

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

**RESOLUTION NO. 08-44**

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 is authorized under Section 370.033 of the Texas Transportation Code to study and evaluate potential transportation projects, and work and coordinate with the region's Metropolitan Planning Organization ("CAMPO") as well as the appropriate Texas Department of Transportation District Office in determining the feasibility of potential transportation projects; and

WHEREAS, in a minute order approved on August 25, 2005, the Texas Transportation Commission authorized the CTRMA to pursue the development of the 290 East Turnpike Project (the "Project"), such Project being a potential regional toll project and included in the CAMPO Transportation Improvement Program for 2008-2011; and

WHEREAS, the CTRMA and the Texas Department of Transportation ("TxDOT") have undertaken the market valuation process set forth in Section 228.0111 of the Transportation Code to determine if either entity will develop the Project as a toll project and such process is currently ongoing; and

WHEREAS, in Resolution No. 05-73, dated September 28, 2005, the Board of Directors approved the entry into a Traffic and Revenue Engineering Services Agreement with URS Corporation (the "T&R Agreement") for the provision of traffic and revenue engineering services for CTRMA projects and potential projects; and

WHEREAS, URS Corporation previously performed traffic and revenue engineering studies under the terms of the T&R Agreement pursuant to various Work Authorizations approved by the Board of Directors; and


WHEREAS, the CTRMA and URS Corporation have determined that a new Work Authorization No. 8 is necessary in order to authorize URS Corporation to perform additional traffic and revenue engineering studies for the CTRMA related to the Project subject to the direction of the Executive Director and in accordance with the provisions of Work Authorization No. 8; and

WHEREAS, a proposed Work Authorization No. 8 is attached hereto as Attachment "A" and incorporated herein for all purposes.

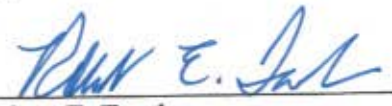
NOW THEREFORE, BE IT RESOLVED, that the CTRMA Board of Directors authorizes the Executive Director to finalize and execute Work Authorization No. 8, substantially in the form set forth in Attachment "A" and consistent with this Resolution, provided that any work commenced under Work Authorization No. 8 shall be subject to all terms and conditions of the T&R Agreement.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 30th day of July, 2008.

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 08-44  
Date Passed 07/30/08

Attachment "A"  
To Resolution 08-44  
Work Authorization No. 8  
URS Corporation

WORK AUTHORIZATION NO. #8 UNDER TERMS OF  
AGREEMENT FOR TRAFFIC & REVENUE ENGINEERING SERVICES

This Work Authorization No. #8 is entered into on this 27th day of June, to be effective as of June 23, 2008, by and between the Central Texas Regional Mobility Authority ("Client"), whose address and phone number are 301 Congress Avenue, Suite 650, Austin, Texas 78701, 512-996-9778, and URS Corporation, a Nevada corporation, ("URS"), whose address and phone number are 9400 Amberglen Blvd., Austin, Texas 78729, 512-454-4797.

WHEREAS, Client and URS entered into an Agreement for Traffic & Revenue Engineering Services dated as of October 2005 (the "Agreement") wherein Client retained URS to provide traffic and revenue engineering services upon the terms and conditions provided in the Agreement. The Agreement provided that URS would provide services under the terms of the Agreement pursuant to work authorizations executed by the parties from time to time which set forth the specific scope, compensation and schedule for the work to be performed. The general form and format of such work authorizations is set forth in Appendix "C" of the Agreement; and

WHEREAS, Client and URS have entered into Work Authorization No. #8 (the "Work Authorization") to address URS preparing and delivering certain traffic and revenue studies and other related services for use by Client, a copy of such Work Authorization (Scope of Services) is attached hereto and incorporated herein for all purposes; and

WHEREAS, Client and URS agree that certain provisions applicable to the Work Authorization under the terms of the Agreement should be amended and/or revised only as they relate to the Work Authorization;

NOW, THEREFORE, Client and URS, in consideration of the above premises as well as other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, agree to the following:

1. **Scope of Services.** Client hereby retains URS to perform those professional services expressly defined in the Work Authorization (the "Services") in accordance with the terms of the Agreement and this Amendment.
2. **Payment.** Client agrees to pay URS in strict accordance with the provisions of the Agreement and the Work Authorization.
3. **Responsibilities of Client.**
  - 3.1. Client will provide URS with all information in its control relating to the Project. All information provided by Client will be, to the best of Client's knowledge with no duty of further inquiry, true and accurate in all respects and will not be misleading by omission or otherwise;
  - 3.2. Client will provide URS with safe access to the Project site and to all employees, information, and documents relevant to performance of the Services;
  - 3.3. Client will promptly provide URS written notice of any suspected deficiency in the Services; and,
  - 3.4. Client will promptly provide required approvals and decisions.
4. **Right to Rely.** Without further investigation, URS is entitled to rely upon all information provided by Client.
5. **Professional Liability; Exclusion of Warranties and Guaranties.** URS will perform the Services with the care and skill established under the terms and conditions of the Agreement, including but not limited to, those set forth in Article 25 thereof. Client acknowledges that there is uncertainty in all projects

involving revenue or traffic forecasts. Client further acknowledges that many of the assumptions relied upon by URS in the performance of the Services, including, without limitation, assumptions related to socioeconomic trends, government practices and policies and prevailing opinions regarding these matters, may not accurately reflect actual conditions or occurrences, or future conditions or occurrences, despite the use of due care by URS. URS does not have any obligation to advise Client of any discrepancies between assumptions made by URS and actual or future conditions or occurrences, so long as URS has utilized the standard of care provided in the Agreement and in this Amendment. Client acknowledges and agrees that any document provided by URS pursuant to the Work Authorization will only constitute the professional opinion of URS with respect to the subject matter thereof and as of the date of the opinion and will not constitute any guarantee or other assurance of future events. Neither will any such document constitute or be regarded as a recommendation by URS to the Client or to any other party to take or not take any actions, including, without limitation, to commence, continue, or complete any project or to provide any financing therefore. Client also acknowledges and agrees that any documents or opinion provided by URS may contain a description of the Principal Materials, Qualifications, and Assumptions upon which URS has relied which statement will be in a form substantially similar to the qualifications contained in Exhibit "A" to this Amendment or otherwise as URS deems appropriate and as approved by Client, such approval not to be unreasonably withheld.

**6. Limited Use of Documents.** Client's use of any of the documents, opinions and communications presented to Client by URS under the terms of the Work Authorization shall be in strict accordance with the provisions, terms and limitations set forth in the Agreement, including but not limited to, Article 13 thereof.

**7. Indemnification.** The indemnification provisions of the Agreement, including but not limited to, those set forth in Article 17 thereof, are specifically acknowledged and reaffirmed by the parties hereto, as they apply to this Amendment, the Work Authorization, the Agreement and any other matter related to the Agreement.

**8. Limitation of Liability.** All limitations of liability, remedies available to either party for breach or alleged breach or default under the Agreement (including under any document or matter related to the Agreement, including this Amendment) shall be as set forth in the terms and conditions of the Agreement.

**9. Waiver of Consequential Damages; Other Limitations.** The provisions of Article 25 of the Agreement, as well as all other applicable provisions of the Agreement shall continue in full force and effect as they relate hereunder.

**10. Insurance.** URS agrees to maintain during the performance of the Services: Workers' Compensation coverage, General Liability insurance coverage,, Automobile Liability insurance coverage and all other insurance coverages as set forth in the Agreement in the amounts set forth in the Agreement.

**11. No Third Party Rights.** This Agreement shall not create any rights or benefits to parties other than Client and URS, except as otherwise specifically provided in the Agreement. URS does not guarantee any particular results. URS is entitled to place whatever disclaimer it deems appropriate in its work product, consistent with the provisions of the Agreement, the Work Authorization and this Amendment.

**12. Assignments.** No assignment by either party of any of its duties and obligations hereunder shall be made in any manner inconsistent with the provisions of the Agreement.

**13. Venue.** The controlling law and venue provisions of the Agreement, including but not limited to, those set forth in Article 27 thereof, are specifically acknowledged and reaffirmed by the parties hereto..

**14. Integrated Writing and Enforceability.** This Amendment is an amendment only to the provisions of the Work Authorization. It is not an amendment to the Agreement or any other agreement or matter between the parties. To the extent the express provisions of this Amendment conflict with the specific provisions of the Agreement (as they relate to or are incorporated into the Work Authorization) or the Work Authorization, but only to such extent such conflict exists, the provisions of this Amendment supersede the conflicting provisions of the Agreement and the Work Authorization. In all other events, Client and URS hereby expressly acknowledge and reaffirm the provisions of the Agreement, as well as all other agreements, work authorizations and other matters arising from the Agreement and the

continuing applicability thereof. Modifications of this Amendment shall not be binding unless made in writing and signed by an authorized representative of each party. The provisions of this Amendment shall be enforced to the fullest extent permitted by law. If any provision of this Amendment is found to be invalid or unenforceable, the provision shall be construed and applied in a way that comes as close as possible to expressing the intention of the parties with regard to the provisions and that saves the validity and enforceability of the provision. This Amendment is the result an arms length negotiation and both parties have materially participated in the drafting of the terms and conditions contained herein.

**15. Client is a Public Entity.** URS acknowledges that Client is a public entity created under the laws and statutes of the State of Texas and is a political subdivision thereof, and is a body politic and corporate. As such, Client is subject to all applicable laws, statutes, rules and regulations, including those associated with the disclosure of information to the public ("Laws"). Client and URS acknowledge and agree that nothing in this Amendment or the Agreement shall be construed to limit the applicability of all such Laws and to the extent any conflict exists between the provisions of this Amendment and the Agreement, and such Laws, the provisions of such Laws shall govern.

THE PARTIES ACKNOWLEDGE that there has been an opportunity to negotiate the terms and conditions of this Amendment and agree to be bound thereby.

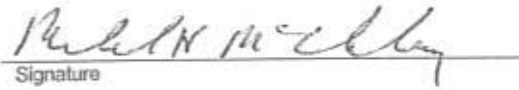
**CLIENT**  
CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

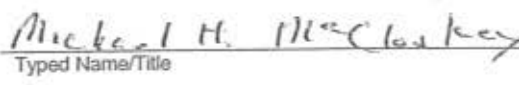
\_\_\_\_\_  
Signature

\_\_\_\_\_  
Typed Name/Title

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Date of Signature

**URS**

  
\_\_\_\_\_  
Signature

  
\_\_\_\_\_  
Typed Name/Title


  
\_\_\_\_\_  
Date of Signature

Exhibit A

PRINCIPAL MATERIALS, QUALIFICATIONS, AND ASSUMPTIONS

Our [report/opinion] \_\_\_\_\_ is subject to the following conditions and limitations:

- *In our review and analysis, and arriving at our [report/opinion] we have assumed and relied upon the accuracy and completeness of all of the information provided to us (both written and oral) by [CLIENT] or otherwise publicly available and have neither attempted independently to verify, nor assumed responsibility for verifying, such information. We have relied upon the assurances of the [CLIENT] that they are not aware of any facts that would make such information misleading.*
- *All estimates and projections in our [report/opinion] are based on URS' experience and judgment and upon a review of information provided to URS by [CLIENT], limited visual observation of conditions at the relevant sites and interview(s) with [CLIENT] personnel and a review of other publicly available reports and information. We also reviewed \_\_\_\_\_. These estimates and projections are not necessarily indicative of actual values or predictive of future results, which may ultimately be more or less favorable than those suggested by our [report/opinion] and are therefore subject to substantial uncertainty.*
- *Any summary of URS' information contained in this report is not a complete description of the analysis and methods conducted in the URS report as such analysis and method involves a complex analytical process involving various determinations as to the most appropriate and relevant methods of analysis and the application of those methods to the particular circumstances; therefore, any analysis is not readily susceptible to a summary description. URS has made qualitative judgments as to the significance and relevance of each analysis and method that it considered. Accordingly, URS' analyses must be considered as a whole and that selecting portions of any individual analyses without considering all analyses and methods could create a misleading or incomplete view of the processes underlying its analyses. We therefore give no opinion as to the value or merit standing alone of any one or more sections of our report.*
- *This [report/opinion] is necessarily based upon scientific, governmental, market, economic and [other conditions] as in effect on, and information made available to us as of, the date of our [report/opinion]. It should be understood that subsequent developments may affect the estimates or projections expressed in the [report/opinion] and cannot be predicted with certainty. We specifically do not guarantee or warrant any estimate or projections contained in our [report/opinion].*
- *Certain statements made in the [report/opinion] that are not historical facts may constitute estimates, projections or other forward-looking statements and even though URS believes that such forward-looking statements are reasonable and are based on reasonable assumptions as of the date in the [report/opinion], such forward-looking statements by their nature involve risks and uncertainties that could cause actual results to differ materially from the results predicted.*
- *We disclaim any undertaking or obligation to advise any person of any change in any matter affecting this [report/opinion], which may come or be brought to our attention after the date of this [report/opinion].*
- *We do not express any opinion on the following items: \_\_\_\_\_.*

URS CORPORATION  
SCOPE OF SERVICES  
FOR  
CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY (CTRMA)

**US 290E TOLL DEVELOPMENT PROJECT  
INVESTMENT GRADE TRAFFIC AND TOLL REVENUE ENGINEERING SERVICES**

The Investment Grade Traffic and Toll Revenue Engineering Services described herein are to be provided by URS Corporation (URS) to the Central Texas Regional Mobility Authority (CTRMA) to prepare an Investment Grade Traffic and Toll Revenue Study and Report for the US 290E toll road project. The US 290E baseline project is defined from US 183 to SH 130.

**SCOPE OF SERVICES**

This Scope of Services is organized into 11 principal tasks that encompass the investment grade study and documentation. Significant analysis of all aspects of the US 290E project along with a comprehensive modeling effort involving the toll diversion forecasting and the socio-economic data (SED) underlying the demographic projections are part of this complex study. This analysis is an update to the existing analysis done in 2006 for this corridor. Included in this comprehensive work program are the following tasks:

- Task 1 – Project Management/Quality Assurance (QA)
- Task 2 – Traffic Data Collection/Field Surveys – Phase 1
- Task 3 – Socioeconomic/Demographic Update
- Task 4 – Toll Rate Schedule/Toll Collection Plan
- Task 5 – Travel Demand Model Roadway Network Development
- Task 6 – Travel Demand Model Calibration – Phase 1
- Task 7 – Traffic and Toll Revenue Estimation – Phase 1
- Task 8 – Traffic Data Collection/Field Surveys – Phase 2
- Task 9 – Travel Demand Model Calibration – Phase 2
- Task 10 – Traffic and Toll Revenue Estimation – Phase 2
- Task 11 – Documentation

The project schedule and budget that support this scope of services are attached. The tasks presented below will be completed for \$485,500 under a lump sum contract as defined by the Master Agreement. This is inclusive of all subconsultants and direct expenses for the work effort.

**Task 1 – Project Management/QA**

Meetings, coordination, administration, and quality assurance comprise Task 1 and are described in the following subtasks:

- 1.1 Meetings
  - 1.1.2 Project Kick-Off, Scope Development, and Mobilization Meetings
  - 1.1.3 Presentations to the CTRMA Staff, Board and/or consultants



- 1.2 Coordination
  - 1.2.1 Coordination with the CTRMA Working Group, Governmental Organizations (including TxDOT), PBS&J and Other Entities to be Identified by the CTRMA
  - 1.2.2 Coordination with Sub-Consultants: GRAM Traffic and Alliance Transportation Group
  - 1.2.3 Establish Communications Procedures and Documentation
- 1.3 Project Schedule and Monthly Updates
- 1.4 Progress Reports and Invoices (Monthly)
- 1.5 Project Quality Assurance

### **Task 2 – Traffic Data Collection/Field Surveys – Phase 1**

In order to meet CTRMA's schedule to provide a preliminary updated traffic and toll revenue forecast by September 2008, a two-phased data collection effort is proposed for the 2008 analysis. This two-phased approach is necessary because traffic data collected during the summer months are not representative of average traffic conditions and are therefore not defensible in support of an investment grade study. The first phase will include a limited data collection effort along the proposed corridor and will be conducted primarily to obtain a general understanding of current traffic volumes on US 290E. URS will adjust the data collected based on TxDOT seasonal factors and experience of Austin area toll roads, SH 130, SH 45N, Loop 1 North and US 183A during the summer months as compared to average annual weekday traffic. Comparing the adjusted 2008 traffic counts to the traffic counts collected in 2006 will provide an indication of growth in traffic volumes since 2006. This information is the minimum required to initiate the traffic modeling calibration process. A more comprehensive data collection effort will then be conducted during the second phase described in Task 8.

The following describes the traffic data collection effort during phase 1:

- Classification counts will be collected at approximately eight (8) traffic count locations along US 290E for a seven (7) day period.

Data collected during phase 1 will be summarized and correlated with the roadway network in the travel demand model to facilitate model calibration.

### **Task 3 – Socioeconomic/Demographic Update**

The socioeconomic review that occurred in the original 2006 Investment grade study will be updated to reflect the current understanding of the demographics in the area surrounding the proposed corridor. The recently developed socioeconomic data (SED) used to support various traffic and toll revenue studies in the region will be used as the initial, underlying data set for this effort. For this task, URS has retained the services of Alliance Transportation Group (ATG) to assess the reasonableness of the forecast. ATG and its predecessor firms successfully completed this task for similar investment grade studies for three Austin area toll road projects: SH 130, SH 45/Loop 1, and US 183-A. ATG also recently served as a consultant in this capacity for the CTRMA SH 45SW, US290W/SH 71 and is currently updating the SED set for other Investment Grade studies in the region. ATG will issue a technical memorandum describing the work performed in Task 3 and documenting the results.

Additionally, URS will review the SED in the study area and the region to verify the reasonableness of the results provided by ATG. This verification process will include a comparison to the 2006 forecast and other data sets developed by CAMPO, the US Census, and the Texas State Data Center. The verification process will include the development of data

comparison tables and thematic maps created using GIS software that will also allow for the identification of geographic areas where significant changes in growth have occurred since 2006.

The result of Task 3 will be a population and employment forecast at the TAZ level for entry into the regional travel demand model for two base years (2005 and 2008) and several future years. The future years included in the forecast will be dependent upon the timing of transportation improvements in the region that may impact the proposed facility, but at a minimum will include 2010, 2015, 2020, 2025, and 2030. Forecasts for intervening years will be interpolated from the model forecast periods.

The following subsections summarize the major components of the SED update task.

### **3.1 Data Collection**

Collect data and review recent literature that summarizes demographic and economic changes to Travis County, the Austin metropolitan area, and, in particular, changes within the US 290E study area. The data will be used to identify recent population and employment development trends and prospects for future growth. Data will be collected from the following sources:

- U.S. Census Bureau
- Texas State Data Center
- Texas Workforce Commission
- Texas Water Development Board
- Texas Comptroller of Public Accounts office
- Capital Area Metropolitan Planning Organization
- City of Austin
- City of Manor
- City of Pflugerville
- Travis County
- *Austin-American Statesman*
- *Austin Business Journal*
- Any other relevant source.

Maps will be obtained from the various municipalities in the study area showing zoning, water and wastewater infrastructure, sensitive environmental features, etc., plus recent digital orthoimagery of the study area.

### **3.2. Field Surveys**

Field surveys will be performed encompassing the entire US 290E study area to discern recent development patterns, including field surveys of selected areas of interest throughout Travis County. Areas of growth and change will be mapped for use during the study area assessment.

### **3.3 Interview Local Officials**

Local officials representing local public entities, such as planning or permitting departments, with jurisdictions in the study area will be interviewed. Public entities that will be contacted include:

- TxDOT
- City of Austin
- City of Manor

- City of Pflugerville
- Travis County
- Others as determined appropriate

#### **Task 4 – Toll Rate Schedule/Toll Collection Plan**

The US 290E toll rate schedule has been established from previous analyses. However, the toll rate policy is still under discussion with respect to both CAMPO and the ability to deliver the project financially under the current funding constraints. In order to provide the CTRMA with a substantial understanding of the impact of the tolling policy on project delivery, URS will analyze four (4) different tolling policies. These tolling policies will be presented to the CTRMA in terms of rate per mile and escalation. Additionally, the corresponding toll at each plaza will be presented by year to provide CTRMA and its stakeholders, a precise description of anticipated toll rates over the life of the project and forecast. The analysis will assume two (2) electronic toll collection (ETC) options would be available to motorists using the tolled facilities:

- ETC transponder; and
- Video tolling.

#### **Task 5 – Travel Demand Model Roadway Network Development**

URS will develop a traffic/toll revenue-forecasting model for the US 290E project for which the CAMPO regional travel model will be the baseline. To develop this model, URS will first update the roadway network to reflect the proposed project configuration, the current transportation infrastructure, and planned infrastructure improvements between opening year and 2030. As part of this effort, URS will confirm the configuration and anticipated completion date of all relevant projects for the specific horizon years in the forecast period. URS will interview local officials who represent local public entities, such as planning or permitting departments with jurisdictions in the study area. Public entities that will be contacted include:

- TxDOT
- City of Austin
- City of Manor
- City of Pflugerville
- Travis County
- Others as determined appropriate

The final list of projects and "most probable" completion dates will be obtained from the TxDOT Austin District, CTRMA and TTA. For all projects that are anticipated to operate as toll facilities, URS will obtain the anticipated toll plans and rates for each of these facilities.

#### **Task 6 – Travel Demand Model Calibration – Phase 1**

Utilizing existing traffic count data and the additional data collected under Task 2, URS will perform an intermediate model calibration of the toll diversion model. This initial calibration will be based on existing data sources and results of phase 1 of the traffic data collection effort and will be conducted with an anticipated completion date of mid-August 2008. A more refined calibration effort based on phase 2 of the traffic data collection effort will be completed in mid-October. The objective of the calibration in this task will be to replicate traffic flows specifically

in the vicinity of the US 290E corridor. This model calibration will also include specific analyses related to trips by vehicle type (auto, truck) as well as specific travel patterns that would utilize the US 290E corridor. URS will also compare the estimated travel speeds generated by the travel demand model against the field data collected from the 2006 Study, adjusted to reflect the possible change in congestion based on the limited adjusted traffic counts collected under Task 2. Additionally, URS will analyze initial estimates of toll constraint and elasticity as part of this task. The overall regional model calibration year will be 2005 and the trip tables will be based on the 2005 population and employment estimates provided by ATG. However, within the project area, URS will validate the model for 2008 using the traffic counts and travel pattern data collected as part of the 2006 analysis.

#### **Task 7 – US 290E Traffic and Toll Revenue Estimation – Phase 1**

In this task, URS will use the toll diversion model based upon the intermediate calibration to estimate volumes for the US 290E project for specific model years, incorporating the revised socioeconomic data and the updated roadway network reflecting information gained in Tasks 3, and 5. Traffic estimates will be developed by toll gantry location. Toll revenue estimates will be developed from the traffic estimates based on appropriate divisions of vehicle class including by payment (ETC/Video) and vehicle (Passenger car/Truck). Additionally, included in the modeling process are assumptions pertaining to toll evasion and toll revenue ramp-up periods.

Traffic and Toll Revenue Estimates will be provided in tabular form for the four tolling scenarios defined during Task 4. A technical memorandum providing the T&R estimates and a brief description of the modeling methodology and assumptions will be delivered by September 5, 2008.

#### **Task 8 – Traffic Data Collection/Field Surveys – Phase 2**

As described previously, this phase of the data collection will be more comprehensive occurring during the appropriate months to collect traffic data. The effort will commence the second week of September when both primary and secondary schools are in session and normal travel patterns are resumed. The purpose of the second phase of the data collection effort will be to verify the original calibration effort and provide data required by the rating agencies to support the sale of bonds.

The following highlights the data collection program for Phase 2:

- Collect approximately 40 classification counts. This may be revised in September based on the appropriateness of locations.
- Perform video-license plate trip origin/destination (O/D) surveys at select locations on SH 130, US 290E, and US 183. Additional surveys may be deemed necessary based on model calibration results. The scope for any additional surveys will be included in a supplemental work authorization.
- Collect turning movement counts on US 290 at the intersections of Parmer, SH 130, and US 183.
- Conduct travel time studies in the US 290E Corridor on parallel routes, cross street routes, and frontage roads. The speed-delay runs will be performed in each direction for the peak and off-peak periods. This data will be collected via multiple trials and the conditions will be averaged to provide estimates of typical travel times through the

corridor by time period. This data will be compared to the estimates of travel times provided by the toll diversion model as part of the final model calibration.

The scope of the Phase 2 data collection effort will be finalized in early September based on the initial calibration results. Data collected during phase 2 will be summarized using GIS applications and entered into the travel demand network to verify the original calibration effort, again necessary for proper conduct of an investment grade analysis.

#### **Task 9 – Travel Demand Model Calibration – Phase 2**

Utilizing the traffic data collection from Task 8 the second calibration of the toll diversion model for 2008 will occur. This calibration effort will reflect the most recent and accurate understanding of the US 290 Study Area. The objective of the calibration in this task will be to replicate traffic flows specifically in the vicinity of the US 290E corridor. This model calibration will also include specific analyses related to trips by vehicle type (auto, truck) and specific travel patterns that would utilize the US 290E corridor. URS will also compare the estimated travel speeds generated by the travel demand model against the field data collected in 2008 from Task 8.

#### **Task 10 – US 290E Traffic and Toll Revenue Estimation – Phase 2**

In this task, URS will use the toll diversion model based upon the Phase 2 calibration conducted in Task 9 to estimate volumes for the US 290E project for specific model years, incorporating the revised socioeconomic data and the updated roadway network reflecting information gained in Tasks 3 and 5. Traffic estimates will be developed by toll gantry location. Toll revenue estimates will be developed from the traffic estimates based on appropriate divisions of vehicle class including by payment (ETC/Video) and vehicle (Passenger car/Truck). Additionally, included in the modeling process are assumptions pertaining to toll evasion and toll revenue ramp-up periods.

Traffic and Toll Revenue Estimates will be provided in tabular form for the four tolling scenarios defined during Task 4. A draft report providing the T&R estimates and briefly describing the methodology and listing all assumptions will be delivered by early November 2008

#### **Task 11 – Documentation**

The US 290E investment grade traffic and toll revenue study will be documented at the first stage with a technical memorandum that includes the Preliminary Toll Revenue Forecasts, and at the second stage with the draft and final report that includes the revised forecasts based on refined calibration of the travel demand model using data collected in the September 2008 data collection efforts. Both the technical memorandum and the report will be issued in draft format for review, comment, and approval by the CTRMA T&R Working Group. It is anticipated that after the submission of the DRAFT Investment Grade Analysis, multiple sensitivity tests will need to be conducted in addition to meetings with prospective financiers and rating agencies. These meetings and tests are not included in this scope of work because of the unknown nature of the length and complexity of this analysis due to changing market conditions. It is anticipated that a supplement or a new work authorization will cover the final steps into project delivery with respect to T&R support for this project.

## Fee Estimate

<b>CTRMA Traffic and Revenue Consultancy</b>			
<b>Work Authorization No #8: Investment Grade Study for US 290E</b>			
<b>Budget</b>			
	Task	Total Hours	Total Costs
Task 1	Project Management/QA	136	\$ 21,482
Task 2	Traffic Data Collection/Field Surveys - Phase 1	34	\$ 4,233
Task 3	Socioeconomic/Demographic Update	122	\$ 13,402
Task 4	Toll Rate Schedule/Toll Collection Plan	32	\$ 4,152
Task 5	Travel Demand Model Roadway Network Development	114	\$ 13,565
Task 6	Travel Demand Model Calibration - Phase 1	420	\$ 42,830
Task 7	Traffic and Toll Revenue Estimation - Phase 1	368	\$ 39,192
Task 8	Traffic Data Collection/Field Surveys - Phase 2	236	\$ 22,771
Task 9	Travel Demand Model Calibration - Phase 2	324	\$ 50,314
Task 10	Traffic and Toll Revenue Estimation - Phase 2	154	\$ 20,032
Task 11	Documentation	264	\$ 31,519
	Hours Subtotal	2204	
	Average DTL		
	Multiplier		
	Average Billing Rate		
	Loaded Cost	\$ 263,492.91	\$ 263,492.91
	Labor Subtotal (rounded)	\$ 263,000	
	<b>Other Direct Costs (ODC)</b>		
	Air Travel (1 trip @ \$750)	\$ 750	
	Lodging (1 night @\$79)	\$ 79	
	Meals (2 days @\$54)	\$ 108	
	Rental Vehicle (12 days @\$40)	\$ 480	
	Gasoline (9 days @ \$50)	\$ 450	
	Color copies (@ \$1.40 each)	\$ 140	
	BW Oversize copies	\$ 200	
	Tech Memos (5x25 copiesx2 (draft and draft final)) @ \$30 each	\$ 300	
	Other	\$ -	
	Expense Subtotal	\$ 2,507	
	Total Expenses (rounded)	\$ 2,500	
	Total URS Costs	\$ 265,500	
	Sub-Contractor		
	Alliance Transportation Group Inc.	\$ 120,000	
	GRAM Traffic	\$ 100,000	
	Total WA No. #8 Costs	\$ 485,500	

## Project Schedule

TASK AND DESCRIPTION	June 2008				July 2008				August 2008				September 2008				October 2008				November 2008			
	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4
<b>Project Name</b>																								
Task 1 Project Management/Quality Assurance																								
Task 2 Traffic Data Collection/Field Surveys - Phase 1																								
Task 3 Socioeconomic/Demographic Update																								
Task 4 Toll Rate Schedule/Toll Collection Plan																								
Task 5 Travel Demand Model Roadway Network Development																								
Task 6 Travel Demand Model Calibration - Phase 1																								
Task 7 Traffic and Toll Revenue Estimation - Phase 1																								
Task 8 Traffic Data Collection/Field Surveys - Phase 2																								
Task 9 Travel Demand Model Calibration - Phase 2																								
Task 10 Traffic and Toll Revenue Estimation - Phase 2																								
Task 11 Documentation																								

⚡ Indicates a submittal