

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

**RESOLUTION NO. 09-67**

**Work Authorization No. 1 with Wilbur Smith Associates  
for Peer Review of the Investment Grade Traffic & Revenue Study  
for the 183A Phase II Project**

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

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

WHEREAS, the CTRMA identified the 183-A Turnpike Project (the "Project") as its initial project, and the Project was constructed and opened for use by the traveling public on March 3, 2007; and

WHEREAS, shortly thereafter the CTRMA began the design and engineering of the northern extension of the main lanes of the Project from RM 1431 to a point north of the intersection of the Project and current FM 2243 (the "Proposed Northern Extension"); and

WHEREAS, in Resolution No. 07-62, dated October 3, 2007, the Board of Directors of the CTRMA authorized entry into a Traffic and Revenue Engineering Services Agreement with Stantec Consulting Services, Inc. ("Stantec") for the provision of the necessary traffic and revenue engineering work related to the Proposed Northern Extension; and

WHEREAS, in Resolution No. 09-14, dated February 25, 2009, the Board of Directors authorized the Executive Director to negotiate and execute contracts with a list of recommended providers, including Wilbur Smith Associates ("WSA"), for the provision of various traffic and revenue engineering services; and

WHEREAS, Stantec is preparing an investment grade traffic and revenue study of the 183A Phase II Project, which will be used in connection with the CTRMA's financing of the Proposed Northern Extension; and

WHEREAS, an independent peer review of the investment grade traffic and revenue study will enhance the credibility of the study among potential investors and will be required in the event the CTRMA receives credit assistance pursuant to the Transportation Infrastructure Finance and Innovation Act ("TIFIA"); and

WHEREAS, WSA has developed a proposed scope of work and cost estimate for peer review and related services for the Investment Grade Traffic & Revenue Study for the 183A Phase II Project; and

WHEREAS, the estimated cost of the peer review study and related services is \$69,870.00; and


WHEREAS, the CTRMA and WSA have determined that a Work Authorization is necessary in order to authorize WSA to undertake the peer review study and related services.


NOW THEREFORE, BE IT RESOLVED, that the Board of Directors of the CTRMA authorizes the Executive Director to finalize and execute Work Authorization No. 1 with WSA, in substantially the same form set forth in Attachment "A" and consistent with this Resolution, provided that any work commenced under Work Authorization No. 1 shall be subject to all terms and conditions of the agreement between the CTRMA and WSA.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 28th day of October, 2009.

Submitted and reviewed by:

Approved:

  
\_\_\_\_\_  
Tom Nielson  
General Counsel for the Central  
Texas Regional Mobility Authority

  
\_\_\_\_\_  
James H. Mills  
Vice-Chairman, Board of Directors  
Resolution Number 09-67  
Date Passed: 10/28/09

CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY (CTRMA)

October 28, 2009

**WORK AUTHORIZATION #1 WITH  
WILBUR SMITH ASSOCIATES  
183A NORTHERN EXTENSION  
INDEPENDENT PEER REVIEW OF TRAFFIC AND REVENUE STUDY**

This Work Authorization is made as of this \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, under the terms and conditions established in the AGREEMENT FOR TRAFFIC AND REVENUE ENGINEERING SERVICES, dated as of \_\_\_\_\_, \_\_\_\_\_ (the "Agreement"), between the Central Texas Regional Mobility Authority ("Authority" or "CTRMA") and Wilbur Smith Associates ("Consultant" or "WSA"). This Work Authorization is made for the following purpose, consistent with the services defined in the Agreement:

The Traffic and Revenue Engineering Services described herein are to be provided by WSA to the CTRMA to conduct a peer review of the 183A Northern Extension Investment Grade Traffic and Revenue Study. This review is being conducted to enhance the credibility of the study among potential investors and will be required in the event the CTRMA receives credit assistance pursuant to the Transportation Infrastructure Finance and Innovation Act (TIFIA). The original study documents being reviewed have been prepared by Stantec Consulting Services, Inc. (Stantec).

**BACKGROUND AND PURPOSE**

This proposal has been designed to reflect an approach to the project consistent with WSA's understanding of the CTRMA and the central Texas region. This proposal includes the following proposed turnpike elements:

- 183A Northern Extension Toll Project, from FM 1431 to RM 2243 (4.2 - 5.1 mile six lane toll facility).

The level of effort envisioned by this proposal assumes the use of only available data and reports provided by Stantec and the CTRMA, in order to assess the impact to forecasted traffic and toll revenue levels produced by and resulting from a variety of changes in assumptions. A review of data validity, travel demand modeling procedures and parameters, and toll rate sensitivity analyses will be conducted. In addition, the economic parameters used as input to travel demand growth will be addressed and reviewed. This effort specifically excludes the development of independent estimates of traffic and toll revenue by WSA. As a result of this effort, the CTRMA and potential investors intend to obtain additional support for, and confidence

## **WORK AUTHORIZATION #1 WITH WILBUR SMITH ASSOCIATES**

in, the credibility of the Investment Grade Traffic & Revenue Study for 183A Northern Extension Toll Project.

### **Section A. – Scope of Services**

A.1. Consultant shall perform the following Services:

The study work program is designed to meet the above objectives and will comprise of the following five major work tasks as outlined below:

- Task 1 – Kickoff Meeting and Data Collection;
- Task 2 – Review of Economic Information;
- Task 3 – Review of Modeling Procedures and Revenue Estimation;
- Task 4 – Design and Review Output of Sensitivity Tests and;
- Task 5 – Documentation and Final Meetings.

Each of the above tasks is described in more detail below, indicating the specific analysis required for completion of each task.

The services presented in this scope will be reimbursed by CTRMA on a lump sum fee basis including reimbursement for other direct costs incurred, e.g., travel, lodging, meals, etc. The project budget and schedule that supports this scope of services is attached.

#### **TASK 1 – KICKOFF MEETING AND DATA COLLECTION**

This task will commence immediately upon receipt of notice-to-proceed. A kick-off meeting will be scheduled in Austin with CTRMA staff members and WSA personnel. It is envisioned that a detailed discussion of the work by Stantec will be made addressing the basic methodology employed to conduct the scope of work that has led to the current report documents submitted to CTRMA. This discussion should address, but not be limited to, details concerning data collected and used for travel demand modeling, economic datasets, value of time (VOT) assumptions, planned highway improvements and infrastructure development planned in each corridor, as well as final output data concerning forecasted traffic and gross toll revenues. As a result of this meeting, all relevant reports and illustrative information supportive of those report documents will be provided to WSA.

WSA will conduct a field review and will then expect to participate in a comprehensive review of each of the analysis elements. The objective of this effort will be to obtain first-hand knowledge of the present levels of congestion, economic growth, type of build-out and development, competing facilities, and any other relevant attributes of the corridor.

## **WORK AUTHORIZATION #1 WITH WILBUR SMITH ASSOCIATES**

Finally, it is anticipated that a follow-up meeting may be required to address any questions which might arise as a result of the peer review, and it will be arranged for conveniently in Austin or via conference call.

### **TASK 2 - REVIEW OF ECONOMIC INFORMATION**

This task will be a key component of the study effort. The initial review of datasets provided will serve as the basis for a detailed evaluation of the appropriateness of their usage in the study. The level of detail employed in the underlying economic information inherent in the Capital Area Metropolitan Planning Organization's (CAMPO's) model, and what was used for the analysis, will be investigated. The review will include, but not be limited to the following:

- What are the current composition, characteristics, and growth trends of existing traffic along the currently operational southern segments of the project?
- What were the assumptions related to the estimates of population, employment and other economic parameters, and to what level of detail were these used in the development of growth rate assumptions employed in the modeling process?
- What were the specific locations of major traffic generators, both current and future?
- What were the specific assumptions related to land use as it currently exists, and as to future development potential in the project corridors?
- What were the assumptions regarding income levels and its distribution along each of the corridors, and how was this used as input to the development of value-of-time factors for use in the modeling process?
- How were variations in economic growth in each of the corridors handled – were recessionary considerations used in the process of determining future growth?

### **TASK 3 – REVIEW OF MODELING PROCEDURES AND REVENUE ESTIMATION**

In order to provide an opinion on the reasonableness of the traffic and gross toll revenue projections provided in the study, it will be important for WSA to completely understand the methodology employed in the development and operation of the CAMPO model and all its attributes. The following key elements will be considered:

- What is the trip generation methodology used to develop the amount of trip production and attractions in the study corridor?
- How were the trip distribution patterns verified along the project corridors?
- How was modal distribution between trucks and passenger vehicles inputted into the modeling process?
- How reasonable are the vehicle usage "capture rates" of the assignments to the project under a toll free versus a tolled condition?



## **WORK AUTHORIZATION #1 WITH WILBUR SMITH ASSOCIATES**

- How reasonable is the resultant corridor share for the project versus existing highways?
- What assumptions were used in the development of the highway networks at varying points along the forecasting path, i.e., when were competing facilities introduced into the assignment process?
- How was the model validated, and how closely did the model replicate the existing travel demands along each of the corridors?
- How was the toll plaza concept developed and does it adequately minimize leakage while meeting the CTRMA's objectives?
- How was toll diversion methodology handled and does it have a logical relationship with travel time savings realized as a result of the assignment process?
- Evaluate assumptions related to the elasticity of the demand;
- Review the value of time chosen for the travel demand forecast and determine its validity;
- Review the rationality of the toll rate sensitivity analysis and the differential toll rate strategies implemented on the projects;
- Review the results of the traffic forecasts and gross toll revenue estimates, including assumptions regarding "ramp-up," inflation rates, toll evasion through the use of video billing or electronic collection payment distribution, and vehicle distribution for reasonableness;
- The results of this evaluation will provide the basis upon which appropriate sensitivity tests will be developed in order to test the reasonableness of the projections of traffic and gross toll revenues. These tests are outlined in the next task.

### **TASK 4 – DESIGN AND REVIEW OUTPUT OF SENSITIVITY TESTS**

Following the above evaluation, WSA may suggest up to four (4) sensitivity tests that will be performed by Stantec as necessary for reasonableness to develop the potential impact on revenues as a result of the likelihood of each of the specified scenarios occurring in the project corridors. Some of these tests may include the following:

- Current and future economic growth considerations (both locally and nationally where applicable);
- Value of travel time assumptions;
- Phasing of highway improvements in the corridors;
- Distribution of payment methods between video billing and electronic toll collection (ETC);
- Ramp-up period variations;
- Vehicle classifications distribution, including truck usage percentages; and
- Toll evasion

**WORK AUTHORIZATION #1 WITH  
WILBUR SMITH ASSOCIATES**

The result of these tests will then be evaluated by WSA as to their impact on the estimates of traffic and gross toll revenues, and the likelihood that they could substantively change the results provided to the CTRMA in Stantec's report on the project.

**TASK 5 – DOCUMENTATION AND FINAL MEETINGS**

The peer review study will be submitted in a letter report document which details the process undertaken and the results obtained. The document will initially be submitted in draft form for review and comment. WSA has budgeted for three trips by key staff to participate in the field kickoff meeting to obtain all available information from the CTRMA and Stantec. Following the oral presentation and the receipt of comments, it is assumed that ten (10) copies of a final document will then be submitted to CTRMA. It is also envisioned as part of this project that it will be necessary to be in close contact during the review procedure. Therefore, it is likely there will be conference calls and meetings with the working group and possibly an additional meeting in Austin with Stantec and CTRMA representatives. This can be handled under this Work Authorization. If necessary, any additional trips to Austin or elsewhere will be provided for under a supplement to this Work Authorization or separate Work Authorization as required by the CTRMA.

- 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, Consultant shall provide the following submittals/deliverables (Documents) to the Authority:

As described in Scope of Services.

**Section B. – Schedule**

Consultant shall perform the Services and deliver the related Documents (if any) according to the attached schedule. See Attachment A.

**Section C. – Compensation**

- C.1. In return for the performance of the foregoing obligations, the Authority shall pay to Consultant an amount not to exceed \$69,870, based on the attached fee estimate. Compensation shall be in accordance with the Agreement. See Attachment B.
- C.2. Compensation for Additional Services (if any) shall be paid by the Authority to Consultant according to the terms of a future Work Authorization.

**WORK AUTHORIZATION #1 WITH  
WILBUR SMITH ASSOCIATES**

**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 Consultant. Unless otherwise provided in this Work Authorization, the Authority shall bear all costs incident to compliance with the following:

Not Applicable.

**Section E. – Other Provisions**

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

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

AUTHORITY:

CONSULTANT:

CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

WILBUR SMITH ASSOCIATES

By: \_\_\_\_\_

By: \_\_\_\_\_

Name: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_



**WORK AUTHORIZATION #1 WITH  
WILBUR SMITH ASSOCIATES**

**ATTACHMENT A**

All work assignments begun under this Lump Sum Fee work authorization must be completed on or before December 31 2009

TASK AND DESCRIPTION	August	September	October	November	December
	2009	2009	2009	2009	2009
Project Name: 493A Peer Review	W1 W2 W3 W4	W1 W2 W3 W4	W1 W2 W3 W4	W1 W2 W3 W4	W1 W2 W3 W4
Task 1 – Kickoff Meeting and Data Collection		#####			
Task 2 – Review of Economic Information		#####			
Task 3 – Review of Modeling Procedures and Revenue Estimation		#####			
Task 4 – Design and Review Output of Sensitivity Tests		#####			
Task 5 – Documentation and Final Meetings		#####		#####	#####

- + Indicates a meeting
- ⊙ Indicates a submital

WORK AUTHORIZATION #1 WITH  
WILBUR SMITH ASSOCIATES

ATTACHMENT B

CTRMA 183A Peer Review Services - August, 2009			
	Labor Fee	Direct Expenses	Total
Task 1 – Kickoff Meeting and Data Collection	\$8,365	\$110	\$8,475
Task 2 – Review of Economic Information	\$7,407	\$0	\$7,407
Task 3 – Review of Modeling Procedures and Revenue Estimation	\$18,669	\$0	\$18,669
Task 4 – Design and Review Output of Sensitivity Tests	\$17,886	\$0	\$17,886
Task 5 – Documentation and Final Meetings	\$17,103	\$330	\$17,433
TOTAL	\$69,430	\$440	\$69,870