Advisor Support	10	20	40			20	90
2.3 Preliminary Design Services - Toll Facilities							0
2.3.1 Prelim Toll Schematic Development	8	80	100	40		10	238
2.3.2 Context Sensitive Design	16	40	100			8	164

TOTAL DIRECT LABOR	312	836	1100	170	40	98	2556
<i>% Total by Classification</i>	<i>12.21%</i>	<i>32.71%</i>	<i>43.04%</i>	<i>6.65%</i>	<i>1.56%</i>	<i>3.83%</i>	
Labor Costs	\$ 21,840	\$ 50,160	\$ 55,000	\$ 6,800	\$ 1,200	\$ 1,960	\$ 136,960
Overhead Costs	167.66% \$ 36,617	\$ 84,098	\$ 92,213	\$ 11,401	\$ 2,012	\$ 3,286	\$ 229,627
Profit	12.00% \$ 7,015	\$ 16,111	\$ 17,666	\$ 2,184	\$ 385	\$ 630	\$ 43,990
Total Loaded Labor	\$ 65,472	\$ 150,369	\$ 164,879	\$ 20,385	\$ 3,597	\$ 5,876	\$410,578

Direct Expenses	
Plotting and Reproduction	\$ 1,000
Mail and Deliveries	\$ -
Misc Expenses	\$ 2,500
Travel and Field Expenses	\$ 600
Total Direct Expenses	\$ 4,100

Total \$ 414,678

Attachment B - Fee Estimate

CTRMA General Engineering Consultant
 Atkins - Man-hour Breakdown & Fee Estimate
 General Engineering Consultant Services Oak Hill Expressway

ATKINS WORK AUTHORIZATION #7

GENERAL ENGINEERING CONSULTANT SERVICES OAK HILL EXPRESSWAY

3.0 - Environmental Services

TASK / WORK DESCRIPTION	(Estimated Average Labor Rates)						TOTAL HRS
	A	B	C	D	E	F	
	\$ 70.00	\$ 60.00	\$ 50.00	\$ 40.00	\$ 30.00	\$ 20.00	
3.1 Agency Coordination	30	30	60				120
3.2 Environmental Program Management Schedule	40	80	80				200
3.3 Document Review							
3.3.1 Review Environmental Documents	40	40	160				240
3.3.2 Review Schematics	40	40	160				240
3.3.3 Misc Conformance Reviews - Governments and Agencies	20	20	80				120

TOTAL DIRECT LABOR	170	210	540	0	0	0	920
% Total by Classification	18.48%	22.83%	58.70%	0.00%	0.00%	0.00%	
Labor Costs	\$ 11,900	\$ 12,600	\$ 27,000	\$ -	\$ -	\$ -	\$ 51,500
Overhead Costs	167.66% \$ 19,952	\$ 21,125	\$ 45,268	\$ -	\$ -	\$ -	\$ 86,345
Profit	12.00% \$ 3,822	\$ 4,047	\$ 8,672	\$ -	\$ -	\$ -	\$ 16,541
Total Loaded Labor	\$ 35,674	\$ 37,772	\$ 80,940	\$ -	\$ -	\$ -	\$154,386

Direct Expenses	
Plotting and Reproduction	\$ 1,000
Mail and Deliveries	\$ -
Misc Expenses	\$ -
Travel and Field Expenses	\$ 600
Total Direct Expenses	\$ 1,600

Total \$ 155,986

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

RESOLUTION NO. 11-___

**APPROVE A WORK AUTHORIZATION UNDER THE GEC
MASTER CONTRACT WITH ATKINS NORTH AMERICA, INC., FOR
PROJECT SPECIFIC SERVICES RELATED TO THE DEVELOPMENT
OF THE OAK HILL EXPRESSWAY (AT THE US 290W / SH 71
INTERCHANGE IN OAK HILL).**

WHEREAS, Atkins North America, Inc. (“Atkins”), as successor entity to Post, Buckley, Schuh & Jernigan, Inc. (d/b/a PBS&J), serves as a general engineering consultant to the Central Texas Regional Mobility Authority (“CTRMA”) under the Agreement for General Consulting Civil Engineering Services effective January 1, 2010 (the “Agreement”); and

WHEREAS, Atkins and the Executive Director have discussed and agreed to a proposed work authorization, a copy of which is attached and incorporated into this resolution as Attachment A, for Atkins to perform certain project management, administrative tasks and program oversight duties related to CTRMA’s development of the Oak Hill Expressway; and

WHEREAS, the Executive Director recommends approval of the proposed amendment.

NOW THEREFORE, BE IT RESOLVED that the Board of Directors approves the proposed Work Authorization No. 7, in the form or substantially the same form as Attachment A; and

BE IT FURTHER RESOLVED that the proposed supplemental work authorization, as approved, may be finalized and executed by the Executive Director on behalf of CTRMA.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 29th day of June, 2011.

Submitted and reviewed by:

Approved:

Andrew Martin
General Counsel for the Central
Texas Regional Mobility Authority

Ray A. Wilkerson
Chairman, Board of Directors
Resolution Number: 11-___
Date Passed: 6/29/11

ATTACHMENT “A” TO RESOLUTION 11-
PROPOSED WORK AUTHORIZATION NO. 7

[on the following 11 pages]