



**CENTRAL TEXAS  
Regional Mobility Authority**

## Regular Meeting of the Board of Directors

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8:30 a.m.  
Wednesday, January 29, 2014

Lowell H. Lebermann, Jr., Board Room  
3300 N. IH-35, Suite 300  
Austin, Texas 78705

## AGENDA

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### ***No action on the following:***

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1. Welcome and opening remarks by the Chairman and members of the Board of Directors.
2. Opportunity for Public Comment – See *Notes* at the end of this agenda.

### ***Discuss, consider, and take appropriate action on the following:***

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3. Approve the minutes for the December 18, 2013, Regular Board Meeting.
4. Award a contract for crack sealing pavement on 183A.
5. Approve a work authorization with Atkins North America, Inc., to provide general engineering consultant services for development of the Bergstrom Expressway project.
6. Approve a work authorization with Telvent USA LLC relating to design, development, testing, and installation of a dynamic tolling system for the MoPac Improvement Project.
7. Approve an amendment to the toll system implementation contract with Telvent USA LLC to extend the length of that contract and increase total compensation payable for services provided under the contract.
8. Authorize the Executive Director to negotiate a proprietary purchase from Metropia, Inc., for software and a smartphone application to manage traffic congestion resulting from construction of the MoPac Improvement Project.

9. Approve an expedited administrative change order approval process for use with the MoPac Improvement Project.
10. Approve an amendment to the Investment Policy (Article 1, Chapter 2 of the Policy Code) following the annual review of that policy.
11. Approve an updated list of financial institutions and brokers authorized to provide investment services to the Mobility Authority.
12. Approve the financial statements for December, 2013.

***Briefing and discussion with no action proposed on the following:***

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13. Quarterly Briefing on the MoPac Improvement Project.
14. Quarterly Briefing on the Manor Expressway Project.
15. Executive Director's report.
  - A. Project Status Updates.

***Executive Session***

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*Under Chapter 551 of the Texas Government Code, the Board may recess into a closed meeting (an executive session) to deliberate any item on this agenda if the Chairman announces the item will be deliberated in executive session and identifies the section or sections of Chapter 551 that authorize meeting in executive session. A final action, decision, or vote on a matter deliberated in executive session will be made only after the Board reconvenes in an open meeting.*

*The Board may deliberate the following items in executive session if announced by the Chairman:*

16. Discuss legal issues related to claims by or against the Mobility Authority, pending or contemplated litigation and any related settlement offers; or other matters as authorized by §551.071 (Consultation With Attorney).
17. Discuss personnel matters as authorized by §551.074 (Personnel Matters).

***Reconvene in Open Session.***

***Discuss, consider, and take appropriate action on the following:***

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18. Approve an agreement with Hill Country Constructors to close out the construction contract for 183A.
19. Adjourn Meeting.

## NOTES

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**Opportunity for Public Comment.** At the beginning and at the end of the meeting, the Board provides a period of up to one hour for public comment on any matter subject to the Mobility Authority's jurisdiction. Each speaker is allowed a maximum of three minutes. A person who wishes to address the Board should sign the speaker registration sheet before the beginning of the public comment period. If a speaker's topic is not listed on this agenda, the Board may not deliberate the speaker's topic or question the speaker during the open comment period, but may direct staff to investigate the matter or propose that an item be placed on a subsequent agenda for deliberation and possible action by the Board. The Board may not deliberate or act on an item that is not listed on this agenda.

**Public Comment on Agenda Items.** A member of the public may offer comments on a specific agenda item in open session if he or she signs the speaker registration sheet for that item before the Board takes up consideration of the item. The Chairman may limit the amount of time allowed for each speaker. Public comment unrelated to a specific agenda item must be offered during the open comment period.

**Meeting Procedures.** The order and numbering of agenda items is for ease of reference only. After the meeting is convened, the Chairman may rearrange the order in which agenda items are considered, and the Board may consider items on the agenda in any order or at any time during the meeting.

**Persons with disabilities.** If you plan to attend this meeting and may need auxiliary aids or services, such as an interpreter for those who are deaf or hearing impaired, or if you are a reader of large print or Braille, please contact Jennifer Guernica at (512) 996-9778 at least two days before the meeting so that appropriate arrangements can be made.



**CENTRAL TEXAS**  
**Regional Mobility Authority**

## AGENDA ITEM #1 SUMMARY

Welcome, Opening Remarks and Board Member Comments.

Welcome, Opening Remarks and Board Member Comments

Board Action Required: NO



**CENTRAL TEXAS**  
**Regional Mobility Authority**

## AGENDA ITEM #2 SUMMARY

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Open Comment Period for Public Comment.  
Public Comment on Agenda Items.

**Open Comment Period for Public Comment** - At the beginning of the meeting, the Board provides a period of up to one hour for public comment on any matter subject to CTRMA's jurisdiction. Each speaker is allowed a maximum of three minutes. A person who wishes to address the Board should sign the speaker registration sheet before the beginning of the open comment period. If the speaker's topic is not listed on this agenda, the Board may not deliberate the topic or question the speaker during the open comment period, but may direct staff to investigate the subject further or propose that an item be placed on a subsequent agenda for deliberation and possible action by the Board. The Board may not act on an item that is not listed on this agenda.

**Public Comment on Agenda Items** - A member of the public may offer comments on a specific agenda item in open session if he or she signs the speaker registration sheet for that item before the Board's consideration of the item. The Chairman may limit the amount of time allowed for each speaker. Public comment unrelated to a specific agenda item must be offered during the open comment period.

Board Action: NO



**CENTRAL TEXAS  
Regional Mobility Authority**

## AGENDA ITEM #3 SUMMARY

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Approve the minutes for the December 18,  
2013 Regular Board Meeting.

Department: Law  
Associated Costs: None  
Funding Source: None  
Board Action Required: YES (by Motion)

Description of Matter:

The Minutes for the December 18, 2013 Regular Board Meeting

Attached documentation for reference:

Draft Minutes for the December 18, 2013 Regular Board Meeting

Contact for further information:

Andrew Martin, General Counsel

## MINUTES

### Regular Meeting of the Board of Directors of the CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY

Wednesday, December 18, 2013  
9:30 A.M.

The meeting was held in the Mobility Authority's Lowell H. Lebermann, Jr., Board Room at 3300 N. Interstate 35, #300, Austin, Texas 78705-1849. Notice of the meeting was posted December 13, 2013 at the respective County Courthouses of Williamson and Travis Counties; online on the website of the Secretary of State; online on the website of the Mobility Authority; and in the Mobility Authority's office lobby at 3300 N. Interstate 35, #300, Austin, Texas 78705-1849.

**1. Welcome and Opening Remarks by Chairman Ray Wilkerson.**

Chairman Ray Wilkerson called the meeting to order at 9:32 a.m. and called the roll. Directors present at the time the meeting was called to order were Mr. Jim Mills, Mr. Bob Bennett, Ms. Nikelle Meade, and Mr. David Armbrust. Mr. Charles Heimsath joined the dais at 9:34 a.m. Mr. David Singleton was not present for the meeting.

**2. Open Comment Period.**

No public comments were offered during the Open Comment Period.

**3. Approve the minutes for the November 20, 2013, Regular Meeting of the Board of Directors.**

Chairman Ray Wilkerson presented for Board consideration the minutes for the November 20, 2013, Regular Board Meeting. Mr. Jim Mills moved to approve the minutes as drafted, and Ms. Nikelle Meade seconded the motion. The motion carried unanimously 5-0, and the minutes were approved as drafted.

**4. Approve a work authorization with Atkins North America, Inc., to provide general engineering consultant services for development of the Bergstrom Expressway project.**

This item was postponed until the January 29, 2013 Board Meeting.

**5. Approve an amendment to the Policy Code relating to gateway monuments on Mobility Authority right-of-way.**

Mr. Sean Beal presented this item. The Policy Code amendment establishes financial responsibility, provides components to be included in the proposal process, and defines regulations related to the design, installation, and maintenance of gateway monuments.

Mr. Bob Bennett moved for approval, and Mr. Charles Heimsath seconded the motion. The motion carried unanimously, 6-0, and the resolution was approved as drafted.

**6. Approve an amendment to the contract with Stantec Consulting Services, Inc., for traffic and revenue services.**

Mr. Bill Chapman presented this item. The proposed renewal agreement authorizes work by Stantec for traffic and revenue studies for Mobility Authority projects in an amount not to exceed \$3 million, and amends the contract to provide for its termination by either party with a thirty day written notice.

Mr. Bob Bennett moved for approval, and Ms. Nikelle Meade seconded the motion. The motion carried unanimously, 6-0, and the resolution was approved as drafted.

**7. Authorize the borrowing of funds from Regions Bank and execution and delivery of a First Amendment to Secured Loan Agreement and other financing documents in connection therewith; and enacting other provisions related thereto.**

Mr. Bill Chapman presented this item. In 2011 the Mobility Authority entered into a \$5 million interim financing loan with Regions Bank. The Mobility Authority has been drawing down on this note to reimburse expenditures on various projects as well as paying down on the principal from proceeds received through the \$13.6 million multi-project Financial Assistance Agreement (FAA) with TxDOT. The expiration date defined in the original Region's loan agreement is December 15, 2013. The Bank and the Mobility Authority have negotiated an extension of the expiration date to November 15, 2015, a maximum principal amount of \$6.4 million and a reduction of the interest rate by 35 basis points.

Mr. Charles Heimsath moved for approval, and Ms. Nikelle Meade seconded the motion. The motion carried unanimously, 6-0, and the resolution was approved as drafted.

**8. Approve the financial statements for November, 2013.**

Mr. Bill Chapman presented this item. There was nothing unusual to report on the financial statements.

Mr. Jim Mills moved for approval, and Ms. Nikelle Meade seconded the motion. The motion carried unanimously, 6-0, and the resolution was approved as drafted.

**Briefing and discussion on the following:**

**9. Executive Director's report.**

Mr. Mike Heiligenstein presented this item and mentioned the 2013 Annual Reports that were provided to Board members.

Chairman Wilkerson recognized and congratulated Mr. Heiligenstein for his ten years of service provided to the Mobility Authority.



## **Executive Session Pursuant to Government Code, Chapter 551**

Chairman Wilkerson announced in open session at 10:07 a.m. that the Board would recess the open meeting and reconvene in Executive Session to deliberate the following items:

10. Discuss legal issues related to claims by or against the Mobility Authority; pending or contemplated litigation and any related settlement offers; or other matters as authorized by §551.071 (Consultation With Attorney).

11. Discuss personnel matters as authorized by §551.074 (Personnel Matters), including evaluation of the performance of the Executive Director.

The Board reconvened in open meeting at 10:45 a.m., and Chairman Wilkerson announced that no action was taken in Executive Session.

### **12. Approve an amended employment agreement with the executive director, including compensation and other contract terms.**

Mr. Bob Bennett moved for approval, and Ms. Nikelle Meade seconded the motion. The motion carried unanimously, 6-0, and the resolution was approved as drafted.

### **13. Adjourn Meeting.**

Chairman Ray Wilkerson declared the meeting adjourned at 10:48 a.m. with unanimous consent.



**CENTRAL TEXAS  
Regional Mobility Authority**

**AGENDA ITEM #4 SUMMARY**

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Award a contract for crack sealing pavement on 183A.

Strategic Plan Relevance: Regional Mobility

Department: Engineering

Associated Costs: \$139,000.00

Funding Source: General Funds

Board Action Required: Yes

Description of Matter:

On January 23, 2014, four bids for the subject contract were received and publicly opened. The following bids were received:

<b>Company</b>	<b>Bid Price</b>
D.I.J. Construction, Inc.	\$139,000.00
Delta Prime Specialty Services, Inc.	\$142,866.90
RHB Construction	\$147,832.00
SCR Construction Co., Inc.	\$360,535.00

The bids have been reviewed by the GEC and Legal Counsel. It is recommended that the contract be awarded to the lowest responsive bidder, D.I.J. Construction, Inc. If approved, a Notice of Award can be issued to the successful proposer. Following submittal and review of the contract bond and insurance documents, the contract will be executed and a Notice to Proceed can be issued.

Reference documentation: Draft Resolution

Contact for further information: Wesley M. Burford, P.E., Director of Engineering

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

**RESOLUTION NO. 14-\_\_\_**

**AWARDING A CONTRACT FOR CRACK SEALING PAVEMENT ON 183A.**

WHEREAS, the pavement surface of 183A frontage roads is now five years old; and

WHEREAS, routine crack sealing activities are recommended as part of a comprehensive preventive maintenance program for roadway surfaces; and

WHEREAS, on October 30, 2013, the Board authorized and directed the Executive Director to procure a contract for surface crack sealing on the 183A frontage roads in accordance with the procurement policies established by Chapter 4 of the Mobility Authority Policy Code; and

WHEREAS, after a review and analysis of the proposal the Mobility Authority staff and the Executive Director recommends awarding a crack sealing contract to D.I.J. Construction, Inc.

NOW THEREFORE, BE IT RESOLVED, that the Board of Directors hereby awards the contract to provide surface crack sealing on 183A frontage roads to D.I.J. Construction, Inc., for a total amount not to exceed \$139,000.00; and

BE IT FURTHER RESOLVED, that the Board authorizes the Executive Director to finalize and execute the contract on the terms and conditions acceptable to the Executive Director and consistent with Mobility Authority procurement policies, the invitation to bid, the proposal package received from D.I.J. Construction, Inc., and this resolution.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 29<sup>th</sup> day of January, 2014.

Submitted and reviewed by:

Approved:

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Andrew Martin  
General Counsel for the Central  
Texas Regional Mobility Authority

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Ray A. Wilkerson  
Chairman, Board of Directors  
Resolution Number: 14-\_\_\_  
Date Passed: 1/29/14



**CENTRAL TEXAS  
Regional Mobility Authority**

## AGENDA ITEM #5 SUMMARY

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Approve a work authorization with Atkins North America, Inc., to provide general engineering consultant services for development of the Bergstrom Expressway project.

Strategic Plan Relevance: Regional Mobility

Department: Engineering

Associated Costs: \$4,780,000

Funding Source: General Fund, Reimbursed per Advanced Funding Agreement with TxDOT (CAMPO ST PMM funds)

Board Action Required: Yes

Description of Matter: Atkins North America, Inc. will provide General Engineering Consultant services related to project activities required to assist the Mobility Authority in the development of the Bergstrom Expressway. These efforts will include, but not be limited to, Project management, administrative tasks, and program oversight including: coordination with TxDOT, Consultants, Resource Agencies, TxDOT Environmental Affairs Division, and the FHWA as required for permitting, environmental approval, Schematic Design Review, Design Alternative Analysis, Toll Systems Design support, Public Involvement support, advancement of utility relocations, procurement management services and additional activities as specifically requested by the Authority.

Reference documentation: Draft Resolution  
Proposed Work Authorization

Contact for further information: Wesley M. Burford, P.E., Director of Engineering

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

**RESOLUTION NO. 14-\_\_**

**APPROVING A WORK AUTHORIZATION WITH ATKINS NORTH AMERICA, INC.,  
TO PROVIDE GENERAL ENGINEERING CONSULTANT SERVICES FOR  
DEVELOPMENT OF THE BERGSTROM EXPRESSWAY PROJECT.**

WHEREAS, Atkins North America, Inc., (“Atkins”) serves as a general engineering consultant to the Mobility Authority under the Agreement for General Consulting Civil Engineering Services effective January 1, 2010 (the “GEC Agreement”); and

WHEREAS, the Executive Director and Atkins have discussed and agreed to a proposed work authorization for Atkins to provide general engineering consultant services for the Bergstrom Expressway Project; and

WHEREAS, the Executive Director recommends approval of the proposed work authorization attached as Exhibit 1.

NOW THEREFORE, BE IT RESOLVED that the proposed work authorization is hereby approved; and

BE IT FURTHER RESOLVED that the Executive Director may finalize and execute for the Mobility Authority the proposed work authorization in the form or substantially the same form as Exhibit 1.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 29<sup>th</sup> day of January, 2014.

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: 14-\_\_  
Date Passed: 1/29/2014

**EXHIBIT 1 TO RESOLUTION 14-**  
**WORK AUTHORIZATION WITH ATKINS NORTH AMERICA, INC.**

**[on the following 13 pages]**

**EXHIBIT D**  
**WORK AUTHORIZATION**

**Supplemental Work Authorization No. 3 to Work Authorization No.2**

This Work Authorization is made as of this 1<sup>st</sup> day of November, 2013, under the terms and conditions established in the AGREEMENT FOR GENERAL CONSULTING ENGINEERING SERVICES, dated as of January 4<sup>th</sup>, 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:

*Bergstrom Expressway [183S Turnpike Project]  
Permitting / Environmental Approval / Schematic Design Review / Design Alternative  
Analysis / Toll Systems Design Support / Public Involvement Support / Advancement of  
Utility Relocation / Procurement Management Services*

**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 shall begin November 1, 2013 and shall be substantially complete by May 31, 2015. This Supplemental 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 authorizes to the GEC an authorized amount \$4,780,000 based on Attachment B-Fee Estimate. This will increase the not to exceed amount for Work Authorization

No. 2 from \$3,389,122 to \$8,169,122. Compensation for Direct Expenses under this Work Authorization which are incurred as part of normal business operations (i.e., internal document reproduction, internal plotting, travel and parking associated with local meetings, etc.) will be reimbursed on a Lump-Sum basis in the amount of: \$47,650 (with \$2,507 to be invoiced monthly). Profit will be 12% for all services. 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: \_\_\_\_\_



**Attachment B - Fee Estimate  
Summary**

CTRMA General Engineering Consultant  
Atkins - Man-hour Breakdown & Fee Estimate  
183 South Turnpike Project (Bergstrom Expressway)

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**ATKINS - Supplemental Work Authorization #3 to Work Authorization #2**

**183 South Turnpike Project (Bergstrom Expressway)**

TASK	<u>SUBTOTAL</u> Labor + Overhead + Profit	<u>SUBTOTAL</u> Direct Expenses	<u>TOTAL</u>
<b>183 South Turnpike Project (Bergstrom Expressway)</b>			
1.1 Environmental Study / Document Services [Code 13210]	\$ 144,297	\$ 1,400	\$ 145,697
1.2 Preliminary Engineering [13110]	\$ 267,875	\$ 2,600	\$ 270,475
1.3 Project Oversight - Pre Construction [Code 13710]	\$ 1,011,790	\$ 10,100	\$ 1,021,890
1.4 Pre-Investment Grade Traffic & Revenue Analysis Coordination [Code 13120]	\$ 168,178	\$ 1,600	\$ 169,778
1.5 Investment Grade Traffic & Revenue Analysis Coordination [Code 13330]	\$ 123,714	\$ 1,250	\$ 124,964
1.6 Project Oversight - CDA [Code 13730]	\$ 1,809,577	\$ 18,900	\$ 1,828,477
1.7 Environmental Permit Support [Code 13220]	\$ 171,324	\$ 1,700	\$ 173,024
1.8 Final Design Services [Code 13310]	\$ 760,431	\$ 7,500	\$ 767,931
1.9 Right-of-Way Acquisition & Relocation Services [Code 13410]	\$ 140,894	\$ 1,400	\$ 142,294
1.10 Right-of-Way Litigation / Condemnation Services [Code 13450]	\$ 125,831	\$ 1,200	\$ 127,031
Subtotals	\$ 4,723,911	\$ 47,650	\$ 4,771,561
		<b>TOTAL (rounded)</b>	<b>\$ 4,780,000</b>

**Attachment B - Fee Estimate**

CTRMA General Engineering Consultant  
 Atkins - Man-hour Breakdown & Fee Estimate  
 183 South Turnpike Project (Bergstrom Expressway)

**ATKINS - Supplemental Work Authorization #3 to Work Authorization #2  
 183 South Turnpike Project (Bergstrom Expressway)**

183 South Turnpike Project (Bergstrom Expressway)

(Estimated Average Labor Rates)

TASK / WORK DESCRIPTION	A	B	C	D	E	F	TOTAL
	\$ 80.00	\$ 70.00	\$ 60.00	\$ 45.00	\$ 35.00	\$ 25.00	HRS
1.1 Environmental Study / Document Services [Code 13210]							
1.1.1 US 183 Environmental Assessment (EA)							
1.1.1.1 Facilitate EA Project Status Meetings	90		45	45			180
1.1.1.2 Complete EA Document Reviews	8		40		20		68
1.1.1.3 Update Traffic information in EA	4	60	20				84
1.1.1.4 Update Figures for EA	4		40	160			204
1.1.1.5 Facilitate Public Involvement Support	20	40	80	160			300

	126	100	225	365	20	0	836
TOTAL DIRECT LABOR	15.07%	11.96%	26.91%	43.66%	2.39%	0.00%	
Labor Costs	\$ 10,080	\$ 7,000	\$ 13,500	\$ 16,425	\$ 700	\$ -	\$ 47,705
Overhead Costs	\$ 17,143	\$ 11,905	\$ 22,959	\$ 27,934	\$ 1,190	\$ -	\$ 81,132
Profit	\$ 3,267	\$ 2,269	\$ 4,375	\$ 5,323	\$ 227	\$ -	\$ 15,460
<b>Total Loaded Labor</b>	<b>\$ 30,490</b>	<b>\$ 21,173</b>	<b>\$ 40,835</b>	<b>\$ 49,682</b>	<b>\$ 2,117</b>	<b>\$ -</b>	<b>\$144,297</b>

<b>Direct Expenses</b>	
Plotting and Reproduction	\$ 600
Mail and Deliveries	\$ 200
Misc Expenses	\$ 400
Travel and Field Expenses	\$ 200
<b>Total Direct Expenses</b>	<b>\$ 1,400</b>
<b>Total</b>	<b>\$ 145,697</b>

## Attachment B - Fee Estimate

CTRMA General Engineering Consultant  
 Atkins - Man-hour Breakdown & Fee Estimate  
 183 South Turnpike Project (Bergstrom Expressway)

### ATKINS - Supplemental Work Authorization #3 to Work Authorization #2 183 South Turnpike Project (Bergstrom Expressway)

TASK / WORK DESCRIPTION	A	B	C	D	E	F	TOTAL
	80.00 \$	70.00 \$	60.00 \$	45.00 \$	35.00 \$	25.00 \$	HRS
(Estimated Average Labor Rates)							
1.2 Preliminary Engineering [13110]							
1.2.1 Design Corridor Exhibits and Schematic							
1.2.1.1 TxDOT Support for Engineering Services	40	80	160	160	80		520
1.2.1.2 Design Verification	20	40	80	80	40		260
1.2.1.3 Design Modification	20	40	80	80	40		260
1.2.1.4 Shared Use Path	8	20	40	40			108
1.2.1.5 Tree Alternative Design	8	20	40	40			108
1.2.1.6 Mobility Improvement at SH71	8	20	80	160			268
1.2.1.7 Pedestrian Bridge	4	24	24	40			92
1.2.1.8 Updates to Design Schematic							

TOTAL DIRECT LABOR	108	244	504	600	160	0	1616
	6.68%	15.10%	31.19%	37.13%	9.90%	0.00%	
Labor Costs	\$ 8,640	\$ 17,080	\$ 30,240	\$ 27,000	\$ 5,600	\$ -	\$ 88,560
Overhead Costs	\$ 1,700	\$ 14,694	\$ 29,048	\$ 51,429	\$ 9,524	\$ -	\$ 150,614
Profit	\$ 2,800	\$ 5,535	\$ 9,800	\$ 8,750	\$ 1,815	\$ -	\$ 28,701
<b>Total Loaded Labor</b>	<b>\$ 26,134</b>	<b>\$ 51,663</b>	<b>\$ 91,469</b>	<b>\$ 81,669</b>	<b>\$ 16,939</b>	<b>\$ -</b>	<b>\$267,875</b>

<b>Direct Expenses</b>	
Plotting and Reproduction	\$ 1,300
Mail and Deliveries	\$ 100
Misc Expenses	\$ 900
Travel and Field Expenses	\$ 300
<b>Total Direct Expenses</b>	<b>\$ 2,600</b>

**Total \$ 270,475**

## Attachment B - Fee Estimate

CTRMA General Engineering Consultant  
 Atkins - Man-hour Breakdown & Fee Estimate  
 183 South Turnpike Project (Bergstrom Expressway)

### ATKINS - Supplemental Work Authorization #3 to Work Authorization #2 183 South Turnpike Project (Bergstrom Expressway)

TASK / WORK DESCRIPTION	(Estimated Average Labor Rates)						TOTAL HRS
	A	B	C	D	E	F	
	\$ 80.00	\$ 70.00	\$ 60.00	\$ 45.00	\$ 35.00	\$ 25.00	
1.3 Project Oversight - Pre Construction [Code 13710]							
1.3.1 Project Management	300	250	250		70	50	920
1.3.2 Project Reporting	120	120	120		40	40	440
1.3.3 Project Scheduling	40	40	200				280
1.3.4 Project Development Support	800	120	1040	160	700	560	3380
1.3.5 Financial Planning Support	40		40	40			120
1.3.6 Conceptual Operations Plan	240		240		120	120	720

TOTAL DIRECT LABOR	1540	530	1890	200	930	770	5860
	% Total by Classification						
Labor Costs	\$ 123,200	\$ 37,100	\$ 113,400	\$ 9,000	\$ 32,550	\$ 19,250	\$ 334,500
Overhead Costs	\$ 1,7007	\$ 209,526	\$ 63,096	\$ 192,859	\$ 15,306	\$ 55,358	\$ 568,884
Profit	\$ 39,927	\$ 12,024	\$ 36,751	\$ 2,917	\$ 10,549	\$ 6,239	\$ 108,406
<b>Total Loaded Labor</b>	<b>\$ 372,653</b>	<b>\$ 112,219</b>	<b>\$ 343,011</b>	<b>\$ 27,223</b>	<b>\$ 98,457</b>	<b>\$ 58,227</b>	<b>\$1,011,790</b>

<b>Direct Expenses</b>	
Plotting and Reproduction	\$ 5,000
Mail and Deliveries	\$ 200
Misc Expenses	\$ 4,200
Travel and Field Expenses	\$ 700
<b>Total Direct Expenses</b>	<b>\$ 10,100</b>

Total **\$1,021,890**

**Attachment B - Fee Estimate**

CTRMA General Engineering Consultant  
 Atkins - Man-hour Breakdown & Fee Estimate  
 183 South Turnpike Project (Bergstrom Expressway)

**ATKINS - Supplemental Work Authorization #3 to Work Authorization #2  
 183 South Turnpike Project (Bergstrom Expressway)**

183 South Turnpike Project (Bergstrom Expressway)

TASK / WORK DESCRIPTION	(Estimated Average Labor Rates)						TOTAL HRS
	A	B	C	D	E	F	
	\$ 80.00	\$ 70.00	\$ 60.00	\$ 45.00	\$ 35.00	\$ 25.00	
1.4 Pre-Investment Grade Traffic & Revenue Analysis Coordination [Code 13120]	80	40	40	80	20	20	0
1.4.1 Coordination with CTRMA's T&R Consultant	40	80	240	240	120	40	280
1.4.2 Provide project information to T&R Consultant							760

TOTAL DIRECT LABOR	120	120	280	320	140	60	1040
	11.54%	11.54%	26.92%	30.77%	13.46%	5.77%	
Labor Costs	\$ 9,600	\$ 8,400	\$ 16,800	\$ 14,400	\$ 4,900	\$ 1,500	\$ 55,600
Overhead Costs	1,7007	16,327	14,286	28,572	24,490	8,333	94,559
Profit	12.0%	3,111	2,722	5,445	4,667	1,588	18,019
<b>Total Loaded Labor</b>	\$ 29,038	\$ 25,408	\$ 50,816	\$ 43,557	\$ 14,822	\$ 4,537	\$168,178

Direct Expenses	\$	800
Plotting and Reproduction	\$	200
Mail and Deliveries	\$	500
Misc Expenses	\$	100
Travel and Field Expenses	\$	1,600
<b>Total Direct Expenses</b>	\$	3,600

Total \$ 169,778

**Attachment B - Fee Estimate**

CTRMA General Engineering Consultant  
 Atkins - Man-hour Breakdown & Fee Estimate  
 183 South Turnpike Project (Bergstrom Expressway)

**ATKINS - Supplemental Work Authorization #3 to Work Authorization #2  
 183 South Turnpike Project (Bergstrom Expressway)**

183 South Turnpike Project (Bergstrom Expressway)

(Estimated Average Labor Rates)

TASK / WORK DESCRIPTION	A	B	C	D	E	F	TOTAL
	\$ 80.00	\$ 70.00	\$ 60.00	\$ 45.00	\$ 35.00	\$ 25.00	HRS
1.5 Investment Grade Traffic & Revenue Analysis Coordination [Code 13330]							0
1.5.1 Coordination with CTRMA's T&R Consultant	80	40	40	80	20	20	280
1.5.2 Provide project information to T&R Consultant	40	80	120	120	60	40	460

TOTAL DIRECT LABOR	120	120	160	200	80	60	740
	<i>16.22%</i>	<i>16.22%</i>	<i>21.62%</i>	<i>27.03%</i>	<i>10.81%</i>	<i>8.11%</i>	
Labor Costs	\$ 9,600	\$ 8,400	\$ 9,600	\$ 9,000	\$ 2,800	\$ 1,500	\$ 40,900
Overhead Costs	1,7007	16,327	16,327	15,306	4,762	2,551	69,559
Profit	12.0%	3,111	2,722	3,111	907	486	13,255
Total Loaded Labor	\$ 29,038	\$ 25,408	\$ 29,038	\$ 27,223	\$ 8,470	\$ 4,537	\$123,714

Direct Expenses	
Plotting and Reproduction	\$ 650
Mail and Deliveries	\$ 200
Misc Expenses	\$ 300
Travel and Field Expenses	\$ 100
<b>Total Direct Expenses</b>	<b>\$ 1,250</b>

Total \$ 124,964

## Attachment B - Fee Estimate

CTRMA General Engineering Consultant  
 Atkins - Man-hour Breakdown & Fee Estimate  
 183 South Turnpike Project (Bergstrom Expressway)

### ATKINS - Supplemental Work Authorization #3 to Work Authorization #2 183 South Turnpike Project (Bergstrom Expressway)

183 South Turnpike Project (Bergstrom Expressway)

TASK / WORK DESCRIPTION	A	B	C	D	E	F	TOTAL
	80.00 \$	70.00 \$	60.00 \$	45.00 \$	35.00 \$	25.00 \$	HRS
(Estimated Average Labor Rates)							
1.6 Project Oversight - CDA [Code 13730]	140	420	320	90	40	40	1050
1.6.1 Request for Qualifications (RFQ) Process	500	720	620	620	340	300	3100
1.6.2 Draft Request for Detailed Proposal (RFDP)	300	500	700	300	200	100	2100
1.6.3 Final RFDP	120	240	360	180	100	60	1060
1.6.4 Proposal Coordinator Support	180	480	720	300	20	120	1800
1.6.5 Proposal Review Support	80		160	120	20	80	460
1.6.6 CDA Contracting Support	120	120	180	60	120	180	780
1.6.7 Bond Sale Support							

TOTAL DIRECT LABOR	1440	2480	3060	1670	820	880	10350
	13.91%	23.96%	29.37%	16.14%	7.92%	8.50%	
Labor Costs	\$ 115,200	\$ 173,600	\$ 183,600	\$ 75,150	\$ 28,700	\$ 22,000	\$ 598,250
Overhead Costs	1,7007 \$	195,921 \$	295,242 \$	312,249 \$	127,808 \$	48,810 \$	1,017,444
Profit	12.0%	\$ 37,334	\$ 56,261	\$ 59,502	\$ 24,355	\$ 9,301	\$ 193,883
Total Loaded Labor	\$ 348,455	\$ 525,103	\$ 555,350	\$ 227,313	\$ 86,811	\$ 66,545	\$ 1,809,577

<b>Direct Expenses</b>	
Plotting and Reproduction	\$ 8,400.00
Mail and Deliveries	\$ 1,000.00
Misc Expenses	\$ 2,500.00
Travel and Field Expenses	\$ 7,000.00
<b>Total Direct Expenses</b>	<b>\$ 18,900</b>

Total \$ 1,828,477

**Attachment B - Fee Estimate**

CTRMA General Engineering Consultant  
 Atkins - Man-hour Breakdown & Fee Estimate  
 183 South Turnpike Project (Bergstrom Expressway)

**ATKINS - Supplemental Work Authorization #3 to Work Authorization #2  
 183 South Turnpike Project (Bergstrom Expressway)**

183 South Turnpike Project (Bergstrom Expressway)

	A	B	C	D	E	F	TOTAL
(Estimated Average Labor Rates)	\$ 80.00	\$ 70.00	\$ 60.00	\$ 45.00	\$ 35.00	\$ 25.00	IRS
	48	120	400	400	40	40	0
							1048

**TASK / WORK DESCRIPTION**

- 1.7 Environmental Permit Support [Code 13220]
- 1.7.1 Preconstruction Notice for (USACE)

	48	120	400	400	40	40	1048
<b>TOTAL DIRECT LABOR</b>	4.58%	11.45%	38.17%	38.17%	3.82%	3.82%	3.82%
Labor Costs	\$ 3,840	\$ 8,400	\$ 24,000	\$ 18,000	\$ 1,400	\$ 1,000	\$ 56,640
Overhead Costs	1,7007 \$	6,531 \$	14,286 \$	40,817 \$	30,613 \$	2,381 \$	1,701 \$
Profit	12.0% \$	1,244 \$	2,722 \$	7,778 \$	5,834 \$	454 \$	18,356 \$
<b>Total Loaded Labor</b>	\$ 11,615	\$ 25,408	\$ 72,595	\$ 54,446	\$ 4,235	\$ 3,025	\$171,324

<b>Direct Expenses</b>	
Plotting and Reproduction	\$ 800
Mail and Deliveries	\$ 100
Misc Expenses	\$ 600
Travel and Field Expenses	\$ 200
<b>Total Direct Expenses</b>	\$ 1,700

**Total \$ 173,024**



**Attachment B - Fee Estimate**

CTRMA General Engineering Consultant  
 Atkins - Man-hour Breakdown & Fee Estimate  
 183 South Turnpike Project (Bergstrom Expressway)

**ATKINS - Supplemental Work Authorization #3 to Work Authorization #2  
 183 South Turnpike Project (Bergstrom Expressway)**

TASK / WORK DESCRIPTION	(Estimated Average Labor Rates)						TOTAL HRS
	A	B	C	D	E	F	
183 South Turnpike Project (Bergstrom Expressway)	80.00 \$	70.00 \$	60.00 \$	45.00 \$	35.00 \$	25.00 \$	
1.8 Final Design Services [Code 13310]	40	120	420	280	160	80	1100
1.8.1 Utility Coordination	200	400	840	1000	1000	800	4240
1.8.2 Subsurface Utility Engineering (SUE)							

TOTAL DIRECT LABOR	240	520	1260	1280	1160	880	5340
<i>% Total by Classification</i>	<i>4.49%</i>	<i>9.74%</i>	<i>23.60%</i>	<i>23.97%</i>	<i>21.72%</i>	<i>16.48%</i>	
Labor Costs	\$ 19,200	\$ 36,400	\$ 75,600	\$ 57,600	\$ 40,600	\$ 22,000	\$ 251,400
Overhead Costs	\$ 32,653	\$ 61,905	\$ 128,573	\$ 97,960	\$ 69,048	\$ 37,415	\$ 427,556
Profit	\$ 6,222	\$ 11,797	\$ 24,501	\$ 18,667	\$ 13,158	\$ 7,130	\$ 81,475
<b>Total Loaded Labor</b>	<b>\$ 58,076</b>	<b>\$ 110,102</b>	<b>\$ 228,674</b>	<b>\$ 174,228</b>	<b>\$ 122,806</b>	<b>\$ 66,545</b>	<b>\$760,431</b>

<b>Direct Expenses</b>	
Plotting and Reproduction	\$ 3,000
Mail and Deliveries	\$ 1,000
Misc Expenses	\$ 1,500
Travel and Field Expenses	\$ 2,000
<b>Total Direct Expenses</b>	<b>\$ 7,500</b>

**Total \$ 767,931**

## Attachment B - Fee Estimate

CTRMA General Engineering Consultant  
 Atkins - Man-hour Breakdown & Fee Estimate  
 183 South Turnpike Project (Bergstrom Expressway)

### ATKINS - Supplemental Work Authorization #3 to Work Authorization #2 183 South Turnpike Project (Bergstrom Expressway)

TASK / WORK DESCRIPTION	A	B	C	D	E	F	TOTAL
	\$ 80.00	\$ 70.00	\$ 60.00	\$ 45.00	\$ 35.00	\$ 25.00	HRS
183 South Turnpike Project (Bergstrom Expressway)							
(Estimated Average Labor Rates) [Code 13410]							
1.9 Right-of-Way Acquisition & Relocation Services [Code 13410]							
1.9.1 Appraisals	40	120	120	80	60	60	480
1.9.2 Negotiation / Voluntary Settlement	40	20	16	16	40	40	172
1.9.3 Relocation Assistance	8	8					16
1.9.4 Right of Way Status Tracking	20	40	60	20	30	30	200

TOTAL DIRECT LABOR	108	188	196	116	130	130	868
	12.44%	21.66%	22.58%	13.36%	14.98%	14.98%	14.98%
Labor Costs	\$ 8,640	\$ 13,160	\$ 11,760	\$ 5,220	\$ 4,550	\$ 3,250	\$ 46,580
Overhead Costs	\$ 14,694	\$ 22,381	\$ 20,000	\$ 8,878	\$ 7,738	\$ 5,527	\$ 79,219
Profit	\$ 2,800	\$ 4,265	\$ 3,811	\$ 1,692	\$ 1,475	\$ 1,053	\$ 15,096
<b>Total Loaded Labor</b>	<b>\$ 26,134</b>	<b>\$ 39,806</b>	<b>\$ 35,571</b>	<b>\$ 15,789</b>	<b>\$ 13,763</b>	<b>\$ 9,831</b>	<b>\$140,894</b>

<b>Direct Expenses</b>	
Plotting and Reproduction	\$ 700
Mail and Deliveries	\$ 100
Misc Expenses	\$ 400
Travel and Field Expenses	\$ 200
<b>Total Direct Expenses</b>	<b>\$ 1,400</b>

Total \$ 142,294

**Attachment B - Fee Estimate**

CTRMA General Engineering Consultant  
 Atkins - Man-hour Breakdown & Fee Estimate  
 183 South Turnpike Project (Bergstrom Expressway)

**ATKINS - Supplemental Work Authorization #3 to Work Authorization #2  
 183 South Turnpike Project (Bergstrom Expressway)**

183 South Turnpike Project (Bergstrom Expressway)

(Estimated Average Labor Rates) \$

TASK / WORK DESCRIPTION	A	B	C	D	E	F	TOTAL
	80.00 \$	70.00 \$	60.00 \$	45.00 \$	35.00 \$	25.00 \$	HRS
1.10 Right-of-Way Litigation / Condemnation Services [Code 13450]							
1.10.1 Litigation Support	20	60	60	200	200	120	660
1.10.2 General Attorney Consultation	40	40	80	0	40	40	240

TOTAL DIRECT LABOR	60	100	140	200	240	160	900
	6.67%	11.11%	15.56%	22.22%	26.67%	17.78%	
Labor Costs	\$ 4,800	\$ 7,000	\$ 8,400	\$ 9,000	\$ 8,400	\$ 4,000	\$ 41,600
Overhead Costs	\$ 1,700	\$ 11,905	\$ 14,286	\$ 15,306	\$ 14,286	\$ 6,803	\$ 70,749
Profit	\$ 1,556	\$ 2,269	\$ 2,722	\$ 2,917	\$ 2,722	\$ 1,296	\$ 13,482
<b>Total Loaded Labor</b>	<b>\$ 14,519</b>	<b>\$ 21,173</b>	<b>\$ 25,408</b>	<b>\$ 27,223</b>	<b>\$ 25,408</b>	<b>\$ 12,099</b>	<b>\$125,831</b>

<b>Direct Expenses</b>	
Plotting and Reproduction	\$ 600
Mail and Deliveries	\$ 200
Misc Expenses	\$ 300
Travel and Field Expenses	\$ 100
<b>Total Direct Expenses</b>	<b>\$ 1,200</b>

**Total \$ 127,031**



**CENTRAL TEXAS  
Regional Mobility Authority**

## AGENDA ITEM #6 SUMMARY

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Approve a new work authorization with Telvent USA LLC relating to design, development, testing, and integration of a dynamic tolling system for the MoPac Improvement Project.

Strategic Plan Relevance:	Regional Mobility
Department:	Operations
Associated Costs:	Not to Exceed \$5,840,021
Funding Source:	MoPac Improvement Project Funds
Board Action Required:	Yes

Description of Matter: This proposed work authorization with Telvent USA LLC provides for the design, development, installation and testing of a dynamic tolling system and related Intelligent Transportation System for the MoPac Improvement Project. The System will be an all-electronic system that uses a dynamic pricing structure to manage operations of the Express Lanes and will be fully compatible with the toll collection systems which have been designed and implemented for 183A and the Manor Expressway.

Based on the review of the proposed Work Authorization by Mobility Authority staff and the GEC, it was determined that the Scope of Services addresses the anticipated project requirements, and that the level of effort and associated fee is appropriate. We recommend approval of this work authorization.

Reference documentation:	Draft Resolution Work Authorization No. 10
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Contact for further information: Tim Reilly, Director of Operations

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

**RESOLUTION NO. 14-\_\_\_**

**APPROVING A NEW WORK AUTHORIZATION WITH TELVENT USA LLC  
RELATING TO DESIGN, DEVELOPMENT, TESTING, AND INTEGRATION OF A  
DYNAMIC TOLLING SYSTEM FOR THE MOPAC IMPROVEMENT PROJECT.**

WHEREAS, effective April 27, 2005, the Mobility Authority executed a Contract for Toll System Implementation with Caseta Technologies, Inc., subsequently acquired by Telvent USA Corporation, for Telvent to provide toll systems implementation services to the Mobility Authority (the "Telvent Contract"); and

WHEREAS, development of the MoPac Improvement Project will require the design and installation of a toll system and related network infrastructure; and

WHEREAS, the Executive Director and Telvent have discussed and agreed to a new work authorization under the Telvent Contract relating to design, development, testing, and integration of a dynamic tolling system for the MoPac Improvement Project; and

WHEREAS, the Executive Director recommends approval of the new work authorization attached as Exhibit 1.

NOW, THEREFORE, BE IT RESOLVED that the new work authorization with Telvent is hereby approved; and

BE IT FURTHER RESOLVED that the Executive Director may finalize and execute for the Mobility Authority the new work authorization in the form or substantially the same form attached as Exhibit 1.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 29<sup>th</sup> day of January, 2014.

Submitted and reviewed by:

Approved:

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Andrew Martin  
General Counsel for the Central  
Texas Regional Mobility Authority

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Ray A. Wilkerson  
Chairman, Board of Directors  
Resolution Number: 14-\_\_\_  
Date Passed: 1/29/2014

**EXHIBIT 1 TO RESOLUTION 14-**  
**NEW TELVENT WORK AUTHORIZATION**

**[on the following 7 pages]**

CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY

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**WORK AUTHORIZATION**

**WORK AUTHORIZATION NO. 10**

**TOLL SYSTEM AND TOLL-RELATED ITS DESIGN, INSTALLATION, AND TESTING**

**MOPAC IMPROVEMENT PROJECT**

**THIS WORK AUTHORIZATION (“WA No.10”)** is made pursuant to the terms and conditions of Article 1 of the GENERAL PROVISIONS, Attachment A to the original Contract for Toll System Implementation, dated April 27, 2005 (the Contract) entered into by and between the Central Texas Regional Mobility Authority (the “Authority”) and Telvent USA, LLC, as the successor in interest to Caseta Technologies, Inc. (the “Contractor,” also referred to in attachments to this WA No. 10 as the “System Integrator” or “SI”), as that Contract has been amended on February 26, 2010, and on May 2, 2011 (the “Contract”).

**PART I.** The Contractor will perform toll system design, installation, and testing services described in **Exhibit A** and System Integrator Proposal **Exhibit B** to this WA No. 10. The Contractor’s duties and responsibilities to coordinate with the Authority’s Design/Build Contractor for the MoPac Improvement Project are detailed in (i) the MoPac - Dynamic Pricing and Toll System Layout in **Exhibit C**, (ii) the Express Lane Toll Facilities Guidelines in **Exhibit D**, and (iii) the Toll Facility Responsibility Matrix in **Exhibit E**. The Contractor shall purchase and provide the equipment and software described in the Bill of Materials in **Exhibit F**. The Contractor shall perform all work in accordance with Federal Requirements in **Exhibit J**.

**PART II.** The maximum amount payable to Contractor under this WA No.10 is \$5,840,021.00. This amount is based on the cost estimate shown in Pricing Schedule in **Exhibit H**.

**PART III.** Payment to the Contractor for the services established under this WA No. 10 shall be made in accordance with the Contract and is listed in Payment Schedule in **Exhibit I**.

**PART IV.** This WA No. 10 is effective on the date both parties have signed this WA No. 10. This WA No. 10 will terminate on 365 days after the Authority’s Design/Build Contractor for the MoPac Improvement Project has achieved Substantial Completion, unless extended by a supplemental Work Authorization as provided in Attachment A,

Article 1 of the GENERAL PROVISIONS. The work shall be performed in accordance with the Express Lanes Project Schedule and Milestones set forth in **Exhibit G**.

**PART V.** This WA No. 10 does not waive any party's responsibilities and obligations established by the Contract; and except as specifically modified by this WA No. 10, all such responsibilities and obligations under the Contract remain in full force and effect.

**IN WITNESS WHEREOF**, this Work Authorization No. 10 is executed in duplicate counterparts and hereby accepted and acknowledged below.

**THE CONTRACTOR: Telvent USA, LLC**

Signature	Date
Typed/Printed Name and Title	

**CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY**

Mike Heiligenstein, Executive Director
Date:

**LIST OF EXHIBITS**

- EXHIBIT A SCOPE OF WORK
- EXHIBIT B SYSTEM INTEGRATOR PROPOSAL
- EXHIBIT C MOPAC - DYNAMIC PRICING AND TOLL SYSTEM LAYOUT
- EXHIBIT D EXPRESS LANE TOLL FACILITIES GUIDELINES
- EXHIBIT E TOLL FACILITY RESPONSIBILITY MATRIX
- EXHIBIT F BILL OF MATERIALS
- EXHIBIT G EXPRESS LANES PROJECT SCHEDULE AND MILESTONES
- EXHIBIT H PRICING SCHEDULE
- EXHIBIT I PAYMENT SCHEDULE
- EXHIBIT J FEDERAL REQUIREMENTS



## **EXHIBIT A**

**CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY**

**TOLL SYSTEM AND TOLL-RELATED ITS DESIGN, INSTALLATION,  
AND TESTING**

**MoPac Improvement Project**

### **SCOPE OF WORK for SYSTEM INTEGRATOR**

#### **A1.0 General**

##### **A1.01. Background**

The Central Texas Regional Mobility Authority (“Authority”) is developing the MoPac Improvement Project on Loop 1 (MoPac) from Parmer Lane to Cesar Chavez Street, for a total length of approximately 11.2 miles (the “Project”). The Project includes construction of one tolled Express Lane in each direction which will be dynamically priced. The Authority has procured a Design/Build Contractor (“D/B Contractor”) and has entered into a design-build contract (the “D/B Contract”) with CH2M HILL who will design and build the Project.

The Toll System Integrator (SI) is responsible for the design, development, testing and installation of a dynamic tolling system (“Toll System”) and related Intelligent Transportation Systems in support of the Toll System (“Toll-Related ITS”), as further described in this Work Authorization No. 10 (the “Toll System and Toll-Related ITS Design, Installation and Testing”). The Project shall be implemented in accordance with the Project schedule in *Exhibit G - “Express Lanes Project Schedule and Milestones”*.

##### **A1.02. Summary of Scope of Work**

The Scope of Work for this Work Authorization No. 10 includes:

- SI shall design the Toll System and Toll-Related ITS.
- SI shall develop and install the Toll System and Toll-Related ITS.
- SI shall implement and test the Toll System and Toll-Related ITS.
- SI shall monitor and provide maintenance and operations support for the duration specified in *Exhibit G - “Express Lanes Project Schedule and Milestones”*.

## EXHIBIT A

### A2.0 General Description – Express Lane Toll System and Toll-Related ITS Work

The Project's Toll System will be an all-electronic toll (AET) facility that uses a dynamic pricing structure to manage the operations of the Express Lanes. The proposed facility will consist of four (4) gantry locations where the toll system will be installed, five (5) variable toll message signs (VTMS) with VTMS cameras, traffic detection systems (TDS) every ½ mile, and CCTV cameras which shall provide visual coverage of the entire project. Preliminary facility layout is shown in *Exhibit C - "MoPac - Dynamic Pricing and Toll System Layout"*. Locations of tolling facilities are approximate and are subject to change as the D/B Contractor progresses towards the completion of plan development. The Project's Toll System also includes a primary and secondary Project Host Systems installed at the Field Operations Building (FOB) and at a second site as specified in *Exhibit B - "System Integrator Proposal"*.

The Toll System for the Project will be fully compatible with the Toll Collection System (TCS) which has been designed and implemented for the 183A Toll Road and 290 East (Manor Expressway) Toll Projects, using Automatic Vehicle Identification (AVI) technology, a Violation Enforcement System (VES) with an integrated camera and triggering system to capture referenced digital images of license plates, and a Remote Online Management System (ROMS). In support of the MoPac Express Lanes, the Toll System will include Dynamic Pricing Systems, and Image Review Systems and Trip Matching Systems. The Toll System shall be interoperable with other Texas electronic toll collection systems.

### A3.0 Detailed Scope of Services

The D/B Contractor is responsible for the design and construction of the Toll System Infrastructure, as established by the D/B Contract. The general locations, layouts, and guidelines for the Toll System, as established by the D/B Contract, are indicated in *Exhibit D - "Express Lane Toll Facilities Guidelines"*.

The SI is responsible for the design, development, testing and installation of the Toll System and Toll-Related ITS Infrastructure identified in *Exhibit E - "Toll Facility Responsibility Matrix"*. The SI shall also work with the Authority, its GEC, the D/B Contractor, and others as described herein. The SI shall purchase, provide and install all equipment detailed in *Exhibit F - "Bill of Materials"*.

#### A3.01. Toll System Design, Installation, and Testing

The SI shall design and install the Toll System at the four (4) Toll Zones identified in *Exhibit D - "Express Lane Toll Facilities Guidelines"* so that it is fully compatible with and meets the requirements for the Project. The Toll System at each Toll Zone shall meet the requirements in *Exhibit B - "System Integrator Proposal"* and shall include:

- Zone Controllers/Image Capture Station: Redundant and independent servers shall be provided capable of stand-alone operation, each processing all data in parallel and providing control/monitoring of all in-lane hardware.

## **EXHIBIT A**

- Automatic Vehicle Identification (AVI) System: Readers and antennas shall be installed that read transponders in each lane and determine its speed and location to enable the system to accurately assign transponders to the correct vehicle.
- Automatic Vehicle Detection System (AVDS): Redundant vehicle detection system comprising of loops, pucks and SICK laser scanners shall be installed in each lane to detect and track vehicles in the toll zone including motorcycles and trigger the image capture cameras.
- Image Capture and Processing System (ICPS): Front and rear high resolution cameras shall be installed in each lane and shoulder to capture images of all vehicles traveling through the lanes. The solution shall analyze image quality degradation and correlate the images to the correct vehicle.
- Digital Video Audit System (DVAS): Each Toll Zone shall have digital video cameras that monitor traffic activity in the Toll Zone. In addition, security cameras shall be installed at each Toll Zone to monitor the equipment cabinet. The DVAS shall integrate the video from all cameras into a video database that stores recorded video and can be accessed by users for auditing.
- Uninterruptible Power Supplies (UPS): All Toll System equipment and electronics shall be on UPS and the UPS shall support the Toll System with one hour of battery backup.
- Equipment Cabinets: Environmentally controlled cabinets shall be provided to house the Toll System electronics.
- Generators: Each Toll Zone will have a generator to be used if there is a prolonged power outage.

### **A3.02. Toll-Related ITS Design, Installation, and Testing**

The SI shall design and install the Toll-Related ITS at the locations identified in *Exhibit C - "MoPac - Dynamic Pricing and Toll System Layout"*. The Toll-Related ITS shall meet the requirements in *Exhibit B - "System Integrator Proposal"* and shall include:

- Traffic Detection System (TDS): Radar Vehicle Sensing Devices shall be installed at every half mile spanning the entire corridor in both directions to provide full coverage on the general purpose lanes and the Express Lanes. These units shall collect traffic data (volumes, occupancy and speed) and report this data in real-time to Project Host to be utilized in the dynamic pricing algorithm.
- Variable Toll Message Sign (VTMS): VTMS panels shall be attached to static signs mounted to existing or new overhead sign bridges and cantilever overhead sign structures. VTMS controllers shall be installed in cabinets and shall control the panels to display the TollTag and Pay By Mail (PBM) toll rates to the downstream exits. The number of panels per VTMS shall be based on the location of the VTMS.
- VTMS Cameras: A digital video camera shall be installed at each VTMS location to capture the toll rate display at configurable intervals.

## EXHIBIT A

- VTMS AVI System: At each VTMS location AVI readers and antennas shall be installed to read transponders on vehicles traveling in the general purpose lanes.
- Closed Circuit Television (CCTV) System: High definition digital video cameras shall be installed throughout the Express Lanes corridor to provide full visual coverage of the Express Lanes in both directions of travel.

### **A3.03. Toll System Project Host Design, Installation, and Testing**

The SI shall design and install a Project Host that supports the monitoring and control of the Toll Systems and Toll-Related ITS. The Project Host shall meet the requirements in *Exhibit B - "System Integrator Proposal"* and shall include:

- Project Host Servers/Storage: Sufficient number of servers and storage devices shall be provided to support the various functions and processes described in *Exhibit B - "System Integrator Proposal"*. There shall be a primary Project Host installed at the FOB and the secondary Project Host shall be at a separate location but connected to the CTRMA fiber communications system. The Project Host shall interface to the CTRMA Host System for processing transponder and PBM trips.
- Dynamic Pricing System: The dynamic pricing algorithm shall utilize the real-time characteristics of the corridor to determine the toll rates. Default toll rates shall be provided to support degraded mode of operations. The dynamic pricing algorithm shall meet the CTRMA operational and revenue generation requirements.
- Optical Character Recognition (OCR)/AutoMatch Software: OCR and AutoMatch software shall be provided to extract the license plate number, jurisdiction and plate type and vehicle characteristics from images of vehicles. The OCR and AutoMatch results shall help with trip building and images review.
- Image Review: Image review and operations functionality shall be provided that allow users to efficiently review images, monitor operations and audit the image processing results.
- Trip Building: Trip Matching software shall be provided that correctly and successfully creates TollTag and PBM trips for customers who drive through the Express Lanes.
- ROMS: The CTRMA ROMS shall be used to monitor and track the overall health of the Express Lanes Toll System and Toll-Related ITS and maintenance activities through real-time displays. Failure of equipment and processes shall result in the creation of work orders through ROMS that are tracked to closure. Maintenance Reports shall be available through ROMS to validate the performance of the Toll System and SI maintenance.
- Dashboards: The Toll System shall include Dashboards that are a graphical representation of information valuable to the management and oversight of the Express Lanes operations. These shall include graphs, charts, and meters that provide as-a-glance real time representation of the system health, Express Lanes traffic conditions, dynamic pricing results, VTMS displays, traffic forecasting and hot links to DVAS, CCTV and VTMS video feeds.

## **EXHIBIT A**

- Remote Operations and Adjustments: The System shall provide authorized users the capability to over-ride dynamic prices; control the VTMS, and make adjustments to toll rates and trip transactions.
- Express Lanes Reports: Traffic, Revenue, Audit, Reconciliation and Operations reports shall be provided to enable CTRMA to audit and reconcile the toll data, transactions and trips; report traffic and revenue and monitor operations.

### **A3.04. Express Lanes Command Center (ELCC)**

The SI shall provide the required workstations and monitors at the FOB to enable the monitoring and operations of the Express Lanes. The SI will provide monitoring, operations and maintenance support for a period of four (4) months after Go Live to monitor and validate the accurate operations of the Express Lanes and the Toll System.

### **A3.05. Toll System and Toll-Related ITS Documentation**

The SI shall provide all documentation for CTRMA review and Approval as listed in *Exhibit G - "Express Lanes Project Schedule and Milestones"*.

### **A3.06. Toll System and Toll-Related ITS Testing**

The SI shall perform all testing as listed in *Exhibit G - "Express Lanes Project Schedule and Milestones"*.



**CENTRAL TEXAS  
Regional Mobility Authority**

**AGENDA ITEM #7 SUMMARY**

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Approve an amendment to the toll system implementation contract with Telvent USA LLC to extend the length of that contract and increase total compensation payable for services provided under the contract.

Strategic Plan Relevance: Regional Mobility  
Department: Operations  
Associated Costs: Not to exceed \$33,575,185.11  
Funding Source: Project Funds  
Board Action Required: Yes

Description of Matter: In April 2005, the Mobility Authority entered into a Contract for Toll System Implementation with Caseta Technologies, Inc. (subsequently acquired by Telvent) for the design, installation, and maintenance of a toll collection system for the Mobility Authority toll road system. The original agreement was for an initial five year term, with the option to renew for an additional three years upon mutual consent of the parties. An additional three year term was approved with Resolution 10-27 on March 31, 2010; and Resolution 11-38 on April 27, 2011 extended the contract to expire on the later of April 26, 2013 or 365 days after substantial completion of the Manor Expressway/290E Project.

This amendment #3 to the master agreement is to increase the maximum compensation payable under the Contract to \$33,575,185.11, and to extend the term of the Contract to 365 days after substantial completion of the MoPac Improvement Project.

Reference documentation: Draft Resolution  
Draft Amendment to Master Agreement

Contact for further information: Tim Reilly, Director of Operations

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

**RESOLUTION NO. 14-\_\_\_**

**APPROVING AN AMENDMENT TO THE TOLL SYSTEM IMPLEMENTATION  
CONTRACT WITH TELVENT USA LLC TO EXTEND THE LENGTH OF THAT  
CONTRACT AND INCREASE TOTAL COMPENSATION PAYABLE FOR SERVICES  
PROVIDED UNDER THE CONTRACT.**

WHEREAS, the Central Texas Regional Mobility Authority (“Mobility Authority”) entered into a contract with Caseta Technologies, Inc. dated April 27, 2005, for the design, procurement, and installation of a toll collection system on the Authority’s turnpike system (the “Contract”); and

WHEREAS, Caseta Technologies, Inc., was subsequently acquired by Telvent USA Corporation, a Maryland corporation (“Telvent”), and all rights and obligations of Caseta Technologies, Inc. under the Contract are now the rights and obligations of Telvent; and

WHEREAS, the initial term of the Contract originally expired on April 26, 2010, but has been extended with approvals by the Board of Directors to expire the later date of April 26, 2013, or 365 days after substantial completion of the Manor Expressway project; and

WHEREAS, Telvent is providing toll system implementation services for the MoPac Improvement Project under the Contract, and staff recommends that the Contract remain in effect until all work on the MoPac Improvement Project is complete; and

WHEREAS, staff also recommends making additional amendments to the existing scope of services, increasing the total contract price to pay for that work, and recommends approval of the proposed amendment to the Contract attached as Exhibit 1 to this Resolution.

NOW THEREFORE, BE IT RESOLVED, that Board approves the proposed amendment to the Contract and authorizes the Executive Director to execute the amendment in the form or substantially the same form as shown on Exhibit 1 to this Resolution.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 29<sup>th</sup> day of January, 2014.

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 14-\_\_\_  
Date Passed: 1/29/14

**EXHIBIT 1 TO RESOLUTION 14-**

**AMENDMENT TO CONTRACT FOR TOLL SYSTEM IMPLEMENTATION**

**[Following 9 Pages]**



**THIRD AMENDMENT TO CONTRACT FOR TOLL SYSTEM IMPLEMENTATION  
BETWEEN CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY  
AND  
TELVENT USA LLC**

This Third Amendment to the Contract for Toll System Implementation between Central Texas Regional Mobility Authority ("CTRMA") and Telvent USA LLC, as the successor in interest to Caseta Technologies, Inc. (the "Contractor") is made effective as of the \_\_\_ day of February, 2014, and is for the purpose of amending Section 13, Attachment B, and SCHEDULE 1 of the Contract for Toll System Implementation between CTRMA and Contractor, effective April 27, 2005 (the "Contract").

Pursuant to action of the CTRMA Board of Directors, reflected in Resolution No. 01- \_\_, dated January 29, 2014, Section 13, Attachment B, Attachment D, and Schedule 1 of the Contract is amended as described below.

Section 13 is amended to read as follows:

13. **TERM OF CONTRACT** Unless otherwise terminated pursuant to Article 15 of Attachment A, the initial term of the Toll System Implementation Contract shall expire upon 365 days after Substantial Completion of the MoPac Improvement Project.

Section B 2.0 of Attachment B – SCOPE OF WORK is amended by adding the following Subsections B2.09, B2.10, B2.11, B2.12, B2.13.

**B2.09. Cameron County Regional Mobility Authority (CCRMA) SH 550 – Port Spur Toll Project**

The SH 550 Project improves the corridor to include a two-lane Toll Road; one lane each direction with shoulders. The Toll Lanes are separated from the frontage roads by a grassed elevated median and physical barrier. The toll collection system for the project will be all Electronic Toll Collection (ETC).

**B2.10. MoPac Improvement Project: Toll System and Toll-Related ITS Design, Coordination, and D/B Contractor Oversight**

The MoPac Improvement Project will add one Express Lane in each direction along an 11-mile stretch of MoPac (Loop 1) from Parmer Lane north of Austin to Cesar Chavez Street in downtown Austin. The Express Lanes will be located in the middle of the corridor, separated from the general purpose lanes by a striped buffer zone with delineators. The Express Lanes will employ dynamic pricing to manage throughput and Toll System and Toll-Related ITS equipment will be installed to support the Express Lanes operation. This scope of work is for design coordination and oversight of the D/B Contractor during the design phase of the project.

**B2.11. Traffic Management Center Implementation**

The project consists of renovations to the existing space and facilities at the current Mobility Authority Field Operations Building, located at 104 North Lynnwood Trail in Cedar Park, Texas, to accommodate the proposed Traffic Management Center (TMC). The

TMC will serve the Manor Expressway, the MoPac Improvement Project, and other future projects on the Mobility Authority System. The TMC will Traffic Management System (TMS) components for projects may include but not limited to closed circuit television (CCTV) cameras, dynamic message signs (DMS), radar vehicle sensing detector stations, traffic detection system (TDS), variable toll message signs (VTMS), VTMS cameras, and VTMS AVI system.

**B2.12. MoPac Improvement Project: Parmer Lane to Cesar Chavez Street**

The MoPac Improvement Project will add one Express Lane in each direction along an 11-mile stretch of MoPac (Loop 1) from Parmer Lane north of Austin to Cesar Chavez Street in downtown Austin. The Express Lanes will be located in the middle of the corridor, separated from the general purpose lanes by a striped buffer zone with delineators. The Express Lanes will employ dynamic pricing to manage throughput and Toll System and Toll-Related ITS equipment will be installed to support the Express Lanes operation. This scope of work is for design and construction of the facility's tolling system during the construction phase of the project.

**B2.13. SH 71 Express Project**

The SH 71 Express Project is part of a series of improvements intended to complete a highway upgrade to SH 71. The project is dedicated to improving mobility along SH 71 in a safe, efficient, and reliable manner.

Schedule 1 – PRICE SCHEDULE is amended by:

- (1) Adding the attached Schedule 1.2 (pages 1.2-1 through 1.2-2) after Schedule 1.1 page 1.1-5;
- (2) Adding the attached pages for Schedules 1-20b, 1-20c, 1-20d, 1-20e;
- (3) Amending the TOTAL PROPOSED PRICE-All Segments and Common Items on page Schedule 1-21 to read **\$33,575,185.11**.

Except to the extent modified herein, all terms and condition of the Contract shall continue in full force and effect.

By their signatures below, the parties of the Contract evidence their agreement to the amendment set forth above.

CENTRAL TEXAS REGIONAL  
MOBILITY AUTHORITY

TELVENT USA LLC

\_\_\_\_\_  
Mike Heiligenstein  
Executive Director

CCRMA SH-550 TOLL SYSTEM				UNIT PRICE		AMOUNT	
ITEM #	QTY.	UNIT	DESCRIPTION	DOLLARS	CENTS	DOLLARS	CENTS
1	1	LS	Installation/Electrical Design and Plans	9,535	00	9,535	00
2	1	LS	Field Installation and Electrical Work, Materials and Labor	317,183	00	317,183	00
3	2	Ea.	Site Prep	32,646	00	65,292	00
4	1	Ea.	Dual 3343 Cabinet, A/C, and Foundation	72,743	00	72,743	00
5	1	LS	Primary Electrical Service	21,226	00	21,226	00
6	2	Ea.	Zone Controller Hardware & SW	30,624	00	61,248	00
7	2	Ea.	Communication Equipment	61,479	00	122,958	00
8	6	Ea.	Automatic Vehicle Classification System, Express ETC Lane	16,392	00	98,352	00
9	4	Ea.	AVI System Hardware, Express ETC Lane	14,598	00	58,392	00
10	6	Ea.	Violation Enforcement System Hardware, Express ETC Lane	40,473	00	242,838	00
11	1	LS	UPS	13,322	00	13,322	00
12	0	LS	Emergency Generator & Automatic Transfer Switch	49,697	00	-	00
13	1	LS	ROMS HW/SW & Security Server(s) (ie: Digital Video Recorder & Audit)	76,897	00	76,897	00
14	1	LS	Host System (Store & Forward) HW/SW	50,592	00	50,592	00
15	1	LS	Training	8,321	00	8,321	00
16	1	LS	Documentation	34,979	00	34,979	00
17	1	LS	Project Management	65,375	00	65,375	00
18	1	LS	Spare Equipment	27,901	00	27,901	00
19	1	LS	Site Commissioning Test	19,863	00	19,863	00
20	1	LS	Operational Test	19,863	00	19,863	00
				Total		1,386,880	00

The Pricing shown above Excludes:

- Bonding
- Excludes UAE Certification/Testing and all other UAE costs
- Gantries (provided by others)
- All Recurring Data Communication Costs
- Recurring 3rd-Party, SW/HW Support Agreements & SW Licenses
- System HW/SW Warranty/Maintenance Services/Support & Spares Replenishment Costs

MoPac Improvement Project - Systems Integrator - Price Build-up										
Item Description / Position Title	Rate	DSoS - A3.01		DSoS - A3.02		DSoS - A3.03		DSoS - A3.04		Ext Price
		Hrs	Price	Hrs	Price	Hrs	Price	Hrs	Price	
Software Engineer	\$ 116.00	8	\$ 928	32	\$ 3,712	8	\$ 928	12	\$ 1,392	\$ 6,960.00
System Engineer	\$ 127.00	200	\$ 25,400	460	\$ 58,420	64	\$ 8,128	64	\$ 8,128	\$ 100,076.00
Technician	\$ 89.00		\$ -	24	\$ 2,136	12	\$ 1,068	8	\$ 712	\$ 3,916.00
Database Administrator	\$ 165.00		\$ -	24	\$ 3,960		\$ -	8	\$ 1,320	\$ 5,280.00
Documentation Clerk	\$ 119.00	60	\$ 7,140	80	\$ 9,520		\$ -	40	\$ 4,760	\$ 21,420.00
Testing Engineer	\$ 126.00		\$ -	36	\$ 4,536		\$ -		\$ -	\$ 4,536.00
Project Manager	\$ 165.00	140	\$ 23,100	140	\$ 23,100	80	\$ 13,200	120	\$ 19,800	\$ 79,200.00
<b>SUB-TOTAL LABOR</b>		<b>408</b>	<b>\$ 56,568</b>	<b>796</b>	<b>\$ 105,384</b>	<b>164</b>	<b>\$ 23,324</b>	<b>252</b>	<b>\$ 36,112</b>	<b>\$ 221,388.00</b>
<b>Other Costs</b>										
								Equipment/Materials	\$	-
								Sub-Contractors	\$	-
								Travel Exp's		
								ODC's	\$	2,500.00
<b>SUB-TOTAL OTHER COSTS</b>										<b>\$ 2,500.00</b>
								G&A / Fee on Other Costs	15%	\$ 375.00
<b>TOTAL PRICE</b>										<b>\$ 224,263.00</b>

A3.01. - Coordination, workshops, meetings, and over the shoulder reviews

A3.02. - Toll System and Toll-Related ITS requirements and Site Design

A3.03. - Schedule Review and Acceptance

A3.04. - Plan Review and Acceptance

1) Excludes any and all Taxes (including State/Federal/Local taxes)

2) Excludes Bonding and/or costs for additional Insurance

3) Excludes Subcontractor, Materials/Equipment and Other Direct Costs (If required, these costs/expenses/services will be billed back to CTRMA at Cost + 15%)

**Final PRICE SHEET  
TMC Command Center**

Task No.	Description	Qty	Unit	Unit Price (US \$'s)	Extended Price (US \$'s)
1	HW - Materials / Equipment	1	Lot	71,905.64	71,905.64
2	Program Management	1	Lot	41,933.35	41,933.35
3	Design & System Documentation	1	Lot	16,843.80	16,843.80
4	Furniture	1	Lot	30,246.07	30,246.07
5	Integration/Test (FAT, Commissioning, Final Accept, etc.)	1	Lot	64,406.08	64,406.08
6	Construction	1	Lot	464,677.73	464,677.73
<b>TOTAL</b>					<b>\$690,012.67</b>

The Pricing shown above Excludes:

- All Recurring Data Communication Costs
- Recurring 3rd-Party SW/HW Support Agreements & SW Licenses
- Spares Replenishment Costs

<b>MOPAC Express Lanes Project</b>					
<b>ITEM #</b>	<b>QTY.</b>	<b>UNIT</b>	<b>DESCRIPTION</b>	<b>UNIT PRICE</b>	<b>EXT PRICE</b>
1	4	EA	Tolling Zone. Includes: Materials/equipment, SW mods to add new locations to system, field installation/labor & electrical work.	\$ 402,291	\$ 1,609,163
2	1	LS	ITS Devices. Includes: Equipment /materials, installation & integration.	\$ 1,339,610	\$ 1,339,610
3	1	LS	Communication Equipment. Includes: Equipment /materials, installation & integration.	\$ 154,819	\$ 154,819
4	1	LS	Video/DVR System Equipment. Includes: Equipment /materials, installation & integration.	\$ 109,708	\$ 109,708
5	4	EA	Equipment Cabinet. Includes: Equip/materials, install & integration (excls: ele/civil, foundations, concrete slabs, etc.)	\$ 23,078	\$ 92,312
6	1	LS	Dynamic Pricing Server and HOST Upgrade. Includes: Equipment /materials, installation & integration.	\$ 329,557	\$ 329,557
7	1	LS	Fiber Optic Installation	\$ 471,325	\$ 471,325
8	1	LS	Spare Equipment	\$ 164,894	\$ 164,894
9	1	LS	Dynamic Pricing and Trip Building SW Design/Development	\$ 523,496	\$ 523,496
10	1	LS	Documentation. Includes: Plans, training manuals, design doc's, etc.	\$ 258,359	\$ 258,359
11	24	Mth	Project Management	\$ 16,368	\$ 392,830
12	1	LS	On-site First Installation Testing (OFIT)	\$ 64,519	\$ 64,519
13	3	EA	Per Zone Commissioning test support (remaining 3-Zones)	\$ 12,673	\$ 38,019
14	1	LS	Operational Testing	\$ 212,413	\$ 212,413
15	1	LS	Bonding	\$ 58,996	\$ 58,996
16	1	LS	Additional Insurance above basic Corporate Policy to cover added ROW coverage	\$ 20,000	\$ 20,000
<b>TOTAL</b>				<b>\$</b>	<b>5,840,021</b>

**Excludes:**

- Excludes All Recurring Data Communication Costs
- Excludes Traffic Control (MOT) & Lane Rental Charges
- Excludes System HW/SW Warr/Maint Services/Support & Spares Replenishment Costs
- Equipment Cabinet Installation Excludes electrical/civil, foundations, concrete slabs, etc.
- Excludes Any/all taxes (Assumes CTRMA is Tax Exempt)
- Pricing above is based on mutually agreeable payment terms.

**TOLL COLLECTION SYSTEMS IMPLEMENTATION  
FEE SCHEDULES**

**Payment Measurement**

This schedule provides description of the Method of Measurement and the Basis of Payment for the bid items necessary to complete the work under the Project. The Contractor is required to submit price proposals which are based on the Method of Measurement and Basis of Payment for each item described in this schedule.

**Payment Items**

**110. ITS Devices (*Includes: Equipment /materials, installation & integration*)**

Method of Measurement

ITS devices shall be measured per each ITS device installed on Express Lanes and General Purpose Lanes. Each shall include furnishing all labor, materials, and support services to complete the design, fabrication, unit testing, packaging, delivery, onsite installation, integration and testing, and acceptance of the ITS Devices, complete with all its internal components, cabinets, UPS, network equipment and mounting devices, all in conformance with the requirements of the Contract, and as accepted by the CTRMA.

Basis of Payment

Payment will be made at the unit bid price upon successful delivery and verification of the ITS Devices. Payment for the ITS Devices delivery does not relieve the Proposer from any responsibilities and terms specified in the Contract.

**111. Equipment Cabinet (*Includes: Equipment/materials, install & integration; Excludes: elec/civil, foundations, concrete slabs, etc.*)**

Method of Measurement

Equipment Cabinets shall be measured per each Equipment Cabinet installed at the Tolling Zone. Each shall include furnishing all labor, materials, and support services to complete the design, fabrication, unit testing, packaging, delivery, onsite installation, integration and testing, and acceptance of the Equipment Cabinets, complete with all its internal components and AC, all in conformance with the requirements of the Contract, and as accepted by the CTRMA.

Basis of Payment

Payment will be made at the unit bid price upon successful delivery and verification of the Equipment Cabinets. Payment for the Equipment Cabinets delivery does not relieve the Proposer from any responsibilities and terms specified in the Contract.

## SCHEDULE 1.2

### 112. **Dynamic Pricing Server and HOST Upgrade** (*Includes: Equipment /materials, installation & integration*)

#### Method of Measurement

Dynamic Pricing Server and Host Upgrade shall be measured on a lump sum basis each for the Dynamic Pricing Servers installed for the Express Lanes and CTRMA Host Server and Database upgrade. Each shall include furnishing all labor, materials, and support services to complete the design, fabrication, unit testing, packaging, delivery, onsite installation, integration and testing, and acceptance of the Dynamic Pricing Server and Host Upgrade, complete with all its internal components, storage devices, operating system, database and warranty all in conformance with the requirements of the Contract, and as accepted by the CTRMA.

#### Basis of Payment

Payment will be made at the lump sum bid price upon successful delivery, integration and verification of the complete Dynamic Pricing Server and Host Upgrade. Payment shall also include warrant-guarantee services and maintenance services, in accordance with the requirements of the Contract. Payment for the Dynamic Pricing Server and Host Upgrade does not relieve the Proposer from any responsibilities and terms specified in the Contract.

### 113. **Dynamic Pricing and Trip Building SW Design/Development**

#### Method of Measurement

Dynamic Pricing and Trip Building SW Design/Development shall be measured on a lump sum basis as developed, tested and deployed on the Express Lanes and shall include all software required for the integration of the Dynamic Pricing and Trip Building SW into the Express Lanes Toll System software. The lump sum unit shall include furnishing all labor, materials, licenses, and support services to complete the design, development, unit testing, integration, configuration, on-site testing and acceptance of the Dynamic Pricing and Trip Building SW all in conformance with the requirements of the Contract, and as accepted by the CTRMA.

#### Basis of Payment

Payment will be made at the lump sum bid price upon successful delivery, integration, testing and acceptance of the complete Express Lanes Toll System which includes the Dynamic Pricing and Trip Building SW. Payment shall also include warrant-guarantee services and maintenance services, in accordance with the requirements of the Contract. Payment for the Dynamic Pricing and Trip Building does not relieve the Proposer from any responsibilities and terms specified in the Contract.





**CENTRAL TEXAS  
Regional Mobility Authority**

## AGENDA ITEM #8 SUMMARY

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Authorize the Executive Director to negotiate a proprietary purchase from Metropia, Inc., for software and a smartphone application to manage traffic congestion resulting from construction of the MoPac Improvement Project.

Strategic Plan Relevance: Regional Mobility, Innovation

Department: Operations

Associated Costs: TBD

Funding Source: MoPac Improvement Project funds

Board Action Required: Yes

Description of Matter: Metropia, Inc., provides a unique incentive based traffic congestion management software and smartphone application that assists its users in avoiding traffic delays by providing real-time traffic information, but also a prediction of near-time future congestion. Travelers are provided with an incentive to contribute to lessening traffic congestion by changing their travel time to a less-congested time period or by choosing an alternative route offered by the application instead of a congested route. Metropia, Inc., was the only respondent to a Request for Information issued by the Mobility Authority for incentive-based congestion management software.

The application offers multiple routes around congested areas and allows for client (Mobility Authority) input regarding route restrictions (i.e. local neighborhood streets). This application is being considered to assist in managing and routing traffic during the construction of the MoPac Improvement Project and continuing to assist in managing traffic corridors throughout the Central Texas Region.

Reference documentation: Draft Resolution  
Response to RFI from Metropia, Inc., dated January 3, 2014

Contact for further information: Tim Reilly, Director of Operations

If the executive director finds that the authority's requirements for the procurement of a general good or service describe a product that is proprietary to one vendor and do not permit an equivalent product to be supplied, the authority may solicit a bid for the general good or service solely from the proprietary vendor, without using the competitive bidding or competitive proposal procedures. The executive director shall justify in writing the authority's requirements and shall submit the written justification to the board. The written justification must:

- (i) explain the need for the specifications;*
- (ii) state the reason competing products are not satisfactory; and*
- (iii) provide other information requested by the board.*

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

**RESOLUTION NO. 14-\_\_\_**

**AUTHORIZING THE EXECUTIVE DIRECTOR TO NEGOTIATE A PROPRIETARY  
PURCHASE FROM METROPIA, INC., FOR SOFTWARE AND A SMARTPHONE  
APPLICATION TO MANAGE TRAFFIC CONGESTION RESULTING FROM  
CONSTRUCTION OF THE MOPAC IMPROVEMENT PROJECT.**

WHEREAS, the Mobility Authority has started construction of the MoPac Improvement Project, and anticipates that travelers on MoPac will face increased traffic congestion while the project is under construction; and

WHEREAS, in an effort to identify methods to reduce and address traffic congestion on MoPac, the Mobility Authority on December 20, 2013, issued a request for information for vendors who could provide an incentive-based traffic congestion management software and smartphone application (the "RFI"); and

WHEREAS, Metropia, Inc., was the sole respondent to the RFI, and the Executive Director recommends negotiating with Metropia, Inc., to reach an agreement for the use of their product to by the Mobility Authority.

NOW THEREFORE, BE IT RESOLVED, that the Board hereby authorizes the Executive Director to negotiate an agreement with Metropia, Inc., for the product and services described in its response to the RFI, on terms and conditions as the Executive Director determines is in the best interests of the Mobility Authority; and

BE IT FURTHER RESOLVED, that any proposed agreement with Metropia, Inc., must be authorized by future Board action.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 29<sup>th</sup> day of January, 2014.

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 14-\_\_\_  
Date Passed: 1/29/2014

**CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY**  
**REQUEST FOR INFORMATION (“RFI”) FOR**  
**INCENTIVE-BASED TRAFFIC CONGESTION MANAGEMENT**  
**SOFTWARE AND SMARTPHONE APP**

**Release Date: December 20, 2013**

The Central Texas Regional Mobility Authority (“Authority”) is soliciting information to identify vendors who may offer an existing software application capable of providing traffic congestion management for central Texas regional roadways. The application should analyze real-time traffic data to provide alternative, less-congested route recommendations based on that data, and communicate information about current and projected traffic congestion to drivers through a smartphone application. The application must also provide an incentive to motivate drivers to choose an alternative route to a route with extreme traffic congestion, thereby improving the efficiency of travel for drivers throughout the region.

The Authority is issuing this Request for Information (“RFI”) to notify firms of the Authority’s interest in acquiring a software tool that includes, as a minimum, the features and elements described by this RFI. However, the Authority has not committed to acquire any software product or service by issuing this RFI, including a software product that meets all the criteria described below. Once the Authority ascertains that one or more software applications may satisfy the criteria discussed in this RFI, the Authority may elect to proceed with a procurement of software and services in accordance with Authority’s Policies and Procedures Governing Procurements of Goods and Services (“Procurement Policies”).

**Responses to this RFI are due by 4:00 p.m., CST, January 6, 2014.**

**I. OVERVIEW**

The Authority is a regional entity granted broad powers under state law to study, design, construct, operate, expand, enlarge, and extend transportation projects in Travis and Williamson Counties and additional areas as permitted by law. The powers and duties exercised by the Authority and its Board of Directors (the “Board”) are established by and subject to state and federal laws and regulations.

**II. DESCRIPTION OF THE MOPAC IMPROVEMENT PROJECT**

The Authority, through its design-build contractor, has begun construction of the MoPac Improvement Project (the “Project”). The Project is approximately 11.9 miles in length, from just north of Parmer Lane (FM 734) southerly to Cesar Chavez Street. The Project includes two dynamically-priced tolled lanes (one lane in each direction) constructed along the inside median of the existing Loop 1 facility by widening pavement and bridges and, in some areas, reducing the width of the existing lanes and shoulders. Construction is anticipated to last through early 2016, during which time traffic congestion on Loop 1 is anticipated to greatly increase. More information on the Project is available at <http://www.mobilityauthority.com/projects/mopac-improvement.php> and at <http://www.mopacexpress.com>.

The Authority seeks information on immediately available software applications to manage traffic and congestion resulting from and during construction of the Project. In addition to this immediate need, the Authority anticipates that a traffic congestion management software application could and would be used to manage traffic and congestion on other regional corridors and roadways in central Texas.

### **III. CONTENT OF RESPONSES**

**A. General Information:** Responses to this RFI should include the following information:

1. An overview of the entity providing the software application, and the name and contact information (mailing and email addresses; telephone numbers) for the principal contact for that entity.
2. A brief summary of the entity's experience in developing and implementing traffic congestion management software.
3. A short description of the location, history, and results from actual implementations of the software, including the name and contact information for one or more individuals associated with the agency or customer who acquired and implemented the software application who can be contacted as a reference.

**B. Software Application:** Please provide the following information concerning the traffic congestion management software application your entity offers:

1. Provide the product name, initial release date, and all subsequent updates and releases of the software application and related smartphone application.
2. Identify each mobile operating system (iOS, Android, Windows, etc.) for which there is an existing mobile application; and the projected release date for any mobile application planned for release on or before August 1, 2014.
3. Describe whether, and if so how, the software identifies existing traffic congestion and predicts near-term future congestion by using real-time traffic data. Describe all sources of real-time traffic data used by the application to identify and predict congestion.
4. Does the software have the capability to push specific information provided by the sponsoring entity to mobile users, such as construction work schedules and work zones, location of traffic accidents or road blockages, or other information that may have an impact on suggested routes provided by the software? If so, please briefly describe the process and requirements for pushing information to mobile users.
5. Can information be pushed to sub-sets of mobile users, based on specific criteria (for example, current location of the smartphone)? If so, please describe the capabilities to target a sub-set of mobile users to receive a push of information by specific criteria.

6. Describe any incentives offered through the mobile application for drivers to change their behavior in a way that reduces traffic congestion, such as changing the time or routing of a trip.
7. Describe any controls or restrictions that can be established by the sponsoring entity to manage available routes or timing information and the incentives offered through the software program.
8. Describe any features of the software program or smartphone application that have not already been addressed (existing or planned for release on or before August 1, 2014) that increase its value as a regional traffic management solution.
9. Describe the general terms of agreements between entities supplying incentives or rewards and your entity and/or the sponsoring entity.

#### **IV. QUESTIONS CONCERNING RFI**

All inquiries concerning this RFI must be submitted in writing (including via email) to the Authority's contact as follows:

Central Texas Regional Mobility Authority  
3300 North Interstate 35, Suite 300  
Austin, Texas 78705  
ATTN: Tim Reilly, Director of Operations  
Email: [treilly@ctrma.org](mailto:treilly@ctrma.org)

Questions regarding this RFI must be received by the Authority by 4:00 p.m., CST, December 30, 2013. Responses to these inquiries will be posted on the Authority's website ([www.mobilityauthority.com](http://www.mobilityauthority.com)) for the benefit of all potential responders.

Note also that Authority may periodically post information concerning the RFI on its website, and all interested parties should monitor Authority's website for additional information.

#### **V. SUBMITTAL OF RESPONSES TO RFI**

Responses should be limited to no more than ten (15) single-spaced pages in length. Respondents should provide five (5) complete paper copies and one complete electronic copy (on CD, DVD, or flashdrive) of their RFI response **no later than 4:00 p.m. CST, January 6, 2014.**

Responses must be sent or delivered to:

Central Texas Regional Mobility Authority  
3300 North Interstate 35, Suite 300  
Austin, Texas 78705  
ATTN: Tim Reilly, Director of Operations

#### **VI. SUBSEQUENT ACTIONS/ONE-ON-ONE MEETINGS**

The Authority will review the responses to this RFI and will use the information contained in the responses to assist the Authority deciding if an appropriate software application is available in the market, and if a decision is made to procure the software or use of the software, the most appropriate method for acquiring the software or use of the software under the Authority's Procurement Policies. The Authority may, at its sole discretion, ask follow up questions of, or seek additional information from, one or more of the responding firms or teams.

In addition, the Authority will consider holding one-on-one meetings with some or all of the respondents following the submission of responses to this RFI if the Authority chooses to do so or the respondent requests the opportunity to participate in such a meeting. The purpose will be to allow for further discussion of the respondent's software application and how it addresses the needs and desires of the Authority as a tool to manage traffic congestion during construction of the MoPac Improvement Project and on other regional traffic corridors. While the Authority hopes to hold meetings with all respondents who request one, the Authority cannot, due to time and resource constraints, guarantee that all requests will be accommodated. It is anticipated that the meetings will be held during January, 2014.

If the Authority elects to procure software to manage traffic congestion, the Authority will follow the Procurement Policies it determines are appropriate for the procurement.

#### **VII. COST OF RESPONSES**

All costs directly or indirectly related to preparing a response to this RFI, including attendance at any meeting or oral presentation requested by the Authority, shall be the sole responsibility of, and shall be borne by, the respondent.

#### **VIII. RELEASE OF INFORMATION AND OPEN RECORDS**

All information submitted to the Authority in connection with this RFI, including any exhibits, correspondence, printed materials, or electronic or digital media is the property of the Authority and may be subject to public disclosure under the Texas Public Information Act ("PIA"). Any material deemed by a respondent to be proprietary, confidential, or otherwise exempt from disclosure under the PIA should be provided separately and clearly marked as such. The Authority will use reasonable efforts to notify a respondent if a request for public information is received that may require the Authority to disclose any material that the respondent has marked as proprietary, confidential, or otherwise exempt from disclosure under the PIA. The Authority is not obligated to assert or argue on behalf of the respondent that any information provided to the Authority is exempt from required disclosure and shall not be liable for the disclosure of any information submitted in connection with this RFI.

#### **IX. OWNERSHIP OF RESPONSES**

The Authority will retain all property rights, including publication rights and intellectual property rights, to any work product developed by respondents and provided to the Authority. Respondents must ensure that the Authority has duplication and distribution rights for all work products.



Metropia, Inc.

Response to  
Central Texas Regional Mobility Authority  
Request for Information (RFI) for Incentive-  
Based Traffic Congestion Management  
Software and Smartphone App

Exploration of Partnership for Metropia and CTRMA  
for MoPac Congestion Alleviation



**Metropia, Inc.**

2200 E. River Road, Suite 224  
Tucson, Arizona 85718

Yi-Chang Chiu, Ph.D.,  
President and CEO  
yc.chiu@metropia.com

(O) 520-268-8067

(M) 520-481-9917

January 3, 2014

# 1 INTRODUCTION

Metropia, Inc. was created to help cities rethink and innovate mobility solutions for an entire region. It has been long recognized that simply adding capacity to cities will have limited success in the long term if not coupled with innovative demand management strategies.

The Austin metro area, including Travis and Williamson Counties, is one of the fastest-growing regions in the U.S. Further, The Central Texas Regional Mobility Authority (CTRMA) is recognized nationwide as a thought leader in proposing and implementing innovative, multi-modal transportation solutions that reduce congestion and create transportation choices that enhance quality of life and economic vitality for both Williams and Travis Counties.

As a result, one of the improvement priority corridors for the CTRMA is Loop 1 (see Figure 1) which is a freeway providing access to the west side of the U.S. city of Austin, Texas. It is also known as MoPac Expressway (or, according to some highway signs, MoPac Boulevard) after the Missouri Pacific Railroad.

According to Texas Transportation Institute, traffic congestion on MoPac has reached more than 127K Annual Average Daily Trips in 2013. The congested period lasts more than five hours daily, and the total annual cost of delay has grown to more than \$64MM (Texas Transportation Institute 2013).

CTRMA, through its design-build contractor, has begun construction of the MoPac Improvement Project (the “Project”). The Project is approximately 11.9 miles in length, from just north of Parmer Lane (FM 734) south to Cesar Chavez Street. The Project includes two dynamically-priced tolled lanes (one lane in each direction) constructed along the inside median of the existing Loop 1 facility by widening pavement and bridges and, in some areas, reducing the width of the existing lanes and shoulders. Construction is anticipated to last through early 2016, during which time traffic congestion on Loop 1 is anticipated to greatly increase. An array of mitigation strategies needs to be implemented to keep the public informed and involved with the benefits of project for the duration of the build and afterwards.

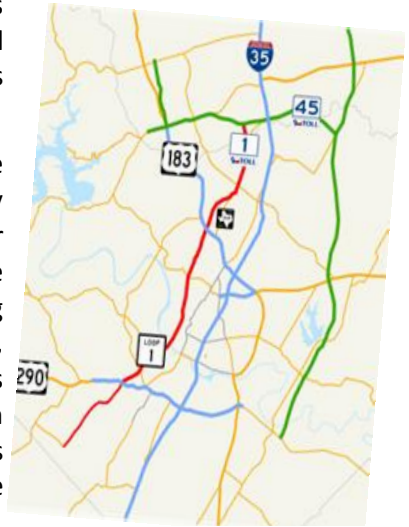


Figure 1: MoPac (Loop 1)

Among all the possible applicable strategies, we believe that the Metropia© Mobile and Synergy platform, an innovation engineered by Metropia Inc., is the ideal solution to assist the CTRMA to:

1. Effectively mitigate the congestion resulting from MoPac construction
2. Allow CTRMA engineers to simulate the impact of work zones, events, emergencies, etc., and create pre-determined mitigation strategies. Further, these strategies are communicated to the driving public ahead of time and in real time to minimize congestion due to the changes.
3. Assist CTRMA with traffic management in the short term as well as the future by balancing traffic flow throughout the city and helping the Central Texas Region fully utilize available system capacity (and making the CTRMA a true Regional Solution Provider to the Austin Area).
4. Co-brand the Metropia Mobile app with the CTRMA.

**Metropia** uses advanced algorithms to determine which departure times and routes for specified destinations have available capacity, and offers varying levels of incentives for using less congested departure times and routes. Drivers use the app to reserve these clearer, faster routes, and when the recommended departure time gets close, the app reminds drivers when it's time to leave.

Metropia also works with local and national business partners to develop an incentive system used to incentivize drivers to change their route or departure time choices. The Metropia system keeps track of the number of drivers using alternative routes and departure times, and automatically adjusts incentive levels for recommended trips if too many **Metropia** drivers are attempting to use the same route. **Metropia** calculates the system optimal incentives and uses differing levels of incentives to drive users to utilize available capacity, thus balancing the traffic load of the system during recurrent rush hours or unexpected incident situations.

Through the Metropia Synergy Platform, the CTBMA and its partnering institutions can adjust the capacity of the roadway (Pre-planned or in real-time) due to changing conditions. These conditions can consist of a combination of lane reductions, closed ramps, contraflow, closed roadways, etc. which typically have a domino effect on the entire transportation system. The advanced algorithms in the Metropia Platform account for these changes, and re-routes the public to minimize regional congestion.

## 1.1 METROPIA – AVOID TRAFFIC, DRIVE SAFER, REWARD YOURSELF

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Metropia is an innovative new mobile traffic app that uses advanced prediction and coordinating technology combined with user rewards to incentivize drivers to cooperate, balance traffic load on the network, and reduce traffic congestion. This new traffic prediction technology that eases roadway congestion by rewarding drivers for using alternate routes and times -- avoiding peak congested traffic -- launched in select U.S. cities in the fall of 2013.



The Metropia mobile traffic app offers the fastest, least congested routes available, and coordinates users to help shift the burden of solving city traffic congestion from expensive new highway construction to driver cooperation and collaboration. Drivers who use Metropia to make simple adjustments to the times they leave and the routes they use can significantly improve their commute times, and are collectively helping reduce the pollution and waste associated with daily traffic congestion.

**Metropia users win:** Drivers using Metropia's suggested alternate times and routes are avoiding major traffic congestion by removing themselves from the area or departing at a time when travel through the area is clear. Metropia users earn rewards points each time they use the app to take an alternate route, and these points can be applied to various rewards made available by the rewards program. Potential rewards include discounts and other special offers from stores, restaurants and other retail services, or drawings for gifts pledged by partnering manufacturers (e.g. iPad, electric cars, etc.), free parking vouchers, etc.

**Everybody wins:** All drivers commuting on their own also benefit from Metropia activity. When Metropia users change their behavior and contribute to the traffic congestion alleviation, the road becomes clearer and remaining drivers also benefit even if they don't use the app to change their departure time or routes.

**Agency wins:** Cost savings to the community. A system-level improvement like the one offered by Metropia, if implemented using traditional infrastructure-based solutions, would require hundreds of millions of dollars. Metropia costs merely a fraction of traditional methods. Further, the Agency is seen by the public as a progressive institution that is using sophisticated, useful technical tools to help solve traffic congestion, as opposed to simpler apps that require users to navigate congestion on their own, bringing little value to the traveling public.

The reality of traffic congestion is that there are only certain peak hours of traffic a day. The rest of the day, most freeways are underutilized. What is missing is a technology that incentivizes drivers to make better, alternate travel choices in route and departure times, to help spread traffic demand. The Metropia team uses mathematical algorithms and computer models to solve the traffic problem, then gives these improved,

faster trip alternatives to Metropia users. When users take these routes, they're helping reduce existing congestion, and also earning rewards points for their help.

Metropia is distinctly effective over existing mobile traffic apps because all other apps offer identical descriptive traffic information to all travelers. This is more likely to cause a "herding effect" – the term for an excessive amount of travelers taking the same action and congesting the same routes, simply shifting traffic congestion somewhere else. Research indicates that traffic congestion is reduced considerably when just 10% of drivers in the area are using the Metropia's alternate departure times and routes. Metropia's scientists and engineers also found that Metropia users can save up to 40% travel time during rush hours. Even non-Metropia users save time thanks to the action of Metropia users.

Drivers use the Metropia system for more than the rewards or their own benefit. They also use it because of its positive social cooperation aspects in solving a growing traffic congestion problem.

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## 1.2 HOW METROPIA WORKS

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Metropia uses advanced algorithms to determine which departure times and routes have available capacity, and offers higher levels of incentives for drivers who travel during least congested times and clearer routes. Metropia uses city-specific data to generate accurate alternative routes and times and predicted experienced travel time. Drivers use the app to reserve these faster routes, and when the recommended departure time gets close, the app reminds drivers when it's time to leave.

The Metropia system keeps track of the number of drivers using alternative routes and times, and automatically adjusts incentive levels for recommended trips if too many Metropia drivers are attempting to use the same alternate routes.

As shown in Figure 2, Metropia servers use both real-time and historical data to analyze (in space and time) where available capacity exists, whereby moving additional demand that will lead to overall reduction of travel time and congestion.

The Metropia server system then utilizes such information in conjunction with its sophisticated models to estimate the amount of reward points, or "mPoints," to be awarded for each departure time and route. If a departure and route is found be more beneficial to the entire system, and then a higher amount of mPoints are allocated to that departure time-route option. Metropia also provides predicted experienced travel time for future departure times. This accurate prediction<sup>1</sup> empowers a driver to decide to leave now or depart later, considering the onset of congestion. The mPoints incentive and travel time prediction is a powerful combination to motivate drivers to use a less congested route and time. A driver will then make a reservation for a specific route and departure time (Step 1).

Ten minutes prior to the reserved departure time and route, the GPS will turn on and a reminder will pop up to remind the driver that it's time to leave. A certain time buffer is allowed so that the driver can leave within a certain time window. Once the trip is started, Metropia becomes a navigation app that provides audio turn-by-turn navigation guidance to assist the user in following the reserved route until reaching the final destination. There are other internal rules that allow for a certain grace period and distance buffer, so that the user will be awarded with the reserved mPoints when the majority of the route being followed is completed (Step 2).

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<sup>1</sup> Extensive field testing shows that the prediction error for Metropia is at a mere 15%, much less compared to two other major navigation tools at 30% and 40% respectively.

A user can continue Steps 1 and 2 in order to continue accumulating mPoints. The earned mPoints can then be redeemed for various discounted products and services, freebies, lotteries, or even donated to charities (Step 3).

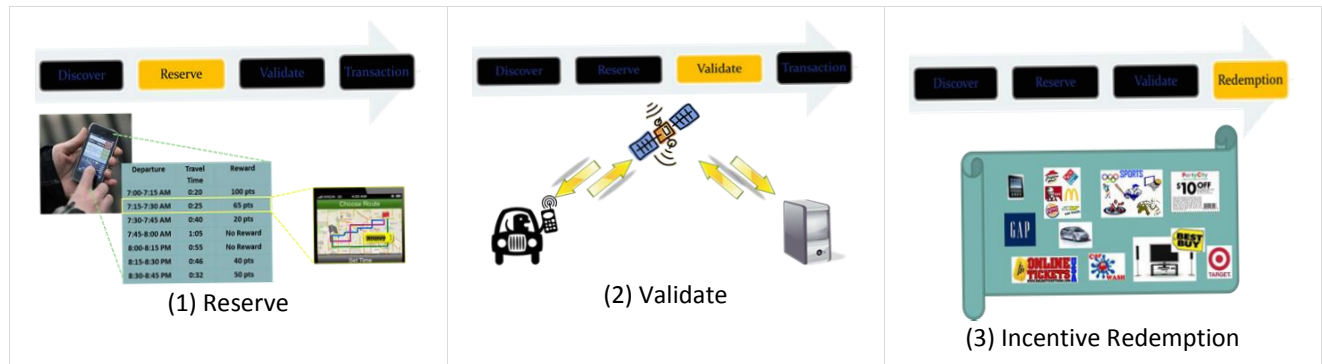


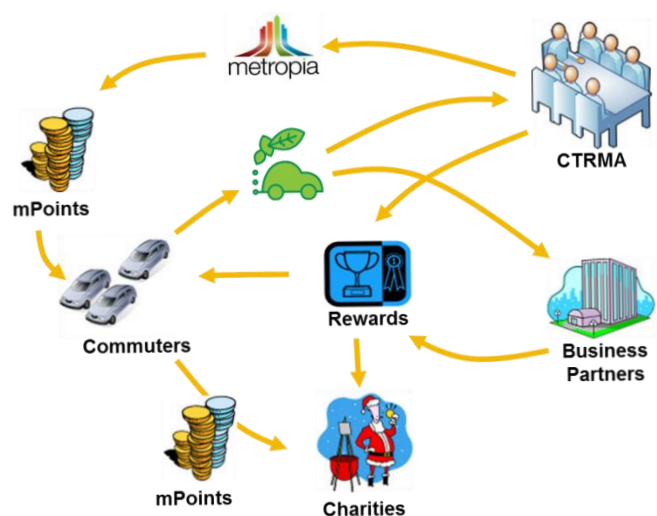
Figure 2: Metropia User Experience

When users validate their reserved trips, the Metropia app retrieves the user’s real time information such as location, speed, and acceleration/deceleration from the GPS module embedded in the smartphone, and sends it to the cloud server, where the user profile and traffic data are stored as well. Users can access their personal dashboard using their mobile device or computer, where their performance, achievement information and other personalized information is available. The detailed data stored in the cloud also provides the feasibility for many other related applications: the detailed user trajectory data can be used for real-time traffic estimation and prediction, the historical traffic database can support historical traffic pattern analysis, real time traffic information can be applied in traffic monitoring and management, while the traffic prediction module and the incentive-based reservation/validation platform can be used for active demand management and active traffic management purposes.

### 1.3 CREATING AND SUSTAINING THE METROPIA ECOSYSTEM

The Metropia team aspires to facilitate the creation and sustainment of the Metropia Ecosystem, a system in which all the participating entities not only contribute to the improvement and sustainability of urban mobility, but also benefit from their participation in the ecosystem. This vision is a paradigm shift from the traditional framework in which the transportation agencies carry most the responsibility for mobility improvement, with commuters and corporate entities demanding congestion improvement while omitting the fact that they are also part of congestion problems.

In the Metropia Ecosystem, all entities actively participate in congestion alleviation and consequently benefit from participation. Transportation agencies sponsor and jump start the initial formation of the ecosystem, providing initial incentives and promoting the technology and ecosystem to the commuter and business communities, consequently accelerating user adoption. With this higher user adoption, viable marketing opportunities exist for the corporate sponsors and merchants/vendors to participate. Corporate sponsors and merchants participate in this ecosystem by way of providing incentives such as discounted products or services. Employers



participate in this ecosystem by promoting the technology to their employees, resulting in more flexible and robust commuting options, happier employees and greater fulfillment of corporate social responsibility. Finally, the commuters who are willing make the effort to adjust their departure time and route by accepting Metropia recommendations have access to various types of rewards provided by agencies and corporate sponsors (see Table 1).

Commuters redeem the earned points as well as discounted products. While commuters enjoy cheaper services and products, the participating merchants also enjoy increased patronage. Further, the participating agency benefits from a more cost-effective solution, robust region-wide mobility, and broader community support.

Table 1: Metropia Ecosystem Participating Entity Contribution and Benefit

<b>Entities</b>	<b>Contribution</b>	<b>Benefit</b>
Agency	Fund program jump-start, initial program marketing and promotion	Cost-effective and robust region-wide mobility, active roadway capacity management via Metropia Synergy Platform; broader community support
Commuter	Adjust departure time and route	Better and safer travel, a sense of contributing to the community and environment, discounted services and products
Employer	Encourage employee participation	Fulfilment of corporate social responsibility
Merchant/Vendor	Provide discounted service and products	Increase patronage and revenue.

## **2 RESPONSES TO CTRMA RFI QUESTIONS**

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### **2.1 A. GENERAL INFORMATION**

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#### **2.1.1 AN OVERVIEW OF THE ENTITY PROVIDING THE SOFTWARE APPLICATION AND THE NAME AND CONTACT INFORMATION (MAILING AND EMAIL ADDRESSES; TELEPHONE NUMBERS) FOR THE PRINCIPAL CONTACT FOR THAT ENTITY.**

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Metropia, Inc. was founded by University of Arizona Professor Yi-Chang Chiu, the inventor of Metropia technology (yc.chiu@metropia.com, 520-268-8067). Metropia is the mobile app system that rewards commuters for choosing better departure times and/or routes to help reduce and eliminate traffic congestion. The Metropia system is one of several technology products in development at Metropia.

Other products currently in deployment or development by Metropia include Metropia Synergy, the city mobility platform for traffic planners and operations engineers, fleet managers, campus planners, emergency planning and more; and Metropia Synergy for Universities, the multi-modal platform that strategically manages campus accessibility using the Metropia mobile application. Metropia currently has products deployed or ready for deployment in the cities of Los Angeles, Phoenix, El Paso and Austin, Texas.

Metropia develops and integrates high-performance and mobile computing technologies to produce apps and backend server systems that help both users (commuters) and entire systems (cities) during normal operations, preplanned special events, or unexpected, extraordinary circumstances. Metropia is composed of a group of transportation engineers, network modelers and computer scientists, all with solid academic

backgrounds and practical experience, and a passion for solving urban traffic congestion problems with creative and innovative cutting-edge solutions. The mailing address for Metropia Inc. is 2200 E. River Road, Suite 224, Tucson, AZ, 85718.





## 2.1.2 A BRIEF SUMMARY OF THE ENTITY’S EXPERIENCE IN DEVELOPING AND IMPLEMENTING TRAFFIC CONGESTION MANAGEMENT SOFTWARE

The Metropia team was established in 2010 and incorporated as Metropia Inc. in 2012. The technology was developed at the University of Arizona and is the sole licensee of the patent pending technology.

Although the company is relative young, the executive team has a proven track record of producing traffic congestion management software for over 15 years. One of the world-renown traffic congestion management software tools developed by the Metropia team, particularly Dr. Yi-Chang Chiu, is the Simulation-Based Dynamic Traffic Assignment (DTA) model called DynusT (Chiu and Nava 2013). Since its debut in 2002, DynusT has the capability of simulating the daily activities of millions of vehicles within any metropolitan area in the United States. Partially funded by Federal Highway Administration and National Science Foundation, since the debut of the official DynusT website in 2011, more than 1,000 copies of DynusT have been downloaded by transportation professionals from more than 25 countries around the world. DynusT has also been used by the Texas Transportation Institute to simulate traffic conditions for the year 2035 in the CAMPO region, with the focus of alleviating future traffic congestion on IH-35, and from which a number of traffic management strategies were recommended (Shelton, Lorenzini et al. 2013).

Qualifications of the Metropia team are briefly described below.

	<p><b>Yi-Chang Chiu, Ph.D. (Transportation Eng., UT-Austin, 2002), Founder and President</b></p> <p>Dr. Chiu is currently an Associate Professor at the Department of Civil Engineering and Engineering Mechanics at the University of Arizona (UA) and President of Metropia, Inc. Dr. Chiu is a renowned researcher and innovator in the area of Intelligent Transportation Systems (ITS) and incentive-based active demand management, and the principal developer and consultant to FHWA.</p>
	<p><b>Jenda Chen, MBA, PMP, Co-Founder and COO</b></p> <p>Mr. Jenda Chen has over 15 years of global cross-functional management experience in Acer America prior to joining Metropia Inc. At Metropia, Mr. Chen is responsible for developing and cascading the organization’s strategy/mission, ensuring efficient and effective business operations, and marshaling limited resources to the most productive uses with the aim of creating maximum value and strategic planning for the company's stakeholders.</p>
	<p><b>Jorge A. Villalobos, Ph.D. (Transportation Eng. Univ. of Arizona 2012), Co-Founder and Board of Directors</b></p> <p>Dr. Jorge Villalobos has 10 years of transportation engineering and over 16 years of operations experience in Fleet Management, Asset Management and Operations. Dr. Villalobos is currently a Director on the Board of Directors for Metropia and works as the General Manager of Operations for Shell Wind Energy. His current role is leading Metropia’s business development efforts, operational planning and investor relations.</p>

	<p><b>Xianbiao Hu, Ph.D. (Transportation Eng., Univ. of Arizona, 2013), Director of Research and Development</b></p> <p>Dr. Hu is an experienced researcher and engineer in the field of transportation engineering, with research focuses in the areas of Active Traffic Demand Management (ATDM), Advanced Traveler Information Systems (ATIS), Intelligent Transportation Systems (ITS), Dynamic Traffic Assignment (DTA), network modeling and simulation. Prior to joining Metropia Inc., Dr. Hu was the core research engineer for Trafficcast China, leading traffic prediction, incident detection and real time Origin-Demand (OD) demand estimation based on the cell phone signal and GPS data.</p>
	<p><b>Mario Salomon, BS, MS – EE/SIE, Lead Operations Engineer</b></p> <p>Mr. Salomon has strong experience in directing sustainability and transportation projects, including a Student Government Association (SGA) funded Green Fund project to engineer and approve a new Wide-Area Student Busing system, the development and deployment of a campus recycling system, and a UTEP Bike-Share System in collaboration with City of El Paso and the Metropolitan Planning Organization.</p>
	<p><b>Ruijun (Ray) Luo, BS, CS, MBA, Director of Software Engineering</b></p> <p>Mr. Ruijun (Ray) Luo has 14 years of in-depth experience in the software industry, taking part in software development, customer support, pre-sale support to build telecom-scale distributed systems to sustain millions of users. At Metropia, Mr. Luo is responsible for designing the architecture of the IT system, leading a team to implement and optimize its components, and also maintaining the infrastructure in a cost-efficient way.</p>
	<p><b>Paul Hoffer, BS, MS SE/CE</b></p> <p>Paul Hoffer is the Metropia’s Program Imagineer with over three years of experience working with Bluetooth traffic detection technology in the Intelligent Transportation Systems industry. He also has several years’ experience in working with the DynuStudio and DynusT software tools, as well as programming experience in Ruby/Python/PHP.</p>

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**2.1.3 A SHORT DESCRIPTION OF THE LOCATION, HISTORY, AND RESULTS FROM ACTUAL IMPLEMENTATIONS OF THE SOFTWARE, INCLUDING THE NAME AND CONTACT INFORMATION FOR ONE OR MORE INDIVIDUALS ASSOCIATED WITH THE AGENCY OR CUSTOMER WHO ACQUIRED AND IMPLEMENTED THE SOFTWARE APPLICATION WHO CAN BE CONTACTED AS A REFERENCE.**

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Metropia initiated a 10-week pilot study in April 2013 in Los Angeles, California, with the main objective to test the performance of the ATDM system and validate incentive-based demand management ideas and travel time saving performance. Incentives such as gift cards and raffle awards were provided as an extrinsic motivation to encourage drivers’ behavior change. While monetary incentives could encourage the use of a product, it is the product’s ability to deliver what users expect and thus provide an intrinsic motivation for its continuing use. As such, the pilot study focused on two aspects of Metropia:

1. Metropia’s capability to accurately predict traffic conditions ahead of time, so as to intelligently determine the best route and departure time choice from an origin to a destination within the user departure time window; and



2. Metropia’s travel time savings given that users are willing to change their departure time, habitual route, or both.

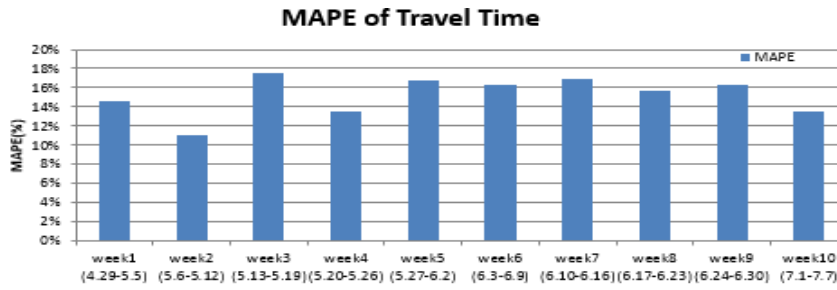


Figure 3: MAPE of travel time across the pilot field study period

Figure 3 shows the temporal changes of Mean Absolute Percentage Error (MAPE) across the pilot study period, from which it can be observed that the weekly average system error varied between 10% and 18%. For the entire pilot study period, the overall Metropia MAPE was 15.20%,

significantly lower when compared to MAPEs based on estimated travel times from two other major navigation tools in the market (around 30% and 40%, respectively).<sup>2</sup>

In addition to comparing predicted and experienced user travel time, the degree of behavioral change was analyzed by comparing the user’s trip decision based on Metropia with the user’s normal travel behavior in

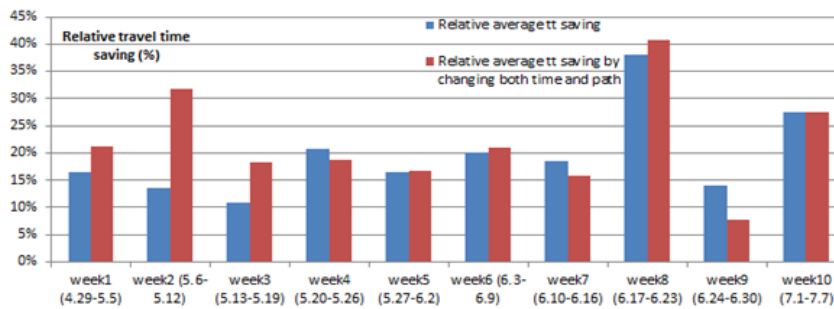


Figure 4: Weekly relative average travel time savings

terms of departure time and route choice. Based on the pilot study, it was observed that users changed departure time for as many as 60% of the trips, changed route for as many as 51% trips, and changed both departure time and route choice for many as 35% of the trips.

the pilot study, with blue bars representing relative average travel savings for all validated trips using Metropia, and red bars representing travel time savings for trips that users changed both departure time and route. In general, travel time savings range from 10% to 40%, with highest savings occurring when users changed both their departure time and route.

Figure 4 illustrates the relative travel time savings by week 10 of

In addition, the following specific observations can be made:

- Metropia users who changed their departure time only, but stayed on the same route, reduced their travel time by 19.40% on average
- Metropia users who changed their route only, but departed at the same time, reduced their travel time by 10.0%
- Metropia users who changed both departure time and route reduced their travel time by 20.12%
- Metropia users who departed earlier than they used to reduced their travel time by 22.13%
- Metropia users who departed later than they used to reduced their travel time by 19.32%
- The average travel time for commuter trips in the morning was reduced by 20.58%
- The average travel time for commuter trips in the evening was reduced by 16.87%

<sup>2</sup> Mean Absolute Percentage Error (MAPE), also known as absolute percentage deviation (MAPD), is calculated by  $1/n * \sum (|Experienced\ travel\ time - Predicted\ travel\ time| / Experienced\ travel\ time)$

The contacts for the Los Angeles pilot study include Selwyn Hollins, Assistant General Manager, Operations, [selwyn.hollins@lacity.org](mailto:selwyn.hollins@lacity.org) and Michael Shimokochi, Information Systems Manager, [michael.shimokochi@lacity.org](mailto:michael.shimokochi@lacity.org)

## 2.2 B. SOFTWARE APPLICATION: PLEASE PROVIDE THE FOLLOWING INFORMATION CONCERNING THE TRAFFIC CONGESTION MANAGEMENT SOFTWARE APPLICATION YOUR ENTITY OFFERS.

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### 2.2.1 PROVIDE THE PRODUCT NAME, INITIAL RELEASE DATE, AND ALL SUBSEQUENT UPDATES AND RELEASES OF THE SOFTWARE APPLICATION AND RELATED SMARTPHONE APPLICATION.

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Product name: Metropia Mobile and Metropia Synergy (aka Smartrek Mobile)

Pilot Test Release: January 2013

Official Release: October 26, 2013

Patch/update schedule: bug fixes - every two weeks; feature enhancement, every month.

Next major release is scheduled for mid-January 2014 and will include:

- Re-branding - re-brand Smartrek Mobile to Metropia as the new product name.
- Improved user experience - simpler trip reservation process, interactive map, SessionM – mPoints integration, enhanced navigation features.

### 2.2.2 IDENTIFY EACH MOBILE OPERATING SYSTEM (IOS, ANDROID, WINDOWS, ETC.) FOR WHICH THERE IS AN EXISTING MOBILE APPLICATION; AND THE PROJECTED RELEASE DATE FOR ANY MOBILE APPLICATION PLANNED FOR RELEASE ON OR BEFORE AUGUST 1, 2014.

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The Metropia Mobile app is currently available in both iOS and Android platforms. Currently there is no plan to extend the platform to Windows in the near future.

### 2.2.3 DESCRIBE WHETHER, AND IF SO HOW, THE SOFTWARE IDENTIFIES EXISTING TRAFFIC CONGESTION AND PREDICTS NEAR-TERM FUTURE CONGESTION BY USING REAL-TIME TRAFFIC DATA. DESCRIBE ALL SOURCES OF REAL-TIME TRAFFIC DATA USED BY THE APPLICATION TO IDENTIFY AND PREDICT CONGESTION.

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The Metropia system identifies existing traffic congestion and predicts near-term future congestion by using real-time traffic data via sophisticated and flexible data fusion techniques and traffic engineering methodologies. The Metropia system deployment employs a MUST (Multi-Stage Transcorrelation) framework that fuses and combines multiple types of data from multiple data sources in a flexible fashion that can accommodate varying quality and availability of these data. At the initial stage, Metropia accesses a real-time data server and pulls real-time data at a 5 minute interval. Data fusion methods are subsequently initiated in order to predict future traffic condition. In case of real-time incidents and/or pre-planned capacity modifications, a special event prediction engine kicks in to provide localized updates of traffic condition around the impact area. Specialized routing algorithms are used to provide real-time congestion-

responsive routes to drivers. All the designs aim to provide accurate travel time prediction and routing under both routine and incident situations.

**2.2.4 DOES THE SOFTWARE HAVE THE CAPABILITY TO PUSH SPECIFIC INFORMATION PROVIDED BY THE SPONSORING ENTITY TO MOBILE USERS, SUCH AS CONSTRUCTION WORK SCHEDULES AND WORK ZONES, LOCATION OF TRAFFIC ACCIDENTS OR ROAD BLOCKAGES, OR OTHER INFORMATION THAT MAY HAVE AN IMPACT ON SUGGESTED ROUTES PROVIDED BY THE SOFTWARE? IF SO, PLEASE BRIEFLY DESCRIBE THE PROCESS AND REQUIREMENTS FOR PUSHING INFORMATION TO MOBILE USERS.**

Metropia is able to send out push notifications to users based on various criteria defined by the System Operator. Information like construction work schedules, work zone, location of traffic accidents, or load blockage can be optimally managed and disseminated via the Metropia Synergy Platform. Metropia Synergy is essentially the TMC (Traffic Management Center) -ready platform that allows seamless communication between the System Operator and the users. As shown in Figure 5, Metropia Synergy keeps track of both preplanned and unexpected events. The information is fed into the Capacity Planner that allows the Operator to either pre-plan the upcoming work zone or closure event, or to synchronize the network capacity change with real-world implementation. For example, in time of a major crash event, the DPS officers may need to close certain on-ramps. Such information can be fed into the Capacity Planner in real-time so that the adjusted network capacity can be reflected in the real-time Metropia routing engine. Examples of Metropia Synergy can be found in the following YouTube videos:

Congestion Analytics: <http://youtu.be/kvWVipyQHxc>

Regional Flow Modeling: <http://youtu.be/OqIPyj8MOrA>

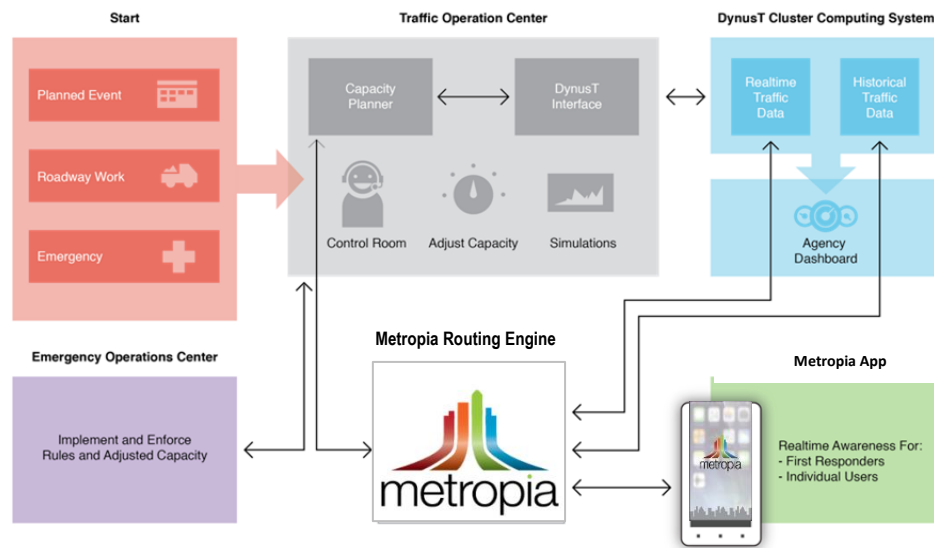


Figure 5: Metropia Synergy System Architecture

Figure 6 provides an example of Metropia showing push notification to users.

**2.2.5 CAN INFORMATION BE PUSHED TO SUB-SETS OF MOBILE USERS, BASED ON SPECIFIC CRITERIA (FOR EXAMPLE, CURRENT LOCATION OF THE SMARTPHONE)? IF SO, PLEASE DESCRIBE THE CAPABILITIES TO TARGET A SUB-SET OF MOBILE USERS TO RECEIVE A PUSH OF INFORMATION BY SPECIFIC CRITERIA.**

Metropia’s ability to push information to a sub-set of users is flexible and configurable. Depending on the needs of the sponsoring agency, the rules and criteria as well as conditions for information dissemination is entirely programmable. Once Metropia engineers fully understand the specifications for this type of communication, they can update the rules and criteria at any time. For example, if work zone or incident information needs to reach those commuters traversing MoPac, Metropia can push such information selectively to only MoPac users. The same strategy can be extended to different facilities under CTRMA’s jurisdiction. To complete the process, Metropia engineers and CTRMA staff will need to jointly define details pertaining to such communications.



Figure 6: Metropia Notification Screen – Pre-trip

**2.2.6 DESCRIBE ANY INCENTIVES OFFERED THROUGH THE MOBILE APPLICATION FOR DRIVERS TO CHANGE THEIR BEHAVIOR IN A WAY THAT REDUCES TRAFFIC CONGESTION, SUCH AS CHANGING THE TIME OR ROUTING OF A TRIP.**

Metropia offers various types of incentives that can be integrated in a flexible manner that meets the goals and needs of the sponsoring agency. The incentive program rollout process is gradual and progressive, aiming to balance the efficacy and resource requirements at different phases of the deployment. The following briefly discusses the phased incentive program development followed by the explanations of individual reward types.

Phase I – Phase I refers to the initial roll out and jump-start of the program. In this initial phase, user uptake is anticipated to be low and the incentive program goal is to provide tangible and substantial rewards provided by the agency and Metropia. The intrinsic reward includes weekly summaries of user personal gain and societal contribution for being part of the Metropia solution. Metropia has also partnered with SessionM and the mPoints system that allows users to immediately start collecting points and redeeming them for rewards.

Phase II – It is anticipated that through the partnership with the sponsoring agency and active marketing and promotional campaigns that user uptake starts to accelerate in Phase II. During this period, the incentive providers will continue to be expanded to local corporate sponsors and merchants.

Phase III – In Phase III user uptake gradually reaches maturity, and therefore the goal of the incentive program is to sustain its program offering by setting up a long-term sustainable relationship with corporate and merchant sponsors.

	Phase I	Phase II	Phase III
User uptake	Low	Accelerating	Mature
Incentive Program Goal	Jump start	Expand	Sustain
Incentive types	Agency Reward mPoint Reward Intrinsic Reward	Agency/Corporate/Merchant Reward mPoint Reward Intrinsic Reward	Agency/Corporate/Merchant Reward mPoint Reward Intrinsic/Charity



Figure 7: Metropia Three-Phase Incentive Program Roll-out

As mentioned in the preceding section, it is our vision that in the Metropia Ecosystem, the agency will not be the sole incentive provider and commuters may not be the sole incentive recipients. The mutually beneficial and responsible relationships need to be established through a carefully designed process. This ecosystem also needs to have a financially sustainable business model in order to sustain and prosper without perpetual significant subsidy. The aforementioned various types of rewards are further explained as follows:

- Agency Reward

As shown in the recent studies, it is rather common and effective for the sponsoring agency to provide a limited amount of incentives for a specified amount of time during the initial roll-out period. Examples of such practices include:

- \* In Melbourne, Australia, an early bird ticket program was proposed to alleviate the rail overcrowding issue during peak hours. Free rail fares were provided for rail travelers by the transit agency if the travelers complete their trips before 7:00 a.m. as incentives to shift demand from the peak to relieve the overcrowding problem (Currie 2011).
- \* In a 13-week field study conducted in The Netherlands, 340 participants were provided with daily rewards by the transportation agency -- monetary and in-kind --in the second half of 2006, in order to encourage them to avoid driving during the morning rush-hour (Ben-Elia, Boeije et al. 2011; Ben-Elia and Ettema 2011).
- \* In the U.S., Stanford University also used the idea of incentives to manage their campus parking problems, through Dynamic Parking Pricing (Stanford University 2012).

The agency reward is the affirmative representation of the agency's leadership in the jump-starting of the Metropia Ecosystem. The agency can identify types of incentives that are at no or minimal cost to the agency, and such rewards could be identified through examining agency assets and identifying the availability of cost-effective assets to offer.

- mPoints

Metropia Inc. currently has partnered with SessionM Inc. allowing Metropia to provide mPoints rewards for drivers using Metropia. The mPoint system is a universal point system provided by SessionM.

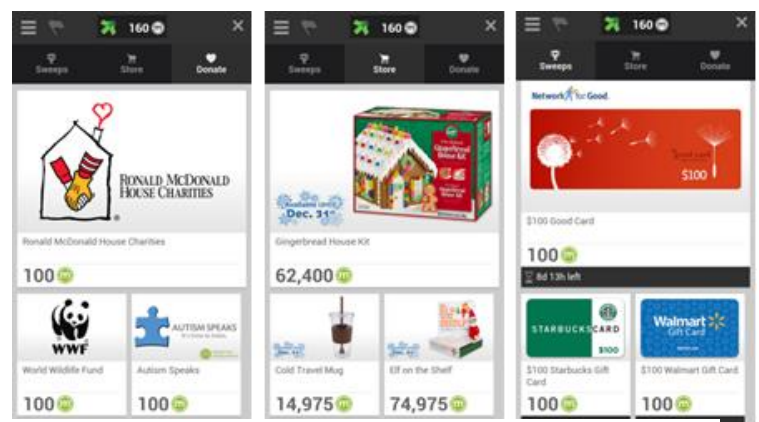


Figure 8: Donate, Store, and Sweep options for mPoints

The mPoints reward platform allows a Metropia user to redeem earned points (160 points are shown in Figure 8) for various offering categories such as Sweeps, Donate and Store. This opens the use of earned points from Metropia to a wide range of rewards. It is noteworthy that there is a daily limit of mPoints given out to users, and such a limit equates to only a small amount of monetary value. mPoints is a supplementary reward system and may not be sufficient as a stand-alone reward program. Other complementary reward programs from other entities are needed. Nonetheless, mPoints deliver instant rewards and a “fun” factor into the overall user experience. It has also an “opt-out” option, allowing a user to disable this feature if a user wishes to do so.

- Merchant Reward

Metropia Inc. has developed a merchant program that allows local business, regional or national franchises to participate by providing time-sensitive coupons to be delivered to Metropia users. Merchants can design and implement campaigns consisting of different types of coupons such as dollar off, % discount or special deals. Merchants participating in this program will have their offered coupons or deals presented to commuters at the time when they are making trip reservations. The offers are carefully presented so that only merchants adjacent to the usual route chosen by the commuters are pushed. Time-sensitive offers can also be presented to users, allowing merchants to be able to effectively reach their potential customers and, as a result, be able to realize reasonable ROIs and be willing to continue participation in the program.

- Corporate Sponsors

Once a substantial number of commuters use Metropia regularly, marketing opportunities exist to attract corporate sponsors to participate through sponsorship. An example is for an oil company to sponsor a number of gas cards to the Metropia users and earn premier sponsorship status with the agency and Metropia.

- Intrinsic Reward

From our prior field testing, we found that commuters can be motivated and feel rewarded in many different ways, part of which is to feel they are making a positive impact to both themselves and to the community, city, and the Earth. The Metropia team delivers highly sophisticated performance measurements based on a set of performance metrics to agencies, commuters, employer sponsors, and merchants. For commuters, we are able to measure and estimate metrics from travel time savings to environmental benefits. Similar metrics aggregated by different criteria can be reported to all participating entities, providing a clear and direct realization of the extent of greater good that the participating entities are making by using Metropia. Using sponsoring agencies as an example, Metropia is able to report performance metrics by region, by corridor, by city, or county or even neighborhood.

- Charity Donations

The Metropia team will also seek collaborations with local charity organizations to allow Metropia users to donate their earned points and rewards to charity organizations, allowing users to do something good for themselves and for their local communities.

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**2.2.7 DESCRIBE ANY CONTROLS OR RESTRICTIONS THAT CAN BE ESTABLISHED BY THE SPONSORING ENTITY TO MANAGE AVAILABLE ROUTES OR TIMING INFORMATION AND THE INCENTIVES OFFERED THROUGH THE SOFTWARE PROGRAM.**

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Extending from the Section 2.2.4 discussions, the Metropia Synergy system includes a Synergy Operator Console (SyCon) like the one shown in Figure 9. SyCon is a Windows™ based system that communicates with Metropia Synergy backend system in real time. SyCon uses the real-time traffic data from Metropia Synergy and by using the Metropia Traffic Simulator can predict three hours ahead of present time and two hours past the present time, so that the Operator can review both the past and future predicted traffic conditions within several minutes.

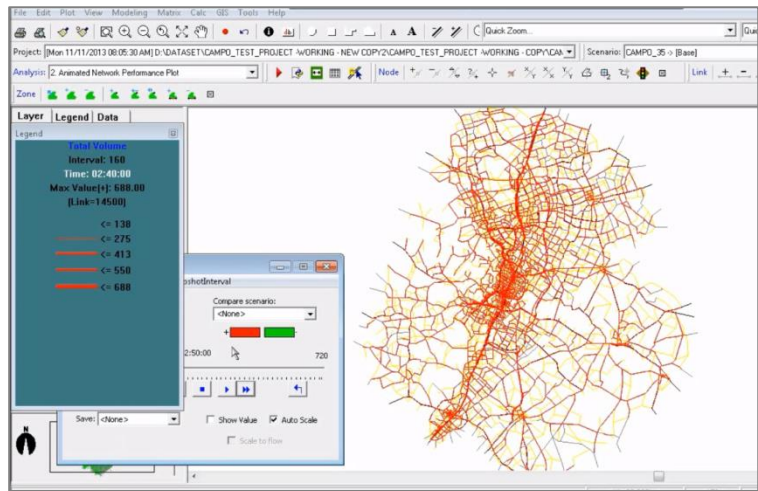


Figure 9: Metropia Synergy Platform Operator Console

More importantly, SyCon allows the Operator to perform various network operations such as capacity reduction due to work zone, roadway closure due to work zone or incident, intersection detour due to traffic control measures, in real time or weeks in advance, after pre-planning and simulation exercises have been complete.

Once such operations are set in place by the Operator, the Metropia Routing Engine will reflect such changes in the recommended routes, preventing users from traversing into the already closed or capacity reduced roadway sections. The Operator also has the ability to implement certain “impedance” for traversing a certain area during certain times, resulting in less traffic being routed through the said area. However, it is highly advised that the Operator perform such an operation with caution as to not create unintended congestion or issues somewhere else. The use of the Metropia Traffic Simulator is recommended to ensure unintended consequences of the change are minimal.

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## 2.2.8 DESCRIBE ANY FEATURES OF THE SOFTWARE PROGRAM OR SMARTPHONE APPLICATION THAT HAVE NOT ALREADY BEEN ADDRESSED (EXISTING OR PLANNED FOR RELEASE ON OR BEFORE AUGUST 1, 2014) THAT INCREASE ITS VALUE AS A REGIONAL TRAFFIC MANAGEMENT SOLUTION.

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The Metropia team continues to improve the features and functions of Metropia App and Synergy System. Four major planned features that are relevant to this RFI include:

1. Multi-Route options: through collaboration with the sponsoring agency, Metropia is able to provide a free and an Express Lane route simultaneously. This optional feature is likely to help commuters fully realize the value of Express Lanes and increase the willingness to enter the Express Lanes and reduce the remorse. This makes the benefit of the Express Lane more transparent and better received, and allows users make a more informed decision based on their trip purposes and needs.
2. Enhanced incident management capabilities. Through partnership with the sponsoring agency, the Metropia system aims to better integrate and coordinate with regional transportation agencies such as the City of Austin and TxDOT, so that the Metropia Synergy backend system is better aware of the traffic management actions implemented by other agencies on the field. This improved situational awareness will improve the accuracy of travel time prediction and routing.
3. Multi-modal capability – Metropia is envisioned to ultimately become a multi-modal mobility management platform and App that provides expanded commuting choices to the traveling public, allowing CTRMA to provide comprehensive and robust mobility choices for constituents. It is anticipated that the Biking mode will be made available by summer 2014 and the transit mode

option will be made available by the end of 2014. Expanded and targeted incentives may be provided for those who give up driving and take other modes from time to time.

4. Collaboration with other mobility service providers – Metropia system can help those who not only drive alone but also carpool or rideshare. Recognizing the increased need and interest in ridesharing and carpooling, Metropia will actively seek opportunities with CTRMA and other service providers to explore synergistic collaboration.

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### 2.2.9 DESCRIBE THE GENERAL TERMS OF AGREEMENTS BETWEEN ENTITIES SUPPLYING INCENTIVES OR REWARDS AND YOUR ENTITY AND/OR THE SPONSORING ENTITY.

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The followings provide high-level descriptions for general terms of agreement but further implementation details remain negotiable with CTRMA.

1. If CTRMA decides to provide a certain type and amount of incentive for selected users, Metropia will collaborate with CTRMA to determine the conditions and criteria by which the incentive/reward are given to those who meet the award criteria. Metropia serves as the incentive/reward delivering agent on behalf of CTRMA. Metropia will regularly report to CTRMA the status of the incentive delivery and the performance metrics related to the incentive program.
2. All the reward/incentives provided by the 3<sup>rd</sup> party such as corporations, merchant sponsors, or employers, are managed through a separate agreement Metropia signs with the participating parties. The agreements clearly state the terms and conditions. Per the agreement the 3<sup>rd</sup> party sponsors will be properly credited and recognized for being part of the Metropia Ecosystem. No direct relationship will be established between the 3<sup>rd</sup> party sponsors and CTRMA.
3. Metropia does anticipate that CTRMA assists in jointly marketing and promoting Metropia technology to potential incentive/reward providers. However, once a 3<sup>rd</sup> party entity decides to become an incentive/reward provider, Metropia will remain the primary entity signing the agreement with these 3<sup>rd</sup> party partners.
4. Metropia's relationship with SessionM's mPoint system remains strictly between Metropia and SessionM and not CTRMA.

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## 3 REFERENCES

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- Ben-Elia, E., H. Boeije, et al. (2011). Behaviour Change Dynamics in Response to Rewarding Rushhour Avoidance: A Qualitative Research Approach. Transportation Research Board.
- Ben-Elia, E. and D. Ettema (2011). "Changing commuters' behavior using rewards: A study of rush-hour avoidance." Transportation Research Part F: Traffic Psychology and Behaviour **14**(5): 354-368.
- Chiu, Y.-C. and E. Nava. (2013). "DynusT Official Website (<http://dynust.net>)."
- Currie, G. (2011). "Free Fare Incentives to Shift Rail Demand Peaks – Medium Term Impacts." Transportation Research Board.
- Shelton, J., K. Lorenzini, et al. (2013). Long-Term Central Texas IH 35 Improvement Scenarios (<http://mobility.tamu.edu/mip/pdfs/MIP-Longterm-Improvement-Central-TX.pdf>). Mobility Investment Priorities Project.
- Stanford University. (2012). "Congestion and Parking Relief Incentives (CAPRI)." from <https://stanfordcapri.org/welcomeinfo.php>.
- Texas Transportation Institute (2013). Mobility Investment Priorities Project - Austin - State Loop 1 (MoPac) (<http://mobility.tamu.edu/mip/corridors-pdfs/austin/AUS-39-SL-1-101713.pdf>).







**CENTRAL TEXAS  
Regional Mobility Authority**

## AGENDA ITEM #9 SUMMARY

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Approve an expedited change order approval process for use with the MoPac Improvement Project.

Strategic Plan Relevance: Regional Mobility

Department: Engineering

Associated Costs: None

Funding Source: MoPac Improvement Project funds

Board Action Required: Yes

Description of Matter: This item authorizes the Executive Director to approve any change orders, in any amount, to the design/build contract with CH2MHill for development of the MoPac Improvement Project. Under Section 101.038(b)(6), the Board may authorize the Executive Director to execute contract change orders “not exceeding amounts established in [the Resolution]” authorizing that action.

Because of the critical importance of completing the MoPac Improvement Project on schedule, the Executive Director recommends that the Board authorize his approval of a change order to CH2MHill in any amount within contingency reserves without specific prior Board action. The Executive Director must promptly provide to the Board members a written description of each such approved change order and his reason for approving that change order.

Most change orders will continue to be scheduled for Board approval during a regular monthly meeting, but this power will allow the Executive Director to act on behalf of the Mobility Authority if circumstances require approval of a change order in the period between the Board’s monthly meetings.

Reference documentation: Draft Resolution

Contact for further information: Wesley M. Burford, P.E., Director of Engineering

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

**RESOLUTION NO. 14-\_\_**

**APPROVING AN EXPEDITED ADMINISTRATIVE CHANGE ORDER APPROVAL  
PROCESS FOR USE WITH THE MOPAC IMPROVEMENT PROJECT.**

WHEREAS, completion of the MoPac Improvement Project on schedule is one of the highest priorities of the Mobility Authority; and

WHEREAS, Section 101.038(b)(6) of the Policy Code provides that the Executive Director “may execute ... contract change orders ... not exceeding amounts established in Resolutions of the board;” and

WHEREAS, the Executive Director recommends that the Board authorize his approval of a change order under the design/build contract with CH2MHill, when scheduling the change order for Board approval at a regular monthly meeting could result in a delay in completing the MoPac Improvement Project.

NOW, THEREFORE, BE IT RESOLVED that the Board hereby authorizes the Executive Director to approve a change order to the design/build contract with CH2MHill for the MoPac Improvement Project, in any amount within contingency reserves for that contract, without prior Board consideration or approval of the change order; and

BE IT FURTHER RESOLVED that the Executive Director shall promptly provide a written report to the members of the Board of Directors of each such approved change order and his reason for approving that change order.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 29<sup>th</sup> day of January, 2014.

Submitted and reviewed by:

Approved:

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Andrew Martin  
General Counsel for the Central  
Texas Regional Mobility Authority

---

Ray A. Wilkerson  
Chairman, Board of Directors  
Resolution Number: 14-\_\_  
Date Passed: 01/29/14



**CENTRAL TEXAS  
Regional Mobility Authority**

## AGENDA ITEM #10 SUMMARY

---

Approve an amendment to the Policy Code relating to the investment policies.

Strategic Plan Relevance: Regional Mobility

Department: Finance

Associated Costs: None

Funding Source: None

Board Action Required: Yes

Description of Matter:

The Public Funds Investment Act (PFIA) requires governing bodies to annually adopt its investment policy. The only change to the policy we are recommending this year is allowing the maximum maturity for individual securities to be up to 5 years to the extent cash flows allow. Any maturity greater than 5 years would require Board approval.

Reference documentation: Draft Resolution  
Amendment to Investment Policy

Contact for further information:

Cindy Demers, Controller

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

**RESOLUTION NO. 14-\_\_\_**

**APPROVING TO THE INVESTMENT POLICY (ARTICLE 1, CHAPTER 2 OF THE  
POLICY CODE) FOLLOWING THE ANNUAL REVIEW OF THAT POLICY.**

WHEREAS, the Texas Public Funds Investment Act, Chapter 2256, Government Code, requires the Board of Directors to adopt a written investment policy regarding investment of Mobility Authority funds and funds under its control, and to include a separate written investment strategy for each of the funds or group of funds under its control; and

WHEREAS, in compliance with the Texas Public Funds Investment Act the Board has previously adopted the required written investment policy, now codified as Article 1, Chapter 2 of the Mobility Authority Policy Code (the "Investment Policy"); and

WHEREAS, both the Texas Public Funds Investment Act and Section 201.017 of the Policy Code require an annual review and approval of the Investment Policy by the Board; and

WHEREAS, in connection with and prior to its action on this resolution, the Board has reviewed the Investment Policy; and

WHEREAS, in accordance with recommendations from the Chief Financial Officer and the Controller, the Executive Director recommends to the Board that it approve revisions to Section 201.009 of the Policy Code, as proposed in Exhibit 1 to this Resolution.

NOW THEREFORE, BE IT RESOLVED that Board hereby approves the Investment Policy codified as Article 1, Chapter 2 of the Mobility Authority Policy Code, including the revisions to Section 201.009 (Investment Strategies) as set forth in Exhibit 1 to this Resolution.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 29<sup>th</sup> day of January, 2014.

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: 14-\_\_\_  
Date Passed: 01/29/14

## Exhibit 1 to Resolution 14-\_\_\_\_\_

### Proposed Revision to Section 201.009 of the Policy Code:

#### **201.009 Investment Strategies**

(a) The authority's investment portfolio shall be designed with the objective of obtaining a rate of return throughout budgetary and economic cycles, commensurate with the investment risk constraints and the cash flow needs.

(b) Market Yield Benchmark: The authority's investment strategy is conservative. Given this strategy, the basis used by the chief financial officer to determine whether minimum market yields are being achieved shall be the six month T-bill rate. Investment Officers and Investment Advisors shall strive to safely exceed minimum market yield within policy and market constraints.

(c) Maximum Maturities: To the extent possible, the authority will attempt to match its individual investments with anticipated ~~project~~ cash flow requirements. ~~Unless matched to a specific cash flow, the authority will not directly invest operating or general funds of each fund. However, in securities maturing more than 16 months from the date of purchase no instance shall the maximum stated maturity of an individual investment exceed five years,~~ unless approved by the board. ~~Investment of bond proceeds shall not exceed the projected expenditure schedule of the related project.~~

~~Reserve funds may be invested in securities exceeding 12 months if the maturity of such investments are made to coincide as nearly as practicable with the expected use of the funds.~~



**CENTRAL TEXAS  
Regional Mobility Authority**

**AGENDA ITEM #11 SUMMARY**

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Approve an updated list of financial institutions and brokers authorized to provide investment services to the Mobility Authority.

Strategic Plan Relevance: Regional Mobility

Department: Finance

Associated Costs: None

Funding Source: N/A

Board Action Required: Yes

**Description of Matter:**

The Mobility Authority's Investment Policy, codified as Article 1 (Investment Policy), Chapter 2 (Finances) of the Policy Code, is adopted to comply with the Texas Public Funds Investment Act, Chapter 2256 of the Texas Government Code.

Sec. 201.011 of the Policy Code provides that "financial institutions and qualified brokers authorized to provide investment services and engage in investment transactions with the authority" shall be approved by separate resolution of the Board of Directors.

This item updates the Mobility Authority's current list of authorized financial institutions and investment brokers.

Reference documentation: Draft Resolution  
Exhibit 1: Financial Institutions and Authorized Investment Brokers

Contact for further information: Bill Chapman, Chief Financial Officer  
Cindy Demers, Controller

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

**RESOLUTION NO. 14-\_\_**

**APPROVING AN UPDATED LIST OF FINANCIAL INSTITUTIONS AND  
BROKERS AUTHORIZED TO PROVIDE INVESTMENT SERVICES TO  
THE MOBILITY AUTHORITY.**

WHEREAS, Article 1 (Investment Policy), Chapter 2 (Finances) of the Policy Code establishes the Mobility Authority's investment policy in compliance with the Texas Public Funds Investment Act, Chapter 2256 of the Texas Government Code; and

WHEREAS, Sec. 201.011 of the Policy Code provides that "financial institutions and qualified brokers authorized to provide investment services and engage in investment transactions with the authority" shall be approved by a separate resolution adopted by the Board of Directors; and

WHEREAS, the current list of brokers authorized by the Board of Directors was established by Resolution No. 13-006, dated January 30, 2013; and

WHEREAS, the Executive Director, Chief Financial Officer, and Controller recommend that the Board update and restate the list of financial institutions and authorized brokers to include the firms named on the list of Financial Institutions and Authorized Investment Brokers attached as Exhibit 1.

NOW, THEREFORE, BE IT RESOLVED that the firms included on the list of Financial Institutions and Authorized Investment Brokers attached as Exhibit 1 are hereby authorized to provide investment services and engage in investment transactions with the Mobility Authority.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 29<sup>th</sup> day of January, 2014.

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: 14-\_\_  
Date Passed: 01/29/14



**EXHIBIT 1 TO RESOLUTION 14-**  
**FINANCIAL INSTITUTIONS AND**  
**AUTHORIZED INVESTMENT BROKERS**

Coastal Securities  
206 Wild Basin Road, Suite 109  
Austin, Texas 78746

JPMorgan Chase Securities, Inc.  
1717 Main Street, Lower Level 1  
Dallas, TX 75201

Gilford Securities Incorporated  
777 Third Avenue  
New York, NY 10017

First Allied Securities, Inc.  
655 West Broadway, 12<sup>th</sup> Floor  
San Diego, CA 92101

First Empire Securities  
100 Motor Parkway, 2<sup>nd</sup> Floor  
Hauppauge, NY 11788

First Southwest Company  
325 North Saint Paul, 8th Floor  
Dallas, TX 75201

Bank of America Securities  
One Bryant Park, 4th Floor  
New York, NY 10036

Morgan Asset Management (Regions Bank)  
500 North Akard Street, Ste. 100  
Dallas, TX 75201

Regions Bank  
100 Congress Avenue  
Austin, TX 78701

Alamo Capital  
201 N. Civic Drive, Suite 145  
Walnut Creek, CA 94596

Oppenheimer & Co. Inc.  
85 Broad Street, 22<sup>nd</sup> Floor  
New York, NY 10004



**CENTRAL TEXAS  
Regional Mobility Authority**

**AGENDA ITEM #12 SUMMARY**

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Accept the financial statements for December 2013.

Department: Finance

Associated Costs: None

Funding Source: None

Board Action Required: YES

Description of Matter:

Presentation and acceptance of the monthly financial statements for December 2013

Attached documentation for reference:

Draft Resolution

Draft Financial Statements for December 2013

Contact for further information:

Cindy Demers, Controller

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

**RESOLUTION NO. 14-\_\_\_**

**ACCEPT THE FINANCIAL STATEMENTS FOR DECEMBER 2013.**

WHEREAS, the Central Texas Regional Mobility Authority (“Mobility Authority”) is empowered to procure such goods and services as it deems necessary to assist with its operations and to study and develop potential transportation projects, and is responsible to insure accurate financial records are maintained using sound and acceptable financial practices; and

WHEREAS, close scrutiny of the Mobility Authority’s expenditures for goods and services, including those related to project development, as well as close scrutiny of the Mobility Authority’s financial condition and records is the responsibility of the Board and its designees through procedures the Board may implement from time to time; and

WHEREAS, the Board has adopted policies and procedures intended to provide strong fiscal oversight and which authorize the Executive Director, working with the Mobility Authority’s Chief Financial Officer, to review invoices, approve disbursements, and prepare and maintain accurate financial records and reports; and

WHEREAS, the Executive Director, working with the Chief Financial Officer, has reviewed and authorized the disbursements necessary for the month of December 2013, and has caused Financial Statements to be prepared and attached to this resolution as Attachments A.

**NOW THEREFORE, BE IT RESOLVED**, that the Board of Directors accepts the Financial Statements for December 2013, attached as Attachments A.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 29th day of January, 2014.

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: 14-\_\_\_  
Date Passed: 1/29/2014

**Attachment A**

**Financial Statements for December 2013**

**Central Texas Regional Mobility Authority  
Balance Sheet**

As of	December 31, 2013	December 31, 2012
<b>Assets</b>		
<b>Current Assets</b>		
Cash in Regions Operating Account	301,844	268,188
Cash In TexSTAR	59,795	74,518
Regions Payroll Account	49,276	27,043
<b>Restricted cash/cash equivalents</b>		
Fidelity Government MMA	155,488,534	108,670,976
Restricted Cash-TexStar	21,374,743	53,757,775
Overpayment accounts	44,331	37,100
<b>Total Cash and Cash Equivalents</b>	177,318,523	162,835,600
Accounts Receivable	7,091	15,302
Due From Other Funds	0	171,248
Due From TTA	408,394	540,356
Due From NTTA	173,654	53,981
Due From HCTRA	142,635	81,410
Due From TxDOT	20,235,775	833,189
Due From Federal Government	0	214,900
Interest Receivable	127,985	370,786
<b>Total Receivables</b>	21,095,534	2,281,172
<b>Short Term Investments</b>		
Treasuries	0	4,549,017
Short Term Investments	45,221,771	104,422,352
<b>Other Current Assets</b>		
Prepaid Insurance	71,115	46,011
<b>Total Current Assets</b>	243,706,943	269,585,136
<b>Construction Work In Process</b>		
	363,284,027	304,440,288
<b>Fixed Assets</b>		
Computers(net)	96,197	25,979
Computer Software(net)	422,648	(7,853)
Furniture and Fixtures(net)	0	11,107
Equipment(net)	10,637	30,524
Autos and Trucks(net)	10,922	17,821
Buildings and Toll Facilities(net)	5,921,333	6,090,186
Highways and Bridges(net)	322,735,173	276,750,667
Communication Equipment(net)	670,060	856,032
Toll Equipment(net)	11,529,077	9,219,931
Signs(net)	8,707,643	6,002,720
Land Improvements(net)	7,061,869	3,330,973
Right of Way	46,642,851	24,800,630
Leasehold Improvements	177,998	51,827
<b>Total Fixed Assets</b>	403,986,409	327,180,543
<b>Long Term Investments</b>		
<b>Other Assets</b>		
Security Deposits	0	8,644
Intangible Assets	15,032,417	650
2005 Bond Insurance Costs	5,337,706	
<b>Total Assets</b>	1,031,347,502	934,134,455

## Liabilities

### Current Liabilities

Accounts Payable	47,911	506,953
Overpayments	45,749	38,143
Interest Payable	21,677,842	21,639,292
Due to other Funds	(300,000)	171,248
Deferred Compensation Payable	0	0
TCDRS Payable	42,524	41,899
Due to other Entities	350,279.20	0
FICA Payable		0
FICA MED Payable		(7,500)
Federal Withholding Payable		7,500
Due to State of Texas	(0)	0
<b>Total Current Liabilities</b>	<b>23,452,860</b>	<b>22,397,535</b>

### Long Term Liabilities

Accrued Vac & Sick Leave Paybl	189,089	189,089
Senior Lien Revenue Bonds 2005	0	172,628,655
Senior Lien Revenue Bonds 2010	106,361,923	103,020,626
Senior Lien Revenue Bonds 2011	307,614,134	306,913,930
Senior Refunding Bonds 2013	185,810,000	0
Sn Lien Rev Bnd Prem/Disc 2010	112,866	150,669
Sn Lien Rev Bnd Prem/Disc 2011	(3,647,934)	(3,801,310)
Sn Lien Rev Bnd Prem/Disc 2013	18,177,214	0
Subordinated Lien Bond 2010	0	45,000,000
Subordinated Lien Bond 2011	70,000,000	70,000,000
Subordinated Refunding Bonds 2013	103,960,000	
Sub Lien Bond 2011 Prem/Disc	(1,936,012)	(2,033,993)
Sub Lien Bond 2013 Prem/Disc	4,041,191	
TIFIA note 2008	0	77,656,077
2011 Regions Draw Down Note	1,799,820	800,000
2013 American Bank Loan	5,300,000	
Total Long Term Liabilities	<b>797,782,289</b>	<b>775,096,455</b>
<b>Total Liabilities</b>	<b>821,235,149</b>	<b>797,493,990</b>

### Net Assets Section

Contributed Capital	18,334,846	18,334,846
Net Assets beginning	153,684,260	86,051,179
Current Year Operations	38,093,247	32,254,440
<b>Total Net Assets</b>	<b>191,777,507</b>	<b>118,305,619</b>
<b>Total Liabilities and Net Assets</b>	<b>1,031,347,502</b>	<b>934,134,455</b>

**Central Texas Regional Mobility Authority**  
**Income Statement**  
**All Operating Departments**

Account Name	Budget Amount FY 2014	Actual Year to Date 12/31/2013	Percent of Budget	Actual Prior Year to Date 12/31/2012
<b>Revenue</b>				
<b>Operating Revenue</b>				
Toll Revenue-TxTag-Manor	1,188,228	1,106,873	93.15%	-
Toll Revenue-TxTag-183A	29,507,860	12,058,250	40.86%	10,413,732
Toll Revenue-HCTRA-183A	884,163	512,118	57.92%	491,206
Toll Revenue-HCTRA Manor	173,689	126,847	73.03%	-
Toll Revenue-NTTA-183A	580,498	296,511	51.08%	316,156
Toll Revenue-NTTA-Manor	77,633	39,047	50.30%	-
Video Tolls 183A	4,243,980	2,719,825	64.09%	2,255,075
Video Tolls Manor Expressway	452,664	363,378	80.28%	-
Fee revenue 183A	1,661,750	1,071,826	64.50%	892,032
Fee revenue Manor Expressway	179,820	253,038	140.72%	-
<b>Total Operating Revenue</b>	<b>38,950,285</b>	<b>18,547,713</b>	<b>47.62%</b>	<b>14,368,201</b>
<b>Other Revenue</b>				
Interest Income	180,000	87,077	48.38%	115,369
Grant Revenue	1,236,000	39,485,633	3195%	37,217,623
Reimbursed Expenditures	-	-	0.00%	34,774
Misc Revenue	92,500	363,901	393.41%	216,007
Unrealized Loss	-	-	0.00%	42,708
<b>Total Other Revenue</b>	<b>1,508,500</b>	<b>39,936,612</b>	<b>2647%</b>	<b>37,626,482</b>
<b>Total Revenue</b>	<b>\$ 40,458,785</b>	<b>\$ 58,484,324</b>	<b>144.55%</b>	<b>\$ 51,994,683</b>
<b>Expenses</b>				
<b>Salaries and Wages</b>				
Salary Expense-Regular	2,185,005	1,102,474	50.46%	922,930
Part Time Salary Expense	12,000	-	0.00%	480
Overtime Salary Expense	3,000	-	0.00%	-
Contractual Employees Expense	5,000	-	0.00%	1,202
TCDRS	317,550	152,997	48.18%	122,218
FICA	102,241	33,940	33.20%	24,404
FICA MED	31,900	16,132	50.57%	13,440
Health Insurance Expense	193,060	98,631	51.09%	88,891
Life Insurance Expense	5,874	1,187	20.20%	3,022
Auto Allowance Expense	10,200	5,100	50.00%	-

**Central Texas Regional Mobility Authority**  
**Income Statement**  
**All Operating Departments**

Account Name	Budget Amount FY 2014	Actual Year to Date 12/31/2013	Percent of Budget	Actual Prior Year to Date 12/31/2012
Other Benefits	190,261	58,474	30.73%	43,364
Unemployment Taxes	12,960	21	0.16%	-
Salary Reserve	50,000	-	0.00%	-
<b>Total Salaries and Wages</b>	<b>3,119,051</b>	<b>1,468,956</b>	<b>47.10%</b>	<b>1,219,950</b>
<b>Contractual Services</b>				
<u>Professional Services</u>				
Accounting	12,000	6,555	54.62%	3,097
Auditing	65,000	51,480	79.20%	44,990
General Engineering Consultant	460,000	1,600	0.35%	120,515
GEC-Trust Indenture Support	75,000	29,250	39.00%	-
GEC-Financial Planning Support	50,000	33,836	67.67%	24,958
GEC-Toll Ops Support	5,000	879	17.59%	-
GEC-Roadway Ops Support	325,000	77,299	23.78%	34,304
GEC-Technology Support	50,000	64,495	128.99%	11,148
GEC-Public Information Support	10,000	461	4.61%	3,436
GEC-General Support	275,000	121,155	44.06%	67,799
General System Consultant	175,000	36,692	20.97%	6,028
Image Processing - 183A	1,140,000	525,439	46.09%	454,347
Image Processing - Manor	120,000	126,176	105.15%	-
Facility maintenance	-	4,097		3,449
HERO	1,629,000	452,231	27.76%	525,522
Special Projects	-	63,500		-
Human Resources	50,000	5,758	11.52%	9,357
Legal	250,000	93,562	37.42%	152,042
Photography	10,000	1,125	11.25%	-
Traffic and Revenue Consultant	5,000	26,650	532.99%	-
Communications and Marketing	-	-	0.00%	92,563
<b>Total Professional Services</b>	<b>4,706,000</b>	<b>1,722,240</b>	<b>36.60%</b>	<b>1,553,555</b>
<u>Other Contractual Services</u>				
IT Services	63,000	19,695	31.26%	16,954
Graphic Design Services	40,000	11,819	29.55%	-
Website Maintenance	35,000	17,748	50.71%	2,929
Research Services	50,000	5,033	10.07%	3,149



**Central Texas Regional Mobility Authority**  
**Income Statement**  
**All Operating Departments**

Account Name	Budget Amount FY 2014	Actual Year to Date 12/31/2013	Percent of Budget	Actual Prior Year to Date 12/31/2012
Copy Machine	10,000	3,936	39.36%	2,324
Software Licenses	17,200	7,387	42.95%	7,387
ETC Maintenance Contract	1,291,625	305,458	23.65%	343,567
ETC Development	125,000	-	0.00%	-
ETC Testing	30,000	-	0.00%	-
Communications and Marketing	140,000	94,254	67.32%	204
Advertising Expense	60,000	33,411	55.68%	25,233
Direct Mail	5,000	-	0.00%	-
Video Production	20,000	5,050	25.25%	20,920
Radio	10,000	-	0.00%	-
Other Public Relations	2,500	-	0.00%	-
Law Enforcement	250,000	156,954	62.78%	76,681
Special assignments	5,000	-	0.00%	-
Traffic Management	-	-	0.00%	14,417
Emergency Maintenance	10,000	-	0.00%	-
Generator Maintenance	20,000	-	0.00%	-
Generator Fuel	9,000	596	6.62%	-
Fire and Burglar Alarm	3,660	-	0.00%	114
Elevator Maintenance	2,640	-	0.00%	-
Refuse	780	191	24.52%	-
Pest Control	1,536	384	25.00%	-
Custodial	4,440	610	13.74%	-
Roadway Maintenance - 183A	750,000	(63,636)	0.00%	71,884
Roadway Maintenance - 290	-	9,008		-
Landscape Maintenance	250,000	60,711	24.28%	76,925
Signal & Illumination Maint	-	20,169		34,216
Mowing and litter control	-	-	0.00%	40,806
Graffiti removal	-	-	0.00%	225
Cell Phones	10,000	5,293	52.93%	3,789
Local Telephone Service	25,000	7,514	30.06%	7,076
Internet	6,000	412	6.86%	-
Fiber Optic System	30,000	35,844	119.48%	14,426
Other Communication Expenses	1,000	376	37.64%	102
Subscriptions	1,850	108	5.86%	53
Memberships	34,600	25,539	73.81%	6,274
Continuing Education	7,300	596	8.16%	1,935
Professional Development	14,000	501	3.58%	-

**Central Texas Regional Mobility Authority**  
**Income Statement**  
**All Operating Departments**

Account Name	Budget Amount FY 2014	Actual Year to Date 12/31/2013	Percent of Budget	Actual Prior Year to Date 12/31/2012
Seminars and Conferences	32,000	14,385	44.95%	11,909
Staff-Travel	89,000	38,533	43.30%	44,699
Other Contractual Svcs	200	-	0.00%	-
Tag Collection Fees	2,013,000	748,275	37.17%	579,783
Court Enforcement Costs	15,000	-	0.00%	-
Contractual Contingencies	130,500	-	0.00%	649
Total Other Contractual Services	5,615,831	1,566,153	27.89%	1,408,628
Total Contractual Services	<b>10,321,831</b>	<b>3,288,392</b>	<b>31.86%</b>	<b>2,962,183</b>
<b>Materials and Supplies</b>				
Books & Publications	6,500	895	13.76%	3,225
Office Supplies	10,000	6,794	67.94%	1,091
Computer Supplies	12,500	7,619	60.96%	3,998
Copy Supplies	2,200	187	8.49%	745
Annual Report printing	7,000	1,944	27.77%	-
Other Reports-Printing	10,000	13	0.13%	2,901
Direct Mail Printing	5,000	-	0.00%	-
Office Supplies-Printed	2,500	484	19.38%	-
Maintenance Supplies-Roadway	9,175	-	0.00%	-
Promotional Items	10,000	370	3.70%	4,827
Displays	5,000	-	0.00%	-
ETC spare parts expense	30,000	-	0.00%	-
Tools & Equipment Expense	1,000	-	0.00%	-
Misc Materials & Supplies	3,000	1,122	37.39%	-
Total Materials and Supplies	<b>113,875</b>	<b>19,429</b>	<b>17.06%</b>	<b>16,788</b>
<b>Operating Expenses</b>				
Gasoline	5,500	1,540	28.00%	2,107
Mileage Reimbursement	6,750	2,376	35.20%	2,382
Toll Tag Expense	2,700	141	5.21%	1,383
Parking	3,175	1,474	46.43%	16,535
Meeting Facilities	250	-	0.00%	-
Community Meeting/ Events	5,000	-	0.00%	-
Meeting Expense	17,300	2,970	17.17%	5,268

**Central Texas Regional Mobility Authority**  
**Income Statement**  
**All Operating Departments**

Account Name	Budget Amount FY 2014	Actual Year to Date 12/31/2013	Percent of Budget	Actual Prior Year to Date 12/31/2012
Public Notices	2,000	-	0.00%	-
Postage Expense	5,650	276	4.88%	138
Overnight Delivery Services	1,700	108	6.38%	127
Local Delivery Services	1,150	-	0.00%	12
Insurance Expense	90,000	47,275	52.53%	31,050
Repair & Maintenance-General	500	775	155.00%	403
Repair & Maintenance-Vehicles	500	772	154.33%	109
Repair & Maintenance Toll Equip	5,000	170	3.40%	400
Rent Expense	400,000	206,774	51.69%	89,350
Water	7,500	3,213	42.84%	3,716
Electricity	180,000	49,807	27.67%	32,912
Other Licenses	700	470	67.14%	494
Community Initiative Grants	65,000	50,000	76.92%	30,000
<b>Non Cash Operating Expenses</b>				
Amortization Expense	25,000	49,144	196.58%	180,805
Amort Expense - Refund Savings	-	513,930		-
Dep Exp- Furniture & Fixtures	14,000	-	0.00%	802
Dep Expense - Equipment	17,000	10,497	61.75%	8,445
Dep Expense - Autos & Trucks	7,000	3,449	49.27%	3,449
Dep Expense-Buildng & Toll Fac	100,000	88,557	88.56%	88,279
Dep Expense-Highways & Bridges	9,000,000	4,503,113	50.03%	3,153,301
Dep Expense-Communic Equip	175,000	98,058	56.03%	95,411
Dep Expense-Toll Equipment	986,000	773,238	78.42%	419,794
Dep Expense - Signs	175,000	121,384	69.36%	73,776
Dep Expense-Land Improvemts	160,000	252,000	157.50%	61,400
Depreciation Expense-Computers	11,000	11,585	105.32%	5,670
<b>Total Operating Expenses</b>	<b>11,470,375</b>	<b>6,793,097</b>	<b>59.22%</b>	<b>4,307,518</b>
<b>Financing Expenses</b>				
Arbitrage Rebate Calculation	6,000	6,630	110.50%	5,605
Loan Fee Expense	5,000	-	0.00%	-
Rating Agency Expense	50,000	6,000	12.00%	11,000
Trustee Fees	8,000	5,913	73.91%	2,000
Bank Fee Expense	8,000	2,747	34.33%	2,944
Continuing Disclosure	4,000	-	0.00%	-

**Central Texas Regional Mobility Authority**  
**Income Statement**  
**All Operating Departments**

Account Name	Budget Amount FY 2014	Actual Year to Date 12/31/2013	Percent of Budget	Actual Prior Year to Date 12/31/2012
Interest Expense	20,796,755	8,777,790	42.21%	10,962,537
Contingency	15,000	-	0.00%	-
<u>Non Cash Financing Expenses</u>				
Bond issuance expense	400,000	22,123	5.53%	217,685
<b>Total Financing Expenses</b>	<b>21,292,755</b>	<b>8,821,203</b>	<b>41.43%</b>	<b>11,201,772</b>
<b>Other Gains or Losses</b>				
Total Other Gains or Losses	-	-	0.00%	-
<b>Total Expenses</b>	<b>\$ 46,317,887</b>	<b>\$ 20,391,077</b>	<b>44.02%</b>	<b>\$ 19,708,210</b>
Net Income	\$ (5,859,102)	\$ 38,093,247		\$ 32,286,473

**Central Texas Regional Mobility Authority**  
**Statement of Cash Flows - FY 2014**  
**as of December 31, 2013**

**Cash flows from operating activities:**

Receipts from Department of Transportation	\$ 44,598,845
Receipts from toll fees	19,749,546
Receipts from other fees	-
Receipts from interest income	358,431
Receipts from other sources	2,331,569
Payments to vendors	(4,946,021)
Payments to employees and benefits	(1,494,212)
Net cash flows used in operating activities	<u>60,598,159</u>

**Cash flows from capital and related financing activities:**

Payments on interest	(14,849,932)
Payment on Bonds/Notes	(974,749)
Acquisitions of property and equipment	(183,794)
Acquisitions of construction in progress	(69,399,582)
Proceeds from Loans and Notes	800,000
Net cash flows used in capital and related financing activities	<u>(84,608,057)</u>

**Cash flows from investing activities:**

Purchase of investments	-
Proceeds from sale or maturity of investments	51,279,981
Net cash flows provided by investing activities	<u>51,279,981</u>
Net increase in cash and cash equivalents	27,270,083
Cash and cash equivalents at beginning of July 2013	150,048,440
Cash and cash equivalents at end of December 2013	<u>\$ 177,318,523</u>

**Reconciliation of change in net assets to net cash provided by operating activities:**

Change in net assets	\$ 38,093,247
Adjustments to reconcile change in net assets to net cash provided by operating activities:	
Depreciation and amortization	6,377,552
Nonoperating interest	8,985,913
Bond Issuance Expense	-
Changes in assets and liabilities:	0
(Increase)/Decrease in accounts receivable	6,690,663
(Increase)/Decrease in prepaid expenses and other assets	(7,709)
(Increase)/Decrease in interest receivable	258,828
Increase/(Decrease) in deferred revenue (audit adjustments)	-
Increase/(Decrease) in other payable	1,207,456
Increase/(Decrease) in accounts payable	(1,007,792)
Total adjustments	<u>22,504,911</u>
Net cash flows provided by operating activities	<u>\$ 60,598,159</u>

**INVESTMENTS by FUND**

		Balance	
		December 31, 2013	
<b>Renewal &amp; Replacement Fund</b>			
<b>TexSTAR</b>	61,316.46		<b>TexSTAR</b> 21,434,537.65
<b>Regions Sweep</b>	600,000.66		<b>CD's</b> 8,000,000.00
<b>Agencies</b>		661,317.12	<b>Regions Sweep</b> 153,899,979.74
			<b>Agencies</b> 37,221,771.20
<b>TxDOT Grant Fund</b>			
<b>TexSTAR</b>	82,176.18		
<b>Regions Sweep</b>	4,350,585.53		
<b>CD's</b>	3,000,000.00		
<b>Agencies</b>	2,029,561.34	9,462,323.05	\$ 220,556,288.59
<b>Senior Debt Service Reserve Fund</b>			
<b>TexSTAR</b>	13,596,899.29		
<b>Regions Sweep</b>	9,442,586.59		
<b>Agencies</b>	25,143,647.36	48,183,133.24	
<b>2010 Senior Lien DSF</b>			
<b>Regions Sweep</b>	1,722,008.82		
<b>TexSTAR</b>	0.00	1,722,008.82	
<b>2011 Debt Service Acct</b>			
<b>Regions Sweep</b>	0.33	0.33	
<b>2013 Sr Debt Service Acct</b>			
<b>Regions Sweep</b>	5,424,948.84	5,424,948.84	
<b>2013 Sub Debt Serrvice Account</b>			
<b>Regions Sweep</b>	2,841,537.31	2,841,537.31	
<b>2010 Senior Lien DSRF</b>			
<b>Regions Sweep</b>	2.98	2.98	
<b>2011 Sub Debt DSRF</b>			
<b>Regions Sweep</b>	2,024,251.48		
<b>CD's</b>	5,000,000.00	7,024,251.48	
<b>Operating Fund</b>			
<b>TexSTAR</b>	59,795.14		
<b>TexSTAR-Trustee</b>	2,668,544.85		
<b>Regions Sweep</b>	0.00	2,728,339.99	
<b>Revenue Fund</b>			
<b>TexSTAR</b>	1.00		
<b>Regions Sweep</b>	1,223,358.17	1,223,359.17	
<b>General Fund</b>			
<b>TexSTAR</b>	53.78		
<b>Regions Sweep</b>	14,697,448.31	14,697,502.09	
<b>2011 Sr Capitalized Interest Fund</b>			
<b>Regions Sweep</b>	8,984,373.77		
<b>Agencies</b>	0.00	8,984,373.77	
<b>2011 Sub Capitalized Interest Fund</b>			
<b>Regions Sweep</b>	2,362,740.56		
<b>Agencies</b>	0.00	2,362,740.56	
<b>2013 Sub Debt Service Reserve Fund</b>			
<b>Regions Sweep</b>	8,421,926.79	8,421,926.79	
<b>MoPac Construction Fund</b>			
<b>Regions Sweep</b>	28,103,165.17	28,103,165.17	
<b>2010-1 Sub Lien Projects Fund</b>			
<b>TexSTAR</b>	795,643.59		
<b>Regions Sweep</b>	0.00	795,643.59	
<b>2010 Senior Lien Construction Fund</b>			
<b>TexSTAR</b>	1.19		
<b>Regions Sweep</b>	125,772.36	125,773.55	
<b>2011 Sub Debt Project fund</b>			
<b>TexSTAR</b>	4,169,986.51		
<b>Agencies</b>			
<b>Regions Sweep</b>	41,361,943.98	45,531,930.49	
<b>2011 Sr Financial Assistance Fund</b>			
<b>Regions Sweep</b>	0.00	0.00	
<b>2011 Senior Lien Project Fund</b>			
<b>TexSTAR</b>	119.66		
<b>Regions Sweep</b>	22,213,328.09		
<b>Agencies</b>	10,048,562.50	32,262,010.25	
		<u>\$ 220,556,288.59</u>	

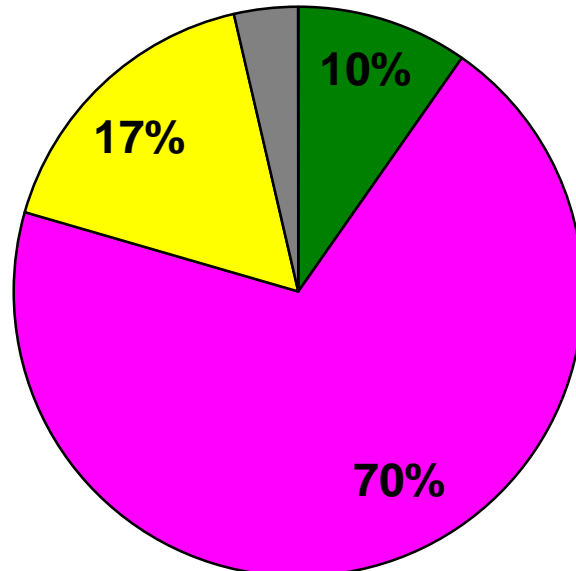
**CTRMA INVESTMENT REPORT**

Month Ending 12/31/13						
Balance 12/1/2013	Additions	Discount Amortization	Accrued Interest	Withdrawals	Balance 12/31/2013	Rate Dec 13
<b>Amount in Trustee TexStar</b>						
2011 Sub Lien Construction Fund	4,169,860.22		126.29		4,169,986.51	0.038%
2011 Senior Lien Construction Fund	119.66				119.66	0.038%
2010 Senior Lien Construction Fund	1.19				1.19	0.038%
2010-1 Sub Liien Projects	795,619.51		24.08		795,643.59	0.038%
General Fund	53.78				53.78	0.038%
Trustee Operating Fund	3,018,455.55	1,100,000.00	89.30	1,450,000.00	2,668,544.85	0.038%
Renewal and Replacement	661,296.87		19.59	600,000.00	61,316.46	0.038%
TxDOT Grant Fund	3,182,082.08		94.10	3,100,000.00	82,176.18	0.038%
Revenue Fund	1.00				1.00	0.038%
Senior Lien Debt Service Reserve Fund	13,596,487.43		411.86		13,596,899.29	0.038%
	<b>25,423,977.29</b>	<b>1,100,000.00</b>		<b>5,150,000.00</b>	<b>21,374,742.51</b>	
<b>Amount in TexStar Operating Fund</b>						
	59,793.33	1,450,000.00		1.81	1,450,000.00	0.038%
<b>Regions Sweep Money Market Fund</b>						
Operating Fund	0.00	1,100,000.00		1,100,000.00	0.00	0.100%
2010 Senior Lien Project Acct	125,756.18		16.18		125,772.36	0.100%
2011 Sub Lien Project Acct	41,356,576.80		5,367.18		41,361,943.98	0.100%
2011 Senior Lien Project Acct	0.00	22,725,000.00	38,315.47	549,987.38	22,213,328.09	0.100%
2010 Senior DSF	1,434,923.42	286,925.00	160.40		1,722,008.82	0.100%
2011 Senior Lien Debt Service Acct	0.33				0.33	0.100%
2013 Senior Lien Debt Service Acct	4,520,531.02	903,912.50	505.32		5,424,948.84	0.100%
2013 Subordinate Debt Service Acct	2,367,839.29	473,433.33	264.69		2,841,537.31	0.100%
2011 Sr Cap I Fund	8,983,780.88		592.89		8,984,373.77	0.100%
2011 Sub Debt CAP I	2,362,585.18		155.38		2,362,740.56	0.100%
TxDOT Grant Fund	1,250,431.37	3,100,000.00	154.16		4,350,585.53	0.100%
Renewal and Replacement	0.66	600,000.00			600,000.66	0.100%
Revenue Fund	1,158,715.93	3,616,006.70	189.73	3,551,554.19	1,223,358.17	0.100%
General Fund	14,903,060.20	154,224.08	1,860.95	361,696.92	14,697,448.31	0.100%
2010 Sr Debt Service Reserve Fund	0.00		2.98		2.98	0.100%
2011 Sub Debt Debt Service Reserve Fund	2,024,001.95		249.53		2,024,251.48	0.100%
Senior Lien Debt Service Reserve Fund	9,366,431.82		76,154.77		9,442,586.59	0.100%
2013 Sub Debt Service Reserve Fund	8,420,888.60		1,038.19		8,421,926.79	0.100%
MoPac Managed Lane Construction Fund	28,239,919.98		3,691.68	140,446.49	28,103,165.17	0.100%
	<b>126,515,443.61</b>	<b>32,959,501.61</b>	<b>0.00</b>	<b>128,719.50</b>	<b>5,703,684.98</b>	<b>153,899,979.74</b>
<b>Amount in Fed Agencies and Treasuries</b>						
Amortized Principal	49,255,797.36		(34,026.16)	12,000,000.00	37,221,771.20	
Accrued Interest			28,958.34			
	<b>49,255,797.36</b>	<b>0.00</b>	<b>(34,026.16)</b>	<b>12,000,000.00</b>	<b>37,221,771.20</b>	
<b>Certificates of Deposit</b>						
	3,000,000.00	5,000,000.00		0.00	8,000,000.00	
<b>Total in Pools</b>	<b>25,483,770.62</b>	<b>2,550,000.00</b>		<b>767.03</b>	<b>6,600,000.00</b>	<b>21,434,537.65</b>
<b>Total in Money Market</b>	<b>126,515,443.61</b>	<b>32,959,501.61</b>		<b>128,719.50</b>	<b>5,703,684.98</b>	<b>153,899,979.74</b>
<b>Total in Fed Agencies</b>	<b>49,255,797.36</b>	<b>0.00</b>	<b>(34,026.16)</b>		<b>12,000,000.00</b>	<b>37,221,771.20</b>
<b>Total Invested</b>	<b>204,255,011.59</b>	<b>40,509,501.61</b>	<b>(34,026.16)</b>	<b>129,486.53</b>	<b>24,303,684.98</b>	<b>220,556,288.59</b>

All Investments in the portfolio are in compliance with the CTRMA's Investment policy.

William Chapman, CFO

## Allocation of Funds



■ Total in Pools

■ Total in Money Market

■ Total in Fed Agencies

■ Total in CD's



Amount of investments As of December 31, 2013

Agency	CUSIP #	COST	Book Value	Market Value	Yield to Maturity	Purchased	Matures	FUND
Freddie Mac	3134G3BF6	<b>Matured</b>	<b>Matured</b>	<b>Matured</b>	0.3592%	3/30/2012	12/23/2013	2011 Sr Project
Federal Home Loan Bank	3133XWKV0	10,388,500.00	10,048,562.50	10,044,900.00	0.3791%	3/30/2012	3/14/2014	2011 Sr Project
Freddie Mac	3137EADD8	1,004,940.00	1,002,634.67	1,003,270.00	0.2290%	12/3/2012	4/17/2015	TxDOT Grant Fund
Northside ISD	66702RAG7	1,057,700.00	1,026,926.67	1,031,870.00	0.3580%	12/5/2012	2/15/2015	TxDOT Grant Fund
Fannie Mae	3135G0BY8	8,081,952.00	8,035,411.36	8,037,600.00	0.2150%	2/8/2013	8/28/2014	2005 DSRF
Fannie Mae	313560TW3	4,999,250.00	4,999,525.00	4,997,550.00	0.4060%	2/8/2013	7/30/2015	2005 DSRF
Federal Home Loan Bank	313371W51	12,217,422.00	12,108,711.00	12,109,320.00	0.2646%	2/8/2013	12/12/2014	2005 DSRF
		<u>11,393,440.00</u>	<u>37,221,771.20</u>	<u>37,224,510.00</u>				

Agency	CUSIP #	COST	Cummulative Amortization	12/31/2013		Interest Income December 31, 2013		
				Book Value	Maturity Value	Accrued Interest	Amortization	Interest Earned
Freddie Mac	3134G3BF6	<b>Matured</b>	<b>Matured</b>	<b>Matured</b>	12,000,000.00	6,250.00	(2,290.00)	3,960.00
Federal Home Loan Bank	3133XWKV0	10,388,500.00	339,937.50	10,048,562.50	10,000,000.00	19,791.67	(16,187.50)	3,604.17
Freddie Mac	3137EADD8	1,004,940.00	2,305.33	1,002,634.67	1,000,000.00	416.67	(164.67)	252.00
Northside ISD	66702RAG7	1,057,700.00	30,773.33	1,026,926.67	1,000,000.00	2,500.00	(1,923.33)	576.67
Fannie Mae	3135G0BY8	8,081,952.00	46,540.64	8,035,411.36	8,000,000.00	5,833.33	(4,426.42)	1,406.91
Fannie Mae	313560TW3	4,999,250.00	(275.00)	4,999,525.00	500,000.00	1,666.67	25.00	1,691.67
Federal Home Loan Bank	313371W51	12,217,422.00	108,711.00	12,108,711.00	12,000,000.00	12,500.00	(9,059.25)	3,440.75
		<u>37,749,764.00</u>	<u>527,992.80</u>	<u>37,221,771.20</u>	<u>44,500,000.00</u>	<u>28,958.34</u>	<u>(34,026.17)</u>	<u>8,392.84</u>

**December 31, 2013      Certificates of Deposit Outstanding**

Bank	CUSIP #	COST	Yield to Maturity	Purchased	Matures	December 31, 2013	
						Interest	FUND
Compass Bank	CD9932129	3,000,000	0.35%	8/27/2012	2/27/2014	\$ 863.01	TxDOT Grant Fund
Compass Bank	CD 02636	5,000,000	0.35%	2/5/2013		\$ 1,458.33	2011 Sub DSRF
		<u>8,000,000</u>				<u>\$ 2,321.34</u>	

**Travis County Escrow account**

Balance 12/1/2013	Additions	Accrued Interest	Withdrawals	Balance 12/31/2013
	\$ 1,600,000.00		\$ 11,445.32	\$ 1,588,554.68



## Monthly Newsletter - December 2013

### Performance

#### As of December 31, 2013

Current Invested Balance	\$4,749,571,555.83
Weighted Average Maturity (1)	47 Days
Weighted Average Maturity (2)	60 Days
Net Asset Value	1.000050
Total Number of Participants	781
Management Fee on Invested Balance	0.05%*
Interest Distributed	\$322,399.52
Management Fee Collected	\$188,296.66
% of Portfolio Invested Beyond 1 Year	1.16%
Standard & Poor's Current Rating	AAAm

#### December Averages

Average Invested Balance	\$4,434,287,876.14
Average Monthly Yield, on a simple basis	0.0357%
Average Weighted Average Maturity (1)*	52 Days
Average Weighted Average Maturity (2)*	65 Days

#### Definition of Weighted Average Maturity (1) & (2)

- (1) This weighted average maturity calculation uses the SEC Rule 2a-7 definition for stated maturity for any floating rate instrument held in the portfolio to determine the weighted average maturity for the pool. This Rule specifies that a variable rate instrument to be paid in 397 calendar days or less shall be deemed to have a maturity equal to the period remaining until the next readjustment of the interest rate.
- (2) This weighted average maturity calculation uses the final maturity of any floating rate instruments held in the portfolio to calculate the weighted average maturity for the pool.

\* The maximum management fee authorized for the TexSTAR Cash Reserve Fund is 12 basis points. This fee may be waived in full or in part in the discretion of the TexSTAR co-administrators at any time as provided for in the TexSTAR Information Statement.

Rates reflect historical information and are not an indication of future performance.

### Holiday Reminder

In observance of Martin Luther King Jr. holiday, **TexSTAR will be closed Monday, January 20, 2014**. All ACH transactions initiated on Friday, January 17th will settle on Tuesday, January 21st.

In observance of Presidents' Day, **TexSTAR will be closed Monday, February 17, 2014**. All ACH transactions initiated on Friday, February 14th will settle on Tuesday, February 18th.

### Investment Forums

TexSTAR and First Southwest were pleased to offer three regional investment forums in December to our participants. These events included several notable speakers who addressed current regulatory and market topics that enabled our participants to be ahead of the curve on many upcoming issues. We would like to thank our TexSTAR Board members who hosted and attended these events in the various locations – Advisory Board members Monte Mercer with the North Central Texas Council of Government who hosted our Arlington conference and Eric Cannon with the Town of Addison, Governing Board President Bill Chapman with the Central Texas Regional Mobility Authority who hosted our Austin conference and Advisory Board member Nicole Conley with Austin ISD, and Governing Board member Kenneth Huewitt with Houston ISD who hosted our Houston conference. We enjoyed seeing our participants at these 2013 events and look forward to expanding these conferences in the future to reach our participants in other areas of the State.

### Economic Commentary

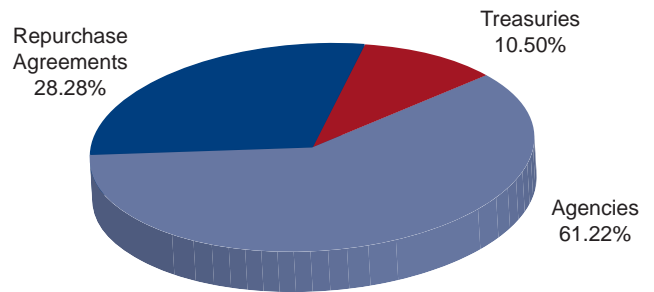
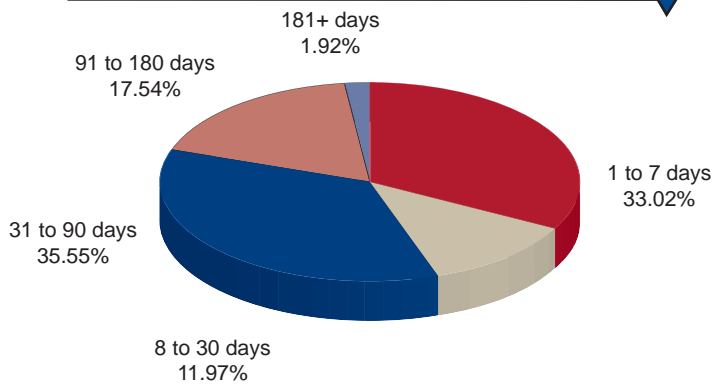
The quarter had an unpromising start, with a federal government shutdown and threats of a debt ceiling breach. Consumer confidence initially plunged; and many feared a sizable economic downturn, including the Fed, as evidenced by their reluctance to taper asset purchases in September. However, these fears proved unwarranted as the economy, led by the consumer, strengthened. Labor markets steadily improved heading into the end of the year. The unemployment rate fell to 7.0%, equity markets hit new record highs, with the S&P 500 Index gaining 30% and the Dow climbing 27% in 2013. The Fed announced on December 18th that it would start to taper its asset purchase program by \$10 billion per month, \$5 billion less in Treasury securities and \$5 billion less in agency MBS starting in January 2014. The tapering announcement was broadly welcomed by equity investors as the decision was a positive signal about the strength of the U.S. economy and a return to more normal monetary policy. The expectations continue to be for subtrend global growth over the next three to six months, but the possibility of above-trend growth in the U.S. has grown. Consumption, investment and diminishing government restraint are leading the U.S. recovery and helping to bring down unemployment. The ongoing improvement in housing is also encouraging. The risks to bond markets have increased moderately. If growth and inflation pressures accelerate at a rate that leads the Fed to consider raising the fed funds target, then a sharp upward move in front-end yields will likely lead to larger bond losses.

This information is an excerpt from an economic report dated December 2013 provided to TexSTAR by JP Morgan Asset Management, Inc., the investment manager of the TexSTAR pool.

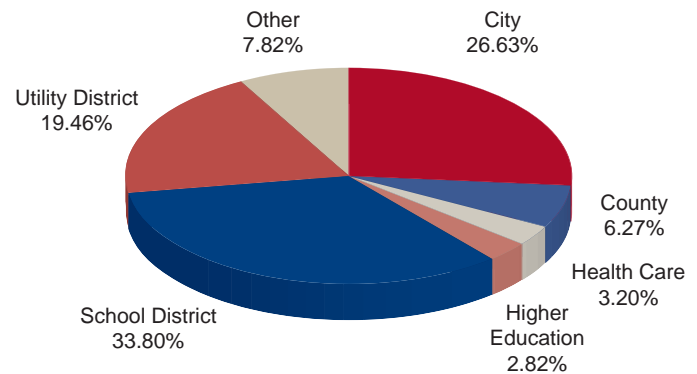
**For more information about TexSTAR, please visit our web site at [www.texstar.org](http://www.texstar.org).**

# Information at a Glance

## Portfolio by Type of Investment As of December 31, 2013



## Portfolio by Maturity As of December 31, 2013



## Distribution of Participants by Type As of December 31, 2013

# Historical Program Information

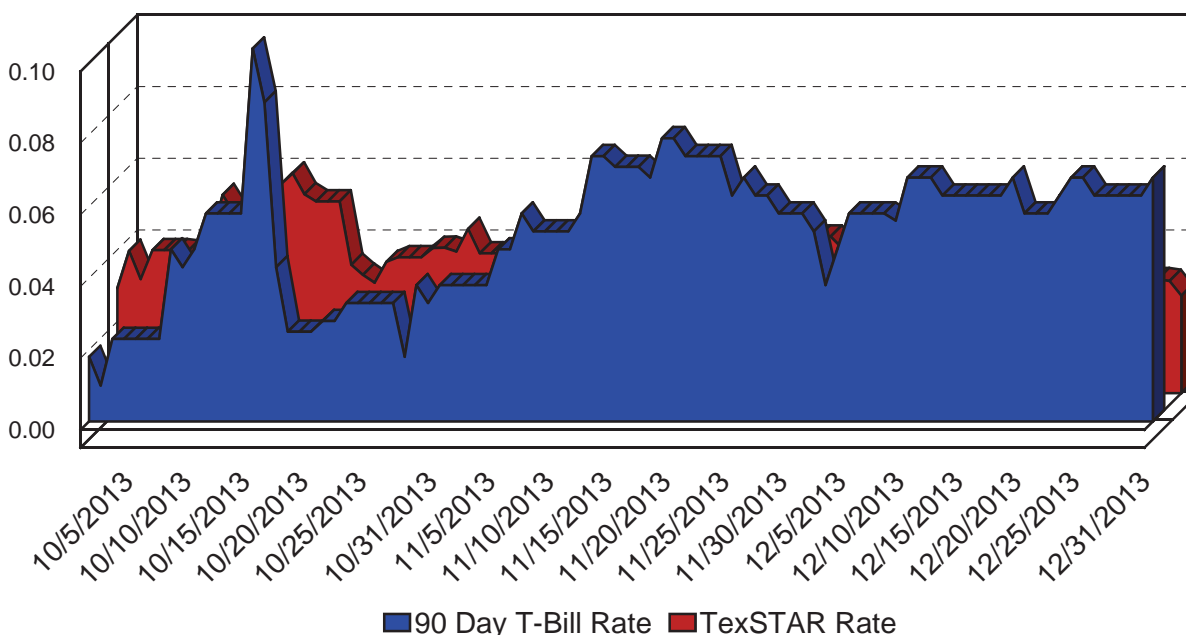
Month	Average Rate	Book Value	Market Value	Net Asset Value	WAM (1)*	WAM (2)*	Number of Participants
Dec 13	0.0357%	\$4,749,571,555.83	\$4,749,808,699.35	1.000050	52	65	781
Nov 13	0.0405%	4,358,778,907.03	4,358,933,052.64	1.000035	52	63	781
Oct 13	0.0434%	4,549,543,382.92	4,549,816,768.31	1.000060	52	63	781
Sep 13	0.0390%	4,545,216,845.55	4,545,590,808.40	1.000082	52	64	781
Aug 13	0.0474%	4,682,919,318.35	4,683,351,916.02	1.000091	52	59	777
Jul 13	0.0487%	4,833,856,137.70	4,834,318,370.27	1.000095	52	56	776
Jun 13	0.0614%	5,173,585,142.53	5,173,948,421.52	1.000070	54	58	775
May 13	0.0723%	5,474,920,318.32	5,475,469,836.81	1.000100	54	59	773
Apr 13	0.1038%	5,496,240,712.35	5,496,953,468.88	1.000129	51	57	773
Mar 13	0.1125%	5,635,357,483.25	5,636,069,051.83	1.000126	52	60	770
Feb 13	0.0996%	6,248,843,373.19	6,249,277,988.81	1.000069	51	58	768
Jan 13	0.1103%	6,030,821,287.69	6,031,600,682.90	1.000129	48	57	767

# Portfolio Asset Summary as of December 31, 2013

	Book Value	Market Value
Uninvested Balance	\$ (4,175.40)	\$ (4,175.40)
Accrual of Interest Income	1,478,720.33	1,478,720.33
Interest and Management Fees Payable	(348,507.47)	(348,507.47)
Payable for Investment Purchased	0.00	0.00
Repurchase Agreement	1,342,648,000.00	1,342,648,000.00
Government Securities	3,405,797,518.37	3,406,034,661.89
<b>Total</b>	<b>\$ 4,749,571,555.83</b>	<b>\$ 4,749,808,699.35</b>

Market value of collateral supporting the Repurchase Agreements is at least 102% of the Book Value. The portfolio is managed by J.P. Morgan Chase & Co. and the assets are safekept in a separate custodial account at the Federal Reserve Bank in the name of TexSTAR. The only source of payment to the Participants are the assets of TexSTAR. There is no secondary source of payment for the pool such as insurance or guarantee. Should you require a copy of the portfolio, please contact TexSTAR Participant Services.

# TexSTAR versus 90-Day Treasury Bill



This material is for information purposes only. This information does not represent an offer to buy or sell a security. The above rate information is obtained from sources that are believed to be reliable; however, its accuracy or completeness may be subject to change. The TexSTAR management fee may be waived in full or in part at the discretion of the TexSTAR co-administrators and the TexSTAR rate for the period shown reflects waiver of fees. This table represents historical investment performance/return to the customer, net of fees, and is not an indication of future performance. An investment in the security is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. Although the issuer seeks to preserve the value of an investment at \$1.00 per share, it is possible to lose money by investing in the security. Information about these and other program details are in the fund's Information Statement which should be read carefully before investing. The yield on the 90-Day Treasury Bill ("T-Bill Yield") is shown for comparative purposes only. When comparing the investment returns of the TexSTAR pool to the T-Bill Yield, you should know that the TexSTAR pool consist of allocations of specific diversified securities as detailed in the respective Information Statements. The T-Bill Yield is taken from Bloomberg Finance L.P. and represents the daily closing yield on the then current 90-day T-Bill.

## Daily Summary for December 2013

Date	Mny Mkt Fund Equiv. [SEC Std.]	Daily Allocation Factor	TexSTAR Invested Balance	Market Value Per Share	WAM Days (1)*	WAM Days (2)*
12/1/2013	0.0437%	0.000001197	\$4,358,778,907.03	1.000035	52	67
12/2/2013	0.0404%	0.000001106	\$4,380,243,636.05	1.000038	51	66
12/3/2013	0.0384%	0.000001052	\$4,399,707,487.86	1.000040	52	66
12/4/2013	0.0356%	0.000000974	\$4,355,151,531.62	1.000043	52	66
12/5/2013	0.0375%	0.000001028	\$4,345,206,867.41	1.000041	53	68
12/6/2013	0.0363%	0.000000995	\$4,309,338,202.94	1.000038	52	67
12/7/2013	0.0363%	0.000000995	\$4,309,338,202.94	1.000038	52	67
12/8/2013	0.0363%	0.000000995	\$4,309,338,202.94	1.000038	52	67
12/9/2013	0.0364%	0.000000998	\$4,255,971,094.09	1.000039	53	68
12/10/2013	0.0353%	0.000000968	\$4,285,747,956.42	1.000037	53	67
12/11/2013	0.0301%	0.000000825	\$4,283,164,946.79	1.000023	52	67
12/12/2013	0.0284%	0.000000778	\$4,275,537,153.49	1.000027	54	69
12/13/2013	0.0271%	0.000000743	\$4,427,493,646.91	1.000023	50	64
12/14/2013	0.0271%	0.000000743	\$4,427,493,646.91	1.000023	50	64
12/15/2013	0.0271%	0.000000743	\$4,427,493,646.91	1.000023	50	64
12/16/2013	0.0408%	0.000001118	\$4,380,317,624.53	1.000035	53	67
12/17/2013	0.0406%	0.000001111	\$4,410,845,319.88	1.000029	54	69
12/18/2013	0.0451%	0.000001235	\$4,396,630,110.83	1.000031	54	68
12/19/2013	0.0450%	0.000001232	\$4,410,773,750.05	1.000037	52	66
12/20/2013	0.0424%	0.000001163	\$4,418,457,892.83	1.000033	52	66
12/21/2013	0.0424%	0.000001163	\$4,418,457,892.83	1.000033	52	66
12/22/2013	0.0424%	0.000001163	\$4,418,457,892.83	1.000033	52	66
12/23/2013	0.0373%	0.000001022	\$4,452,771,708.67	1.000031	51	64
12/24/2013	0.0342%	0.000000937	\$4,575,755,281.38	1.000031	51	63
12/25/2013	0.0342%	0.000000937	\$4,575,755,281.38	1.000031	51	63
12/26/2013	0.0312%	0.000000856	\$4,585,914,700.93	1.000033	51	64
12/27/2013	0.0318%	0.000000870	\$4,623,713,557.57	1.000038	50	63
12/28/2013	0.0318%	0.000000870	\$4,623,713,557.57	1.000038	50	63
12/29/2013	0.0318%	0.000000870	\$4,623,713,557.57	1.000038	50	63
12/30/2013	0.0313%	0.000000857	\$4,648,069,345.33	1.000040	49	62
12/31/2013	0.0272%	0.000000746	\$4,749,571,555.83	1.000050	47	60
Average	0.0357%	0.000000977	\$4,434,287,876.14		52	65

TexSTAR Participant Services  
First Southwest Asset Management, Inc.  
325 North St. Paul Street, Suite 800  
Dallas, Texas 75201



## **TexSTAR Board Members**

<i>William Chapman</i>	<i>Central Texas Regional Mobility Authority</i>	<i>Governing Board President</i>
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<i>Michael Bartolotta</i>	<i>First Southwest Company</i>	<i>Governing Board Secretary</i>
<i>Joni Freeman</i>	<i>JP Morgan Chase</i>	<i>Governing Board Asst. Sec./Treas.</i>
<i>Eric Cannon</i>	<i>Town of Addison</i>	<i>Advisory Board</i>
<i>Nicole Conley</i>	<i>Austin ISD</i>	<i>Advisory Board</i>
<i>Pamela Moon</i>	<i>City of Lubbock</i>	<i>Advisory Board</i>
<i>Monte Mercer</i>	<i>North Central TX Council of Government</i>	<i>Advisory Board</i>
<i>Oscar Cardenas</i>	<i>Northside ISD</i>	<i>Advisory Board</i>
<i>Stephen Fortenberry</i>	<i>Plano ISD</i>	<i>Advisory Board</i>
<i>Becky Brooks</i>	<i>Government Resource Associates, LLC</i>	<i>Advisory Board</i>
<i>Len Santow</i>	<i>Griggs &amp; Santow</i>	<i>Advisory Board</i>

**For more information contact TexSTAR Participant Services ★ 1-800-TEX-STAR ★ [www.texstar.org](http://www.texstar.org)**



**J.P.Morgan**  
Asset Management



**CENTRAL TEXAS  
Regional Mobility Authority**

## AGENDA ITEM #13 SUMMARY

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Quarterly briefing on the MoPac Improvement Project.

Strategic Plan Relevance: Regional Mobility

Department: Engineering

Associated Costs: N/A Briefing Only

Funding Source: N/A

Board Action Required: No

Description of Matter:

The report is an account of the activities on the MoPac Improvement Project from October through December, 2013.

Reference documentation:

GEC Quarterly Activities Report and Board Presentation

Contact for further information:

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




**MOPAC**  
**IMPROVEMENT**  
**PROJECT** 

**QUARTERLY**  
**PROGRESS**  
**REPORT**

No. 13 | January 2014







**CENTRAL TEXAS**  
**Regional Mobility Authority**

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**GENERAL ENGINEERING  
CONSULTANT (GEC)**

**HNTB**

**DESIGN/BUILD  
CONTRACTOR**

**CH2MHILL®**

**PROJECT PARTNERS**





# QUARTERLY PROGRESS REPORT No. 13

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## INTRODUCTION

The MoPac Improvement Project is a \$204 million project to add one Express Lane in each direction along an approximately 11-mile stretch of MoPac from Cesar Chavez Street in downtown Austin to Parmer Lane north of Austin within existing right of way. The Project is an effort to address the mobility problem in this corridor and takes into account the needs of drivers, transit riders, pedestrians, bicyclists, and the concerns of surrounding neighbors.

Environmentally cleared in August 2012, the Project will be built in cooperation with the Texas Department of Transportation (TxDOT), the Capital Area Metropolitan Planning Organization (CAMPO), the City of Austin, Capital Metro (CapMetro), and the Federal Highway Administration (FHWA).

The Express Lanes will be located in the middle of the MoPac corridor separated from the existing general purpose lanes by a four to five foot wide striped buffer zone with flexible pylons. Drivers will be able to access the MoPac Express Lanes at Cesar Chavez Street, near Far West Boulevard, or near Parmer Lane. While this addition of lanes will require widening of the pavement, the Express Lanes project requires no property acquisition and all existing non-toll general purpose lanes and the UPRR corridor will remain.

In addition to the Express Lanes, the MoPac Improvement Project will include: sound walls; a Collector/Distributor road under Steck Avenue; aesthetic enhancements and significant landscaping; bicycle and pedestrian improvements including two shared-use paths; full mainlane overlay with porous friction course (PFC) pavement which serves as a wet weather safety improvement measure; enhanced incident management (cameras and traffic data collection); and a significant community relations effort.

The Mobility Authority entered into a contract with CH2M HILL to design and build the MoPac Improvement Project. The agreement requires the project to be substantially complete by September 17, 2015. The Contractor developed an acceptable Baseline CPM (Critical Path Method) Schedule for the Project. The Mobility Authority issued Notice to Proceed (NTP) on April 18, 2013.

This report describes the status of the MoPac Improvement Project and documents the activities accomplished from October through December 2013.

# LOCATION MAP



**KEY TO LINES**

- Express Lane Southbound
- Express Lane Northbound
- ⋯ Union Pacific Railroad
- ⋯ Capital Metro Rail



**Segment 1:** Parmer to UPRR  
**Segment 2A:** UPRR to US 183  
**Segment 2B:** US 183 to RM 2222  
**Segment 3:** RM 2222 to Enfield  
**Segment 4:** Enfield to Cesar Chavez

# SUMMARY OF ACTIVITIES

The following activities have been accomplished by the Mobility Authority, its consultants, and the D/B Contractor during the reporting period.

## DESIGN ACTIVITIES

- Weekly task force meetings continue and over the shoulder informal reviews have been ongoing. The Mobility Authority's GEC is performing oversight of the Contractor activities.
- Management Plans including the Water Quality Maintenance/Enhancement Plan, and Tree Protection Plans were submitted to oversight team and reviewed in October.
- Railroad Exhibit A's for the following bridges were submitted by CH2M HILL:
  - CapMetro Bridge Widening – submitted to CapMetro
  - Pedestrian Bridge – submitted to UPRR
  - Segments 3 and 4 median work – submitted to the Oversight Team for review
- Segment 2B (US 183 / RM 2222) Final (100%) Design was completed and accepted in December.
- Segment 3 (RM 2222 / Enfield) Final (100%) Design was completed and submitted in December.
- Segment 2B Early Release for Construction (ERFC); which includes Removals, Stormwater Pollution Prevention Plans (SWPPP), Clearing, Safety Lighting and Project Advance Warning Signs, was issued in November.
- Segment 3 (RM 2222/Enfield) ERFC was submitted to Oversight Team for review in December.

## CONSTRUCTION ACTIVITIES

- From October-December 2013 CH2M HILL's team finalized data collection needed for design including surveying and geotechnical soil borings.
- CH2M HILL mobilized its resources for construction to begin in early December. Advance warning signs were installed and striping removals occurred. Temporary traffic barrier will be installed along the corridor at the US 183 Interchange South to RM 2222 along the median shoulder both Northbound and Southbound.
- Erosion control measures are being installed along the corridor in preparation for construction.
- Fabrication of pre-cast concrete barrier rail continues at the Tricon Plant in New Braunfels, TX.
- CH2M HILL is coordinating with fabricator of Sound Wall panels to begin production.
- TxDOT negotiated an agreement with a separate contractor to remediate asbestos coatings present on bridges within corridor. TxDOT's contractor will operate under the same lane closure constraints as CH2M HILL. Asbestos remediation is scheduled to begin January 22<sup>nd</sup> on RM 2222 southbound bridge. The intent is to remediate bridges in advance of CH2M HILL demolition and widening activities.

# PROGRESS PHOTOS



## Groundbreaking!

Drilling rig breaks ground for construction on MoPac



Chairman Ray Wilkerson, the Board of Directors, and Executive Director Mike Heiligenstein of the Central Texas Regional Mobility Authority at the groundbreaking ceremony for the MoPac Improvement Project on October 18, 2013



### **EarthCam**

The Mobility Authority's EarthCam trailer is located near the southern limit of the project near 10th Street and Newfield Lane



The EarthCam is a valuable tool that assists in monitoring and documenting project progress by providing a webcam feed which can be viewed at [MopacExpress.com](http://MopacExpress.com). It will be live on the website in early 2014.



### **Subsurface Utility Engineering**

This photo depicts the vacuum-excavation rig onsite along with workers in an effort to locate existing subsurface utilities. This underground utility information is needed for the design team to locate proposed structures and to aid in overall utility design and planning.



### **Pavement Marking Removal**

This machine grinds off the existing pavement markings and vacuums the debris into the truck. This work was necessary to temporarily shift the driving lanes in order to create enough space for placement of the temporary concrete barrier that will separate the travelling public from work areas.

# PROJECT PROGRESS

As of December 31<sup>st</sup>, 2013, 29.1% of the 882 calendar days to scheduled Substantial Completion have expired. There are 625 calendar days until Substantial Completion. The contractor is allowed an additional 120 calendar days for Final Acceptance.

## Design and Construction Progress through December 2013

Based on the assessment of the GEC, the summary of the project progress achieved on major work tasks through the end of December 2013 is as follows:

### MoPac Improvement Project Progress for the Period Ending December 2013

Design + Construction Tasks	% Complete
Development Design	59%
Traffic Control/Detours/Temp Barrier	14%
Earthwork/Demolition/Removals/Drainage	0%
Structures/Bridges/Retaining Walls	0%
Sound/Neighborhood Walls	0%
Geotech/Survey	100%
Utilities	0%
Pavement/Subbase/Base Course	0%
Environmental Monitoring	2%
Lighting/Signing/Striping	0%
Toll Facilities	0%
Landscaping/Shared use Path/Sidewalks	0%

CH2M HILL's Substantial Completion date per their approved baseline schedule is September 12, 2015.



## **SCHEDULE OF CONTRACTUAL PROJECT MILESTONES**

- **February 27, 2013:** Selection of Best Value Proposer
- **April 18, 2013:** NTP Issued
- **September 17, 2015:** Substantial Completion
- **January 15, 2016:** Final Acceptance

## **REPORTING PERIOD PROGRESS ACTIVITIES**

- **October 2013:** Executive Level Partnering Meeting No. 2
- **October 2013:** Groundbreaking Ceremony
- **October 2013:** Early Release for Construction (ERFC) Segment 2B Package Submittal
- **October 2013:** Segment 2B Final (100%) Design Package Submittal
- **November 2013:** “Meet the Contractor” Open House
- **November/December 2013:** Segments 2B and 3 Bridge Design Submittals
- **December 2013:** Segment 3 Final (100%) Design Package Submittal
- **December 2013:** Segment 2B Construction Activities Began
- **December 2013:** Corridor Courtesy Patrol Commenced

## **UPCOMING ANTICIPATED PROGRESS ACTIVITIES**

- **January 2014:** Executive Level Partnering Meeting No. 3
- **January 2014:** Project Team Partnering Workshop No. 2
- **January 2014:** TxDOT to begin asbestos remediation for Segments 2 & 3 structures
- **January 2014:** Segment 3 Construction Activities Begin
- **January 2014:** Environmental Re-Evaluation FHWA finding anticipated
- **January 2014:** Segment 4 ERFC Package Submittal
- **February 2014:** Segment 4 Bridge Design Submittal
- **February 2014:** Segment 4 Final (100%) Design Package Submittal
- **February 2014:** Segment 4 Construction Activities Begin
- **March 2014:** Segment 1 Final (100%) Design Package Submittal
- **March 2014:** Segment 2A Final (100%) Design Package Submittal
- **March 2014:** Segment 1 Bridge Design Submittal

## PROJECT FINANCIAL STATUS

All CH2M HILL draw requests are accompanied by an approved progress schedule. The original CH2M HILL Contract Amount is **\$136,632,100**.

### *Summary of Project financial status through December 2013*

<b>Original CH2M HILL Contract Amount:</b>	<b>\$136,632,100</b>
<i>Authorized Changes (Change Order and/or Amendments):</i>	
Change Orders No.	_____ \$0
<b>Current Authorized Contract Amount:</b>	<b>\$136,632,100</b>
<b>CH2M HILL Payments:</b>	
Amount of Draw Nos. 01-03 (July – September 2013)	\$15,685,134
Amount of Draw No. 04 (October 2013)	\$1,476,352
Amount of Draw No. 05 (November 2013)	\$1,152,937
Amount of Draw No. 06 (December 2013)	<u>\$1,007,544</u>
<b>Total Requested Amount To-Date through Draw No. 6:</b>	<b>\$19,321,967</b>
<b>Retainage withheld**:</b>	_____ <b>\$0</b>
<b>Approved Amount for Work Completed through Draw No. 06:</b>	<b>\$19,321,967</b>
<b>Total Project Budget Expended Through December 2013:</b>	<b>14.1%</b>
<b>Amount remaining for work to be completed:</b>	<b>\$117,310,133</b>

\*\*Retainage to be withheld only after 95% of the adjusted contract price has been paid.

### *Summary of Change Orders During Reporting Period*

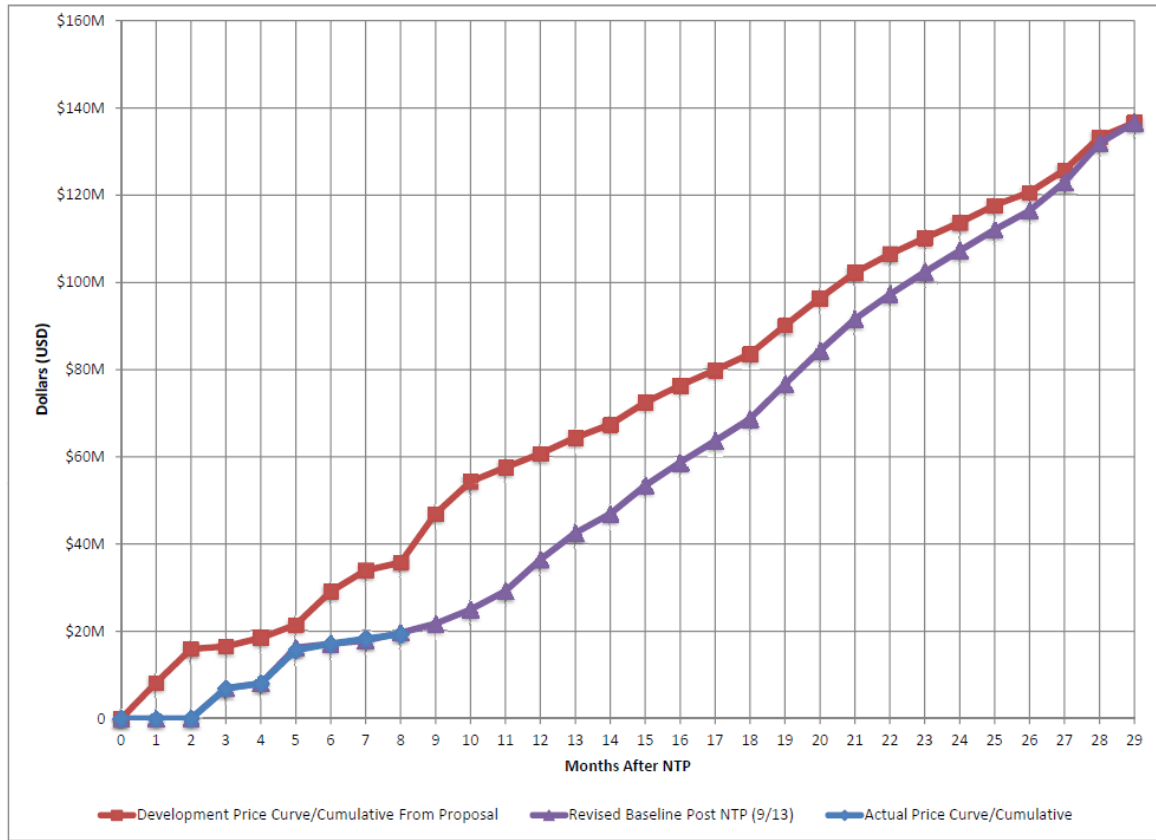
There were no executed Change Orders during the reporting period.

### Project Cash Flow Curve – December 2013

Cash Flow Curves are provided by CH2M HILL at the time of billing/draw requests submittal.



PAYMENT CURVE  
COMPARITIVE GRAPH

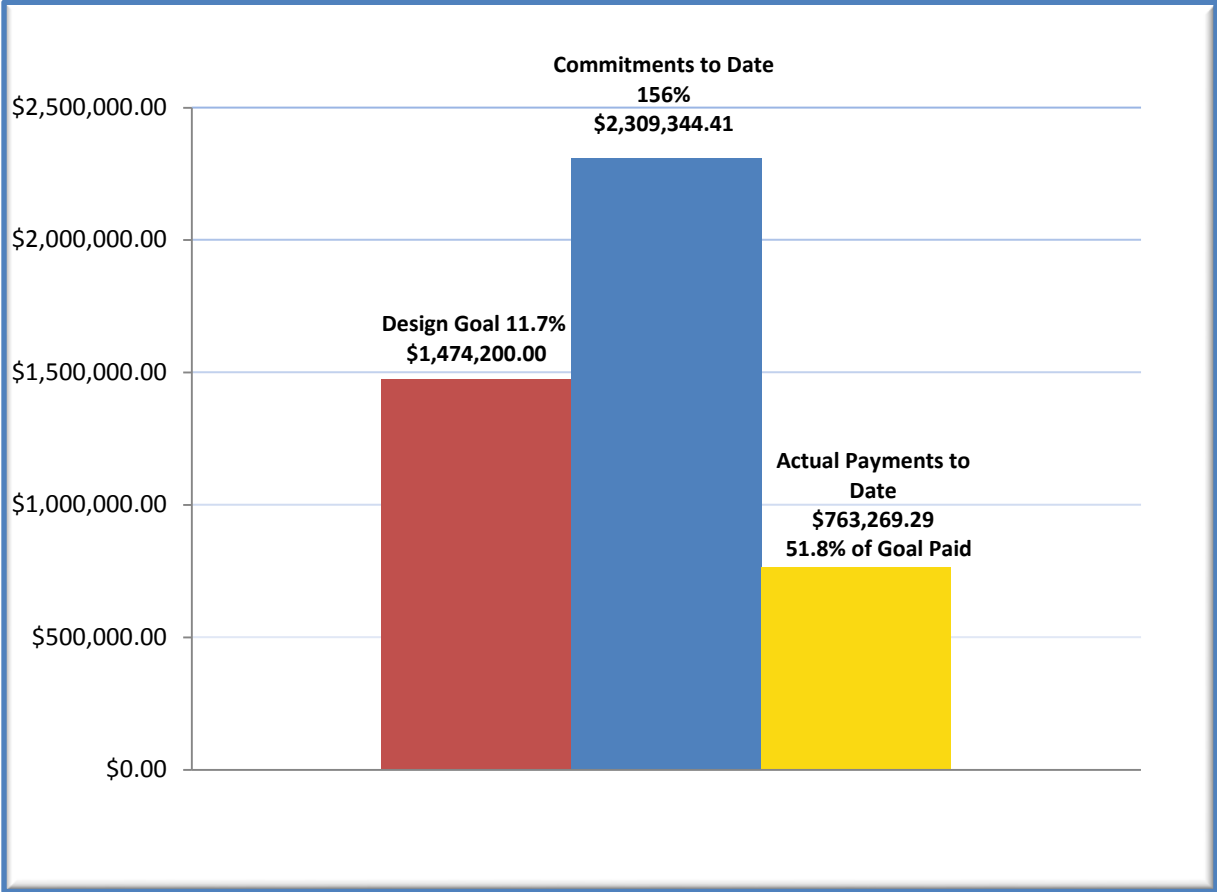


# DBE STATUS

CH2M HILL plans to meet the Disadvantaged Business Enterprise (DBE) goal of 11.7% for both the design services and the construction work. The overall total DBE requirement for the project, based on the current contract value, is \$15,985,955. The current committed total for all DBE subcontracts is \$16,262,278. The below charts reference the current actual DBE Commitments vs. Payments to date.

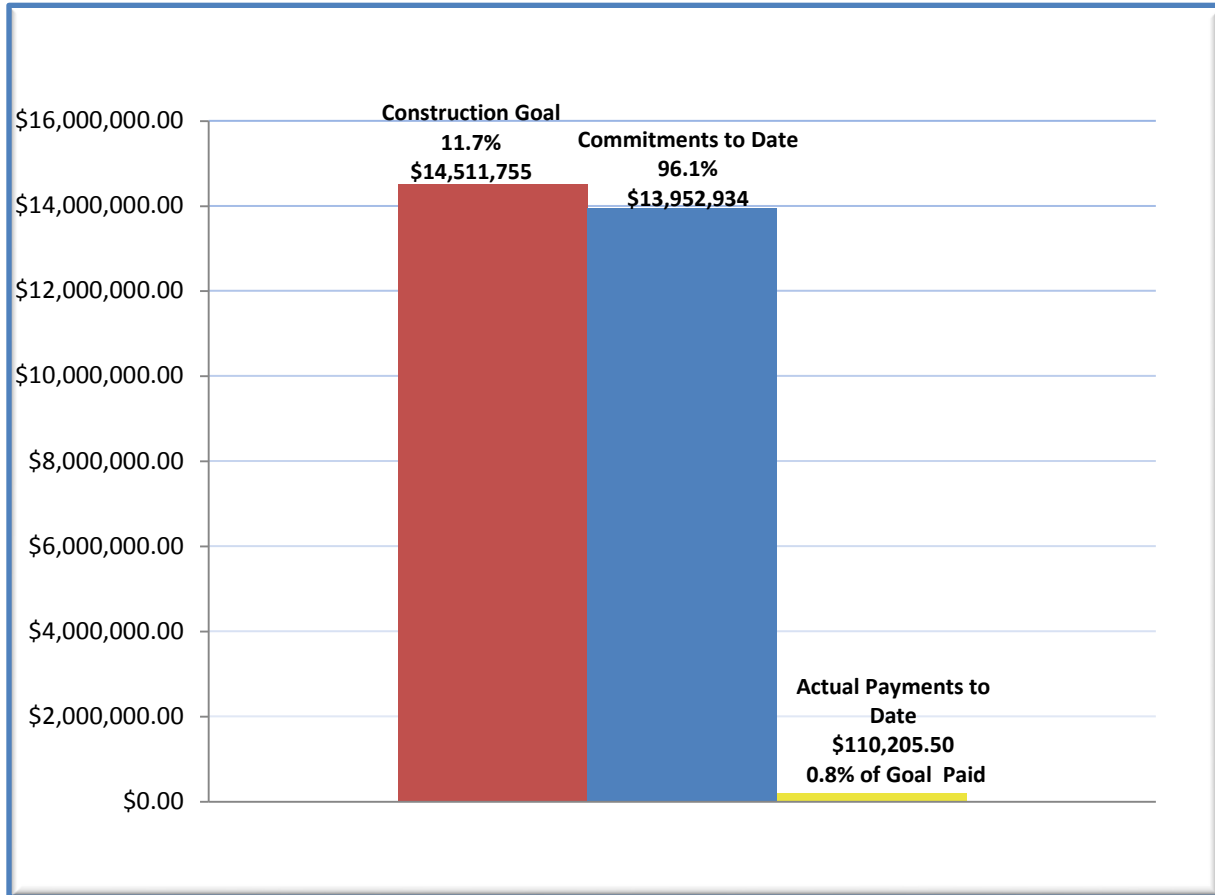
## Design

**DBE Design Goal vs. Commitment vs. Payment  
For Period Ending December 2013**



# Construction

## DBE Construction Goal vs. Commitment vs. Payment For Period Ending December 2013



## EMPLOYMENT REPORTING STATUS

Design and construction of the MoPac Improvement Project is estimated to have supported approximately 122 jobs during the reporting month of December 2013. This estimated number of jobs supported by the project includes: the design personnel and management staff; the construction personnel and their subcontractors; construction management staff, including inspectors and subconsultants; and the general engineering consultant staff and their subconsultants.

## COMMUNITY RELATIONS

- In November 2013, postcards with an attached magnet were mailed to approximately 75,000 residences along the corridor, indicating key contacts for obtaining up-to-date project information. As a result, the Community Relations Team received a large number of calls and emails on the hotline and website, respectively, from people interested in learning more about the upcoming construction.
- The 24/7 Hotline and Answering Service, as well as the Online Contact Form, receives and responds to a steady number of inquiries about the project. In addition, when TxDOT transferred maintenance of the roadway to CH2M HILL, the call protocol was revised to ensure that calls are routed to the appropriate staff.
- The project website ([www.MoPacExpress.com](http://www.MoPacExpress.com)) and twitter account (@ImproveMopac) are updated regularly with construction alerts. The twitter account has over 700 followers. Members of the public can sign up to receive project construction alerts via email, text message, and push notifications on the mobile app (available for Androids and iPhones).
- After coordination with TxDOT, the Highway Advisory Radio (800 AM) went live in late October with a recorded message announcing the MoPac Improvement Project construction and an invitation to the “Meet the Contractor” Open House. Following that, a new message is recorded and broadcasted every week.
- Social media, including the MoPac Man blog and the project’s Facebook and twitter accounts, continues to be monitored and updated.
- MoPac Project Roadway Signs were approved and are in production currently to be placed in three areas along the corridor.
- The fact sheet was updated and disseminated at the “Meet the Contractor” Open House as well as made available on the project website.
- The first e-Newsletter was distributed at the beginning of November.
- Outreach regarding Sound Wall Installation along the corridor began this reporting period. Outreach materials were produced and letters were sent to the first round of impacted property owners. In November, CH2M HILL’s employees began visiting stakeholders to obtain signatures on Right of Entry forms. To date, the outreach has been in regards to Sound Walls 1, 4, 7, and 8 as well as Neighborhood Wall 1.
- Business outreach began with a presentation at the Commercial Brokers Association of Austin Luncheon on December 20, 2013. The project team also met with the manager of the Verano Apartment Homes located near the construction staging area near Duval Street.
- Media coordination is ongoing and has continued with coverage on several aspects of the MoPac Improvement Project, including the Groundbreaking Ceremony, construction start, “MoPac Man”, and sound wall construction.
- During the reporting period, the official Open House Summary Report for the Environmental Re-Evaluation Open House held in September 2013 was prepared and sent to TxDOT and FHWA for review.
- Adjacent project coordination with the Mobility Authority’s multiple ongoing environmental studies continues. “MoPac Man” attended the MoPac South Environmental Study Open House in November 2013.

- As part of the groundbreaking ceremony, the communications team placed a full page, four-color “wrap” ad in the American Statesman featuring a large-scale schematic drawing and details about the project. The ad also invited readers to visit the project website and download the mobile app. More than 147,000 households received the ad. An awareness campaign will take place in the first half of 2014 to begin positioning the project’s benefits upon completion.
- Primary interest issues identified from the current outreach activities include:
  - Trees along the corridor
  - Construction information, including schedule and lane closures

## EVENTS

- A **Ceremonial Groundbreaking** launched the construction of the MoPac Improvement Project on October 18<sup>th</sup>. Speakers included: Chairman Ray Wilkerson, Mobility Authority; Chairman Ted Houghton, Texas Transportation Commission; Mayor Lee Leffingwell, City of Austin; Travis County Judge Sam Biscoe; and CAMPO Policy Board Chairman Will Conley, who also serves as Hays County Commissioner. Other elected officials included: Texas Representative Paul Workman; Travis County Commissioners Gerald Daugherty and Bruce Todd; and City of Austin Mayor Pro Tem Sheryl Cole and Council Member Chris Riley. Members of virtually every transportation agency in the area were in attendance, including TxDOT Executive Director Phil Wilson and Austin District Engineer Greg Malatek; Justin Ham and Bindu Johnson with FHWA; Capital Metro President and CEO Linda Watson; and CAMPO Director Maureen McCoy. Representing the neighborhoods and key stakeholder interests groups were: Frances Allen, Elected President Emeritus of MONAC; August Harris, President of MONAC (and Commissioner of the Texas Historical Commission); and Tom Wald, Executive Director of Bike Austin.
- A **“Meet the Contractor” Open House** was held on November 12th at O. Henry Middle School. Key staff was available to answer questions. Various display boards, a project schematic, and a 3D project video were on display. The event was announced in the monthly e-Newsletter and email invitations were sent out to key stakeholders and organizations.



**CENTRAL TEXAS  
Regional Mobility Authority**

## AGENDA ITEM #14 SUMMARY

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### Quarterly Briefing on the Manor Expressway Project

Strategic Plan Relevance: Regional Mobility given that the Manor Expressway will reduce congestion and improve mobility in the area

Department: Engineering

Associated Costs: Not applicable

Funding Source: Not applicable

Board Action Required: No

Description of Matter: The report is a comprehensive account of the activities on the Manor Expressway Project during the 4<sup>th</sup> quarter of 2013

Reference documentation: Quarterly Progress Report on the Manor Expressway Project - Phase II

Contact for further information: Alastair T. Miller, P.E., Atkins North America, Inc., GEC Program Manager





MANOR EXPRESSWAY PROJECT - PHASES I & II

# Quarterly Progress Report



No. 18 | January 2014



TOLL ROAD		
		PAY BY Mail
2 AXLE VEHICLES	\$0.50	\$0.67
EACH ADDITIONAL AXLE	\$0.50	\$0.67

**ATKINS**

Independent Engineering Report



**CENTRAL TEXAS**  
**Regional Mobility Authority**

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Mike Heiligenstein

**General Engineering Consultant (GEC)**

**ATKINS**

**Phase I Construction Contractor**

**webber**

**Phase II Design-Build Developer**



MANOR EXPRESSWAY PROJECT - PHASES I & II  
**Quarterly Progress Report**  
No. 18  
January 2014



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## INTRODUCTION

This report documents and describes Phase II of the Manor Expressway Project during the period from September 26, 2013 to December 25, 2013. This Project is being developed and constructed by the Central Texas Regional Mobility Authority (“Mobility Authority”). The Project is funded by a combination of funds including, a State Infrastructure Bank loan, Series 2011 Senior Lien Bonds, Series 2011 Subordinate Lien Bonds, TxDOT grant funds, and Mobility Authority funds.

## PROJECT DESCRIPTION

The Manor Expressway Project is an approximately 6.2-mile toll project located in Travis County along the existing U.S. Highway (US) 290 corridor between US 183 and just east of State Highway (SH) 130. This project will upgrade the existing US 290 four-lane divided highway to a controlled access highway facility with three tolled mainlanes and three non-tolled frontage lanes in each direction. The tolled mainlanes will provide grade-separated access through several local intersections that currently experience significant congestion throughout the day, and will provide a more expeditious route to traverse the US 290 corridor. Local traffic will continue to access adjacent properties by use of non-tolled frontage roads and signalized intersections at cross streets. The Manor Expressway Project also includes four direct connectors at the US 183 interchange that allow for continuous movement from the US 183 interchange to the Manor Expressway Project.

The Manor Expressway Project is being implemented in three phases as shown on Figure 1 and described below.

### **Manor Expressway Project - Phase I**

Phase I of the Manor Expressway Project includes completion of four tolled direct connectors and associated pavement at the US 183 interchange that provide direct access to and from the Manor Expressway Project mainlanes. Toll gantries were installed to toll each of the direct connectors. Frontage roads between the US 183 interchange and Cross Park Drive were also constructed in this phase. Access to the westbound direct connectors from the westbound frontage road has been achieved by construction of an entrance ramp located just west of Tuscany Way. Construction of Phase I of the Manor Expressway Project has been completed, and is currently open to tolled traffic.

### **Manor Expressway Project - Phase II**

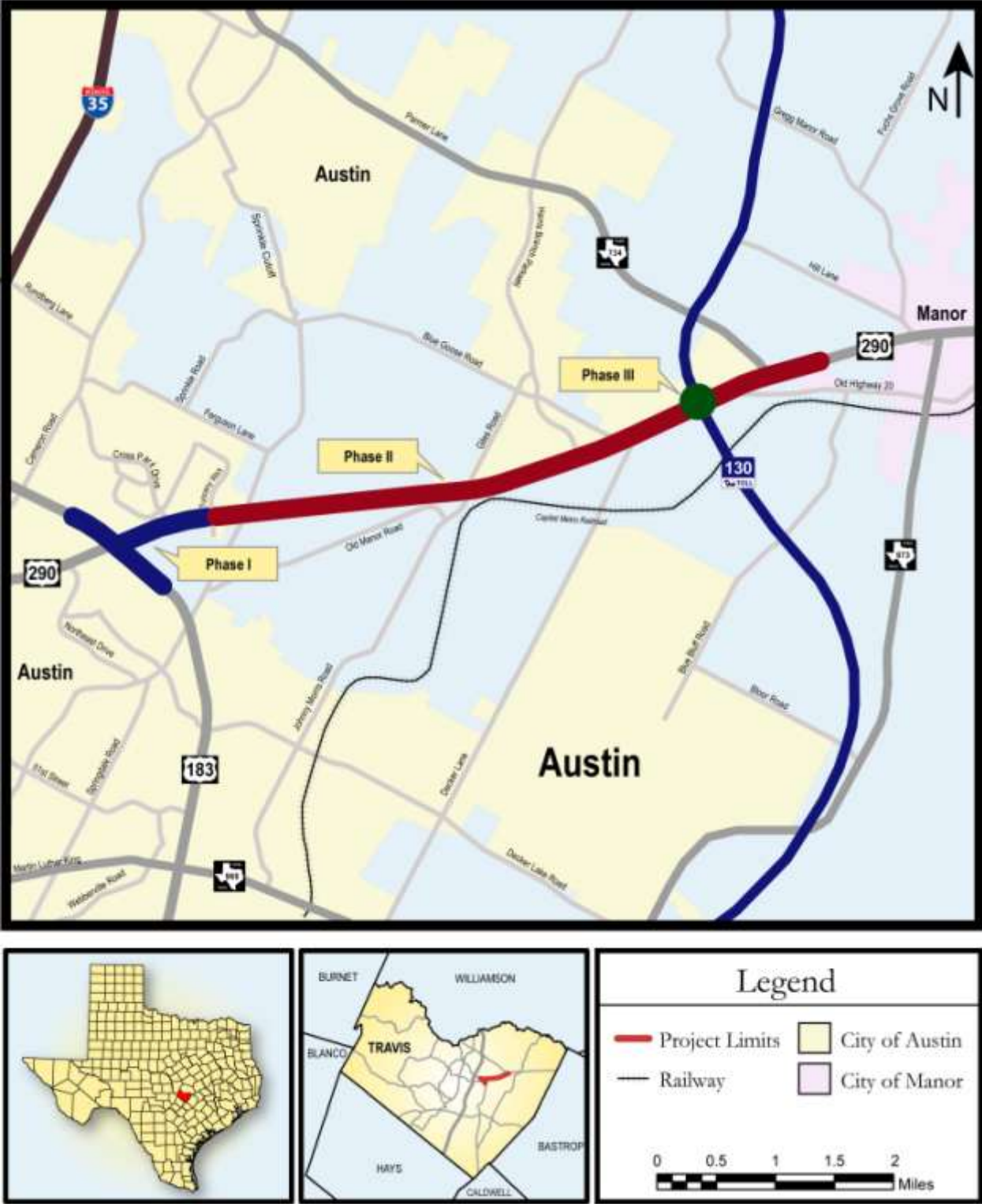
Phase II of the Manor Expressway Project includes completion of the Manor Expressway Project from Phase I at the US 183 interchange to the eastern limits east of SH 130. Three tolled mainlanes and three lane non-tolled frontage roads will be constructed in each direction as well as all associated ramps, auxiliary lanes, toll gantries, and ramp gantries. Phase II of the Manor Expressway Project includes an interim milestone that provides grade-separated intersections

at Tuscan Way and Springdale Road so that users of the direct connectors constructed as part of Phase I can bypass the existing signals at those intersections. These two grade-separated intersections provide for a minimum of two tolled lanes and two-lane non-tolled frontage roads in each direction. The work associated with the interim milestone, the Interim Development Work, has been completed.

### **Manor Expressway Project - Phase III**

Phase III of the Manor Expressway Project includes construction of the seven remaining direct connectors at the SH 130 interchange. The Mobility Authority has no current plans to design or construct these direct connectors at this time. Phase III of the Manor Expressway Project will be developed as traffic conditions warrant and funding sources are identified.

Figure 1 - Project Location Map



## PHASE I ACTIVITIES

Construction of Phase I of the Manor Expressway Project has been completed. The Phase I Contractor, Webber, LLC (“Webber”) achieved Final Acceptance on April 12, 2013. The facility is currently open to tolled traffic.

## PHASE II DEVELOPMENT ACTIVITIES

Since the Quarterly Report in October, 2013, Central Texas Mobility Constructors, LLC (“CTMC”) has completed much of the frontage road construction throughout Phase II of the Manor Expressway Project. Although a majority of the eastbound and westbound frontage road work has been completed; there is some frontage road work, subject to execution of pending change orders that must be completed for the Project. This change order work includes a reconfigured eastern terminus transition, and additional asphalt surfacing at the US 183 and SH 130 interchanges. Additionally, there is a small amount of the final asphalt surface course that must be placed prior to completion of the frontage road construction. With the frontage roads nearly completed during the reporting period, CTMC’s construction focus shifted from frontage road construction to mainlane construction.

CTMC has made significant progress on the eastbound and westbound mainlane construction. During the reporting period, CTMC has nearly completed construction of the pavement sections of both the eastbound mainlanes and the westbound mainlanes from the western terminus of the Project through the SH 130 interchange. CTMC continues to prepare for the construction of the concrete paving from the SH 130 interchange through the Parmer Lane intersection. Additionally, some of the concrete paving for the shoulders of the mainlanes and the access ramps remain to be completed. Furthermore, the approaches to the Parmer Lane bridge remain incomplete. CTMC expects to complete these concrete pours in early 2014.

Although much of the major roadway is nearing completion, there is a small amount of miscellaneous work remaining on some of the retaining walls. Coping still has to be installed on the retaining walls at the Parmer Lane intersection, and on the abutment walls at a number of other intersections. Many walls also have to be prepped and painted. In addition to the outstanding retaining wall work, there is also a substantial amount of incidental work that must be completed. This incidental work includes, but is not limited to, completion of mow strips at retaining walls, installation of overhead sign gantries, stabilization of soil slopes, construction of miscellaneous driveways, completion of hardscaping at intersections, and completion of the median cable barrier and concrete riprap. Installation of the tolling equipment, and Intelligent Transportation System (ITS) equipment also continues.

Since the last Quarterly Report in October 2013, CTMC has continued to relocate utilities throughout the project; only several utilities remain to be relocated. All utilities in conflict with the Project construction have been relocated.



## PHASE II PROGRESS PHOTOS

### Eastbound Mainlane Work

Since the Quarterly Report in October 2013, CTMC has transitioned its construction focus to mainlane construction. These photos show the progress specific to the eastbound mainlanes during the reporting period.



Concrete paving east of Giles Road  
(Looking East)



Concrete paving east of Harris Branch Parkway  
(Looking West)



Concrete paving east of the SH 130  
interchange (Looking East)



Crews continue to pour concrete paving east  
of Tributary #1C (Looking East)



The overhead sign bridge has been installed  
near Arterial "A" (Looking East)

## PHASE II PROGRESS PHOTOS

### Westbound Mainlane Work

Since the Quarterly Report in October 2013, CTMC has transitioned its construction focus to mainlane construction. These photos show the progress specific to the westbound mainlanes during the reporting period.



Concrete paving east of the Arterial "A" intersection (Looking West)



Concrete paving east of the Giles Road intersection (Looking West)



Concrete paving west of the Harris Branch Parkway intersection (Looking West)



Concrete paving west of the SH 130 interchange (Looking West)



The overhead sign structure west of Harris Branch Parkway (Looking West)

## PHASE II PROGRESS PHOTOS

### Frontage Road and Access Ramp Work

While CMTC was primarily focused on mainline construction during the reporting period, some of the remaining frontage road work was also progressed. Additionally, CTMC also completed work on the access ramps during the period.



The final asphalt course has been placed east of Giles Road (Looking West)



The final asphalt surface course has been placed at the Parmer Lane intersection (Looking South)



The westbound entrance ramp west of the SH 130 interchange is paved (Looking East)



The eastbound entrance ramp west of Parmer Lane is paved (Looking West)



Hardscape pavers being installed at the Springdale Road intersection (Looking East)

## PHASE II PROGRESS

CTMC has submitted their progressed schedule for the period ending November 25, 2013 (CTMC's draw request for December 2013 services has not yet been submitted). Based on an assessment of CTMC's activities and progress, a summary of the construction progress achieved on work tasks through this period is provided in Table 1.

CTMC's latest schedule indicates Substantial Completion of all remaining Development Work on February 7, 2014, on schedule with the current contract requirement. However, the scope of work for a number of change orders will require an extension to the substantial completion date. Atkins, the General Engineering Consultant for the Manor Expressway Project, has estimated that the substantial completion date could be extended to May 2014 as a result of this change order scope. This anticipated extension of the substantial completion date to complete the aforementioned change order scope will not impact the projected date for commencement of toll revenue collection for Phase II of the Manor Expressway Project. As of November 25, 2013, there were 74 days remaining until contractual Substantial Completion for the Project; CTMC has used 92.3% of the days allotted in the contract for the Development Work.

Table 1 - Phase II Development Progress

Development Tasks	% Complete
Development Design	100%
Utility Coordination	99%
Earthwork	96%
Utility Relocation	94%
Pavement	91%
Structures (Bridges and Retaining Walls)	98%
Drainage	73%
Lighting, Signing, Striping, and Signals	59%
Toll Facility Infrastructure	93%
Toll System Integration	80%
Incidental Construction (Barriers, Sidewalks, Landscaping)	47%

The Manor Expressway Project (Phases I & II) milestones are provided in Table 2.

**Table 2 - Schedule of Project Milestones**

<b>Task</b>	<b>Date (*Projected)</b>
Selection of Phase I Contractor	January 12, 2010
Phase I NTP Issued	April 27, 2010
Phase I Substantial Completion	November 30, 2012
Phase I Final Acceptance	April 12, 2013
Phase II Selection of Developer	February 23, 2011
Phase II NTP Issued	June 29, 2011
Phase II Interim Completion (Open to Traffic)	December 22, 2012
Phase II Substantial Completion (Phase II Open to Traffic)	February 7, 2014**
Phase II Final Acceptance	June 7, 2014**

**\*\*Based on CTMC's schedule submitted with Draw Request #30 for November 2013 efforts (excludes some change order scope)**

# MANOR EXPRESSWAY PROJECT FINANCIAL SUMMARY

Table 3 shows the overall financial status for the Manor Expressway Project through November 2013. The original budget established for the Project and the expenditures to date are provided. An estimated cost remaining and an estimate at completion is also provided. The Manor Expressway Project is currently projected to be under budget.

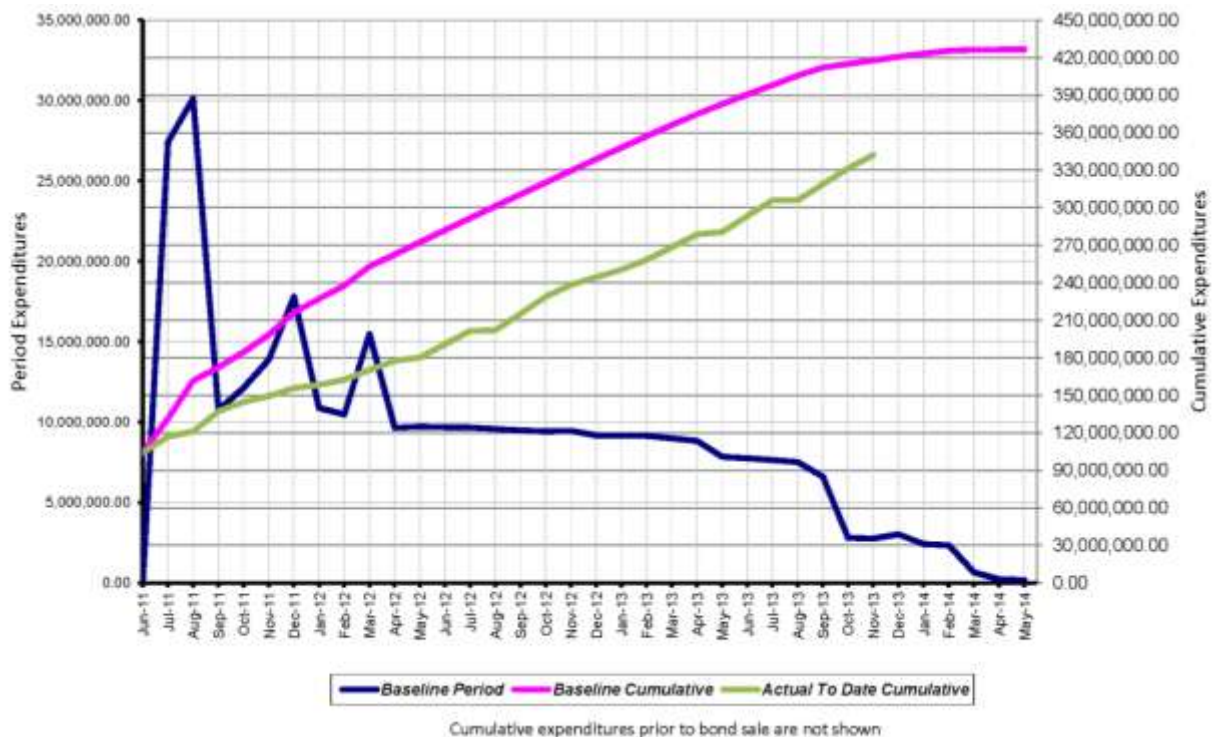
**Table 3 - Project Financial Status Summary**

Project Description	Original Cost Estimate (\$)	Expenditures to Date (\$)	Estimated Remaining Cost (\$)	Estimate at Completion (\$)
Total Project Cost (Phases I and II)	426,434,773	342,060,718	54,724,353	396,785,071

Note: These costs include Traffic & Revenue analyses costs, Final Engineering costs, Utility Adjustment costs, Construction costs, Toll & ITS costs, GEC costs, Legal costs, and contingencies.

## Project Cash Flow Curve - Baseline

**Figure 2 - Project Cash Flow Curve (Phase I & Phase II Total Project Costs)**



## PHASE II CONSTRUCTION FINANCIAL STATUS

The following summary provides the financial status of design-build CDA contract for the Phase II Project.

Original CTMC Contract Amount:	\$ 207,297,859.00
<i>Authorized Changes (Change Order and/or Amendments):</i>	
Allowable Dispute Resolution Board Expenses <sup>(1)</sup>	\$ 24,346.91
Liquidated Damages Assessed <sup>(2)</sup>	\$ (550,000.00)
Change Order #1	\$ 1,480,445.71
Change Order #2	\$ 9010.88
Change Order #3	<u>\$ 41,339.71</u>
<b>Current Authorized Contract Amount:</b>	<b>\$ 208,303,002.21</b>
<b>Previous Total of CTMC Payments:</b>	<b>\$ 159,674,676.23</b>
Amount of CTMC Draw Request #28 for September 2013 efforts	\$ 8,226,972.82
Amount of CTMC Draw Request #29 for October 2013 efforts	\$ 10,433,328.29
Amount of CTMC Draw Request #30 for November 2013 efforts	<u>\$ 9,193,205.21</u>
<b>Total Amount Paid To-Date: <sup>(3)</sup></b>	<b>\$ 187,528,182.55</b>
Retainage withheld: <sup>(4)</sup>	<u>\$ 0.00</u>
<b>Approved Amount for work completed (through Draw #30):</b>	<b>\$ 187,528,182.55</b>
<b>Amount remaining for work to be completed:</b>	<b>\$ 20,774,819.66</b>
<b>Total Percent of Budget Expended through November 2013:</b>	<b>90.03%</b>

Footnotes:

- (1) The Dispute Resolution Board ("DRB") was convened to introduce the board to the project; the CDA allows CTMC to invoice half of the expenses associated with the DRB to the Mobility Authority.
- (2) Liquidated Damages were assessed for CTMC's failure to meet the contractual Interim Completion Date.
- (3) Draw Request #30 for CTMC's November 2013 efforts is currently being processed by the Mobility Authority.
- (4) Retainage to be withheld only after 95% of the adjusted contract price has been paid.

### ***Summary of Phase II Change Orders This Reporting Period***

No new change orders were approved during the reporting period.

# DBE STATUS

## Phase II DBE Status

CTMC is required to meet the Disadvantaged Business Enterprise (“DBE”) goal of 12.2% for Phase II of the Manor Expressway Project. The total DBE amount subcontracted to date is \$26,367,356.74 which is 12.72% of the authorized contract total. This represents executed DBE subcontracts with the following firms: Aviles Engineering Corporation [geotechnical design], RJ Rivera Associates, Inc. [sign and pavement marking design], SE3, LLC [retaining wall design], PE Structural Consultants [bridge design], Lina T. Ramey & Associates [design surveying], United States R.O.W. [right-of-way acquisition], Solar Ray [utility design], Hayden Consultants [TDLR Review], Breda Company [furnish and tie reinforcing steel], N-Line Traffic Maintenance, L.P. [traffic barricades], Office Authority [furnishes office supplies], Panther Creek Transportation, Inc. [trucking], Roadway Specialties [cable barrier & small signs], Texas Trucking [trucking], S&R Investments [furnish fuel], Transtec [pavement design], and ID Guerra [wet utilities].

As of November 25, 2013, Webber has submitted costs associated with DBE development work in the amount of \$32,666,727.90 which equals 15.8% to date of the original contract value. CTMC has exceeded the contractual DBE goal of 12.2%.

Figure 3 - Phase II DBE Design & Construction Commitment for Period Ending November 2013

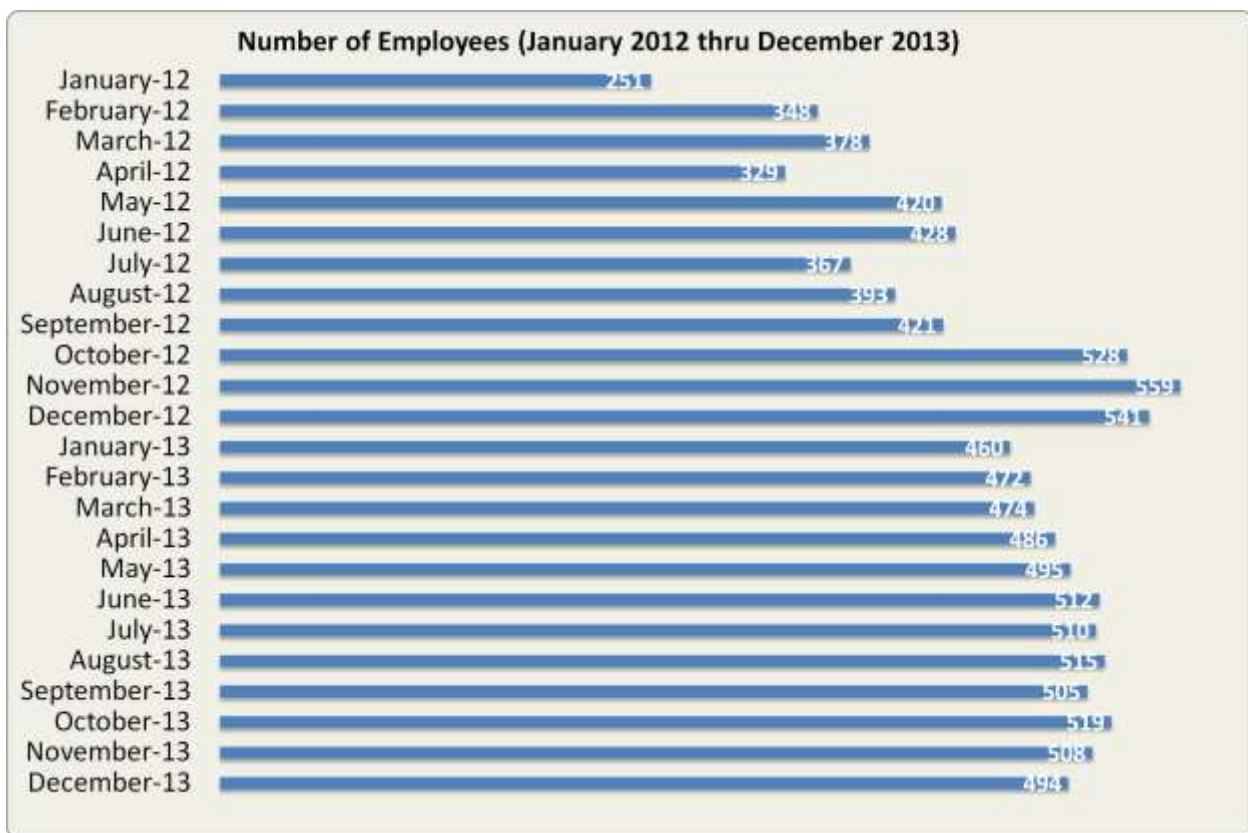




## EMPLOYMENT REPORTING STATUS

The Phase II Developer began providing employment data in January 2012. Construction of Phase II of the Manor Expressway Project supported **494 jobs** during the reporting month of December 2013. This number of jobs supported by the construction includes: the construction personnel and their subcontractors; design staff; design and construction management staff, including inspectors and subconsultants; and the general engineering consultant staff and their subconsultants. The employment history from January 2012 through December 2013 for Phase II of the Manor Expressway Project is provided in Figure 4.

Figure 4 - Phase II Employment History



# SUSTAINABILITY

## ***Phase II Sustainability Initiatives***

In accordance with the terms of the Comprehensive Development Agreement (“CDA”), CTMC is required to incorporate sustainable practices into the Project. The Mobility Authority, through provisions in the CDA, has implemented a “Green Credits” program that requires CTMC to attain a minimum number of credits for implementing sustainable practices into the Project; CTMC is required to attain 30 credits for the Project. CTMC is required to submit a quarterly report identifying the sustainable practices being implemented on the Project. CTMC submitted their Sustainability Initiatives Report for the third quarter of 2013 in December. The following sustainable initiatives were reported:

➤ Sustainability Plans:

CTMC has prepared and implemented a series of required sustainability plans on the Project. These plans include a Noise Mitigation Plan, a Dust/Emission and Odor Control Plan, a Waste Management Plan, a Site Recycling Plan, and a Water Quality Maintenance/Enhancement Plan.

➤ Solar-Powered Traffic Control Devices/Flashing Beacons:

During the third quarter of 2013, CTMC continued using two solar-powered flashing beacons and six solar-powered traffic control devices on the Project.

➤ Pavement Reuse:

During the third quarter of 2013, asphalt millings were used as detour subgrade, mainlane subgrade, shared-use-path subgrade, and foundation improvements. Unbound base was used for foundation improvements, pipe backfill, and intersection subgrade. To date, 95% of the paving structure which has been removed, has been reused.

➤ Reuse of Topsoil:

During the third quarter of 2013, CTMC stockpiled 7,898 cubic yards of topsoil. 2,954 cubic yards of topsoil was reused on the Project during the third quarter of 2013. To date, 53% of stockpiled topsoil has been reused.

➤ Recycled Fill/Embankment Materials:

During the third quarter of 2013, CTMC reused approximately 202,296 cubic yards of material for fill or embankment. All of this material was from the Project site or from overburden from a local sand reserve quarry.

➤ Wood Recycling:

During the third quarter of 2013, 15 tons of wood waste was generated for recycling.

➤ Steel Recycling:

During the third quarter of 2013, 1.4 tons of steel were recycled from the Project. To date, a total of 63.7 tons of steel waste (100% of that generated) has been recycled from the Project.

➤ Utilization of Reclaimed or Non-Treated Water:

During the third quarter of 2013, CTMC continued using non-treated water from Gilleland Creek for dust suppression on the Manor Expressway Project.

➤ Separating Waste for Landfills Recyclable Waste:

Recyclable materials are separated at the IESI waste recycling and disposal facility.

➤ Equipment Emission Reduction:

20% of CTMC's equipment fleet is Tier 4 equipment.

CTMC is on track to earn thirty three (33) green credits for the sustainable practices currently being implemented on the Project.

## PUBLIC INVOLVEMENT

The Mobility Authority's Public Involvement Team manages the Manor Expressway hotline (512-684-3252) and the Project website (manorexpressway.com). Lane closures and construction alerts are regularly posted on the Project website as well as posted on the Project twitter account (@ManorExpressway). Additionally, stakeholders can sign up on the Project website for lane closure information to be sent directly to their cell phone via SMS text.

Public involvement continues to play a crucial role in the Manor Expressway Project. Following are the outreach activities for this quarter:

✓ Hotline:

28 calls were received over the project's hotline (512-684-3252) and 10 emails/website contacts were made regarding the Manor Expressway Project. The calls and messages included project information requests, complaints about noise/vibrations and alleged damage to town homes on Merion Circle, complaints about light pollution, damage claims from vehicles traveling the corridor, and complaints regarding the Springdale intersection signal timing at eastbound US 290.

✓ Twitter:

77 updates have been posted to the Manor Expressway's Twitter account (@ManorExpressway) and email this quarter to inform followers of closures and detours.

✓ SMS Bulk Texting Service:

77 text messages were sent to subscribers via the projects SMS bulk texting service account to inform them of closures and detours.

✓ Website:

All project updates have continued to be posted on the website in an effort to help keep the public informed on lane closures and construction activities.

✓ Emails:

26 construction alerts were sent out by email to 290 stakeholders via Constant Contact email.

✓ Outreach/Visits:

Manor Expressway Project team members met with property owners on Merion Circle in the Chimney Hill subdivision to document cracking in driveways and damage to homes. Property owners believe the damage was caused by vibrations from road construction. The property owners were referred to CTMC to view the results of a vibration study performed prior to construction.

**Attachment A**

Manor Expressway Phase II Project  
Aerial Photographs  
December 2013



US 290 East looking west from Gilleland Creek  
(Taken 12/16/2013)



US 290 East looking west at Parmer Lane  
(Taken 12/16/2013)



US 290 East at SH 130 Interchange looking west  
(Taken 12/16/2013)





US 290 East at Decker Lane Intersection looking west  
(Taken 12/16/2013)



US 290 East at Harris Branch Intersection looking west  
(Taken 12/16/2013)



US 290 East at Crofford Lane Intersection looking west  
(Taken 12/16/2013)



US 290 East at Giles Road Intersection looking west  
(Taken 12/16/2013)



US 290 East near Old Manor Road looking west  
(Taken 12/16/2013)



US 290 East looking west at the MOKAN Crossing  
(Taken 12/16/2013)



US 290 East at Chimney Hill Blvd looking west  
(Taken 12/16/2013)



US 290 East at Springdale Road looking west  
(Taken 12/16/2013)





US 290 East at Tuscany Way looking west  
(Taken 12/16/2013)

**Attachment B**

Manor Expressway Project  
Contingency Tracking  
December 2013

Manor Expressway Phase II | Contingency Balance Sheet

12/20/13

<b>PROJECT CONSTRUCTION CONTINGENCY (from the bond sale)</b>		<b>\$17,200,000</b>
<b>APPROVED ITEMS</b>		
<b>Executed Change Orders</b>		
CO#1	Revision to the mainline and frontage road pavement sections	\$1,480,446
CO#2	Archival research of discovered cistern (force majeure event)	\$9,011
CO#3	Broadcast seeding at the US 183 interchange	\$41,340
		<b>Subtotal Executed Change Orders</b>
		<b>\$1,530,797</b>
<b>Approved Other Items</b>		
	Dispute Resolution Board expenses	\$24,347
		<b>Subtotal Other Items</b>
		<b>\$24,347</b>
		<b>Subtotal Approved Items</b>
		<b>\$1,555,144</b>
<b>ITEMS UNDER NEGOTIATION or ESTIMATED</b>		
<b>CO under negotiation</b>		
CO#4	Design and construct column protection at SH 130 interchange	\$187,404
CO#5	Erosion repair at Bent 7 of NE direct connector at US 183	\$25,000
		<b>Subtotal CO under negotiation</b>
		<b>\$212,404</b>
<b>Potential Change Orders or pending more information</b>		
PCO#6	Revision to aesthetic scope on frontage roads <sup>1</sup>	-\$300,000
PCO#7	Design and construction costs associated with ADA compliant Shared Use Path <sup>1</sup>	\$700,000
PCO#8	Re-design and construction costs associated with minimization of impacts to Harris Branch wetland <sup>1</sup>	\$600,000
PCO#9	Revision to Shared Use Path at US 183 and deletion of sidewalk from Blue Goose Road to SH 130 <sup>1</sup>	\$250,000
PCO#10	Install LED lighting and remove an overhead sign bridge <sup>1</sup>	\$200,000
PCO#11	Revise pavement widening section near US 183 interchange <sup>1</sup>	\$200,000
PCO#12	Revise metal beam guardrail height from 27" to 31" <sup>1</sup>	\$100,000
PCO#13	Incorporate certain elements of the 2011 TMUTCD into the Development Work <sup>1</sup>	\$50,000
PCO#14	Guardrail revisions to Ramp #1 <sup>1</sup>	\$250,000
PCO#15	Eastern terminus geometric revisions	\$1,000,000
PCO#16	Asphalt surface course at US 183 and SH 130 interchanges	\$300,000
		<b>Subtotal Potential Change Orders</b>
		<b>\$3,350,000</b>
<b>Other Items</b>		
Incentive	Early Completion Incentives (Max Amount Achievable)	\$2,700,000
		<b>Subtotal Other Items</b>
		<b>\$2,700,000</b>
<sup>1</sup> Estimated cost		
		<b>Subtotal Items Under Negotiation or Estimated</b>
		<b>\$6,262,404</b>
		<b>Total Costs</b>
		<b>\$7,817,548</b>
		<b>Budgeted Construction Contingency</b>
		<b>\$17,200,000</b>
		<b>TOTAL REMAINING AVAILABLE CONSTRUCTION CONTINGENCY</b>
		<b>\$9,382,452</b>

<b>RIGHT OF WAY COST (from the bond sale)</b>		<b>\$65,400,000</b>
<b>Estimated Right of Way Costs</b>		
	Schematic ROW <sup>2</sup>	\$49,300,000
		<b>Subtotal Right of Way Costs</b>
		<b>\$49,300,000</b>
<b>Additional Right of Way Costs</b>		
	Wetland Mitigation	\$48,000
		<b>Subtotal - Additional Right of Way</b>
		<b>\$48,000</b>
<sup>2</sup> Estimated Cost		
		<b>Available Right of Way Contingency</b>
		<b>\$16,052,000</b>



**CENTRAL TEXAS  
Regional Mobility Authority**

## AGENDA ITEM #15 SUMMARY

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Executive Director's report.

Strategic Plan Relevance: Regional Mobility

Department: Executive

Associated Costs: N/A

Funding Source: N/A

Board Action Required: No

Description of Matter:

A. Project Status Updates.

Reference documentation:  
Executive Director's report

Contact for further information:  
Mike Heiligenstein, Executive Director



**CENTRAL TEXAS  
Regional Mobility Authority**

## AGENDA ITEM #16 SUMMARY

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### *EXECUTIVE SESSION*

*Executive Session:*

Discuss legal issues related to claims by or against the Mobility Authority, pending or contemplated litigation and any related settlement offers; or other matters as authorized by §551.071 (Consultation with Attorney; Closed Meeting).



**CENTRAL TEXAS  
Regional Mobility Authority**

## AGENDA ITEM #17 SUMMARY

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### *EXECUTIVE SESSION*

*Executive Session:*

Discuss personnel matters as authorized by §551.074 (Personnel Matters).



**CENTRAL TEXAS  
Regional Mobility Authority**

## AGENDA ITEM #18 SUMMARY

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Approve an agreement with Hill Country Constructors to close out the construction contract for 183A.

Strategic Plan Relevance: Regional Mobility

Department: Engineering

Associated Costs: None

Funding Source: N/A

Board Action Required: Yes

Description of Matter:

To be discussed in executive session.

Reference documentation:

Action will follow discussion in executive session.

Contact for further information:

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