

Regular Meeting of the Board of Directors



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

April 28, 2021

Welcome and opportunity for public comment



1

Bobby Jenkins
Chairman

**Discuss and consider
recognition of former Executive
Director of the Central Texas
Regional Mobility Authority,
Michael Heiligenstein**

2

Bobby Jenkins
Chairman

Virtual groundbreaking of the 183A Phase III Project



3

Bobby Jenkins
Chairman

Consent Agenda

4. Approve the minutes from March 31, 2021 Regular Board Meeting
5. Prohibit the operation of certain vehicles on Mobility Authority toll facilities pursuant to the Habitual Violator Program
6. Approve financial institutions and qualified brokers authorized to provide investment services and engage in investment transactions with the Mobility Authority and reaffirm the CTRMA investment policy

4-9

Bobby Jenkins
Chairman

7. Authorize the Interim Executive Director to execute an Interlocal Agreement with Texas Department of Transportation for materials inspection and testing services for Elroy Road
8. Authorize the Interim Executive Director to execute an Interlocal Agreement with Texas Department of Transportation for materials inspection and testing services for 183A Phase III
9. Authorize the Interim Executive Director to execute an Interlocal Agreement with Texas Department of Transportation for materials inspection and testing services for 183 North Mobility Project

Bobby Jenkins
Chairman

Regular Items

10-14

Bobby Jenkins
Chairman

Accept the financial statements through March 2021

10

William Chapman - Interim Executive Director and CFO
Mary Temple - Controller



**Most recent figures
to be presented at Board
Meeting**

Discuss and consider approving an Interlocal Agreement with the City of Leander for Drone Services for accident investigations and maintenance inspections



11

Jeff Dailey
Deputy Executive Director



The Issue



- » Crashes involving a fatality are awful and require a complex and time-consuming investigative process
 - » Drivers are inconvenienced
 - » Commerce is interrupted
 - » Emergency responders are diverted from other duties
 - » Toll revenue can be impacted



An Innovative Approach: Drones

- » Unmanned aerial vehicles (drones) are becoming a vital tool for law enforcement agencies
- » Accident investigation is a key use case
- » Studies show drones provide numerous benefits over traditional investigative approaches:
 - » Lessens time required for data collection freeing up law enforcement resources
 - » Significantly reduces risk for investigators and motorists
 - » Reduces the time required to reopen roadways following a collision
 - » Provides immediate documentation of acquired data
 - » Easier to operate and maintain
 - » Provides aerial perspective of the scene

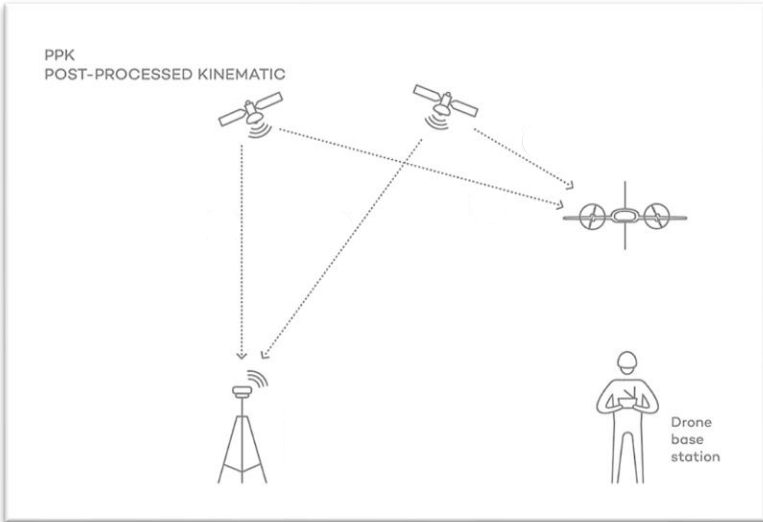




- » Leander Case Study: Fatal accident at the intersection of US 183 and the 183A frontage road on September 9, 2020
 - » Two motorcyclists killed after a vehicle ran a red light
 - » Traffic diverted onto US 183 for 9 hours and 35 minutes
 - » The Mobility Authority lost more than \$48,000 due to diversion
 - » Because of rain, investigation could not be completed that night
 - » Drone operator from another agency called to finish investigation
 - » Leander Police estimate drone prevented 12 hours of additional road closures



Agreement Terms



- » Mobility Authority to contribute \$18,500 toward purchase of a drone and GPS-based aerial ground surveying system
- » In addition to expedited crash investigation, the Leander Police Department will provide the following:
 - » Quarterly flyovers of the 183A Phase 3 construction project
 - » Flyovers of existing 183A in Leander
 - » Traffic incident reports whenever a roadway closure causes travel delays in excess of five minutes
 - » Quarterly reports detailing use of the drone equipment and its benefit to the Mobility Authority
- » The City of Leander is required to reimburse a pro-rated portion of the payment if the agreement is terminated within three years of its approval



Recommendation

- » Authorize the Interim Executive Director to execute an interlocal agreement with the City of Leander for Drone Services for 183A Toll and 183A Phase III in an amount not to exceed \$18,500

Discuss and consider awarding a design and construction phase services contract for the Barton Skyway Ramp Relief project

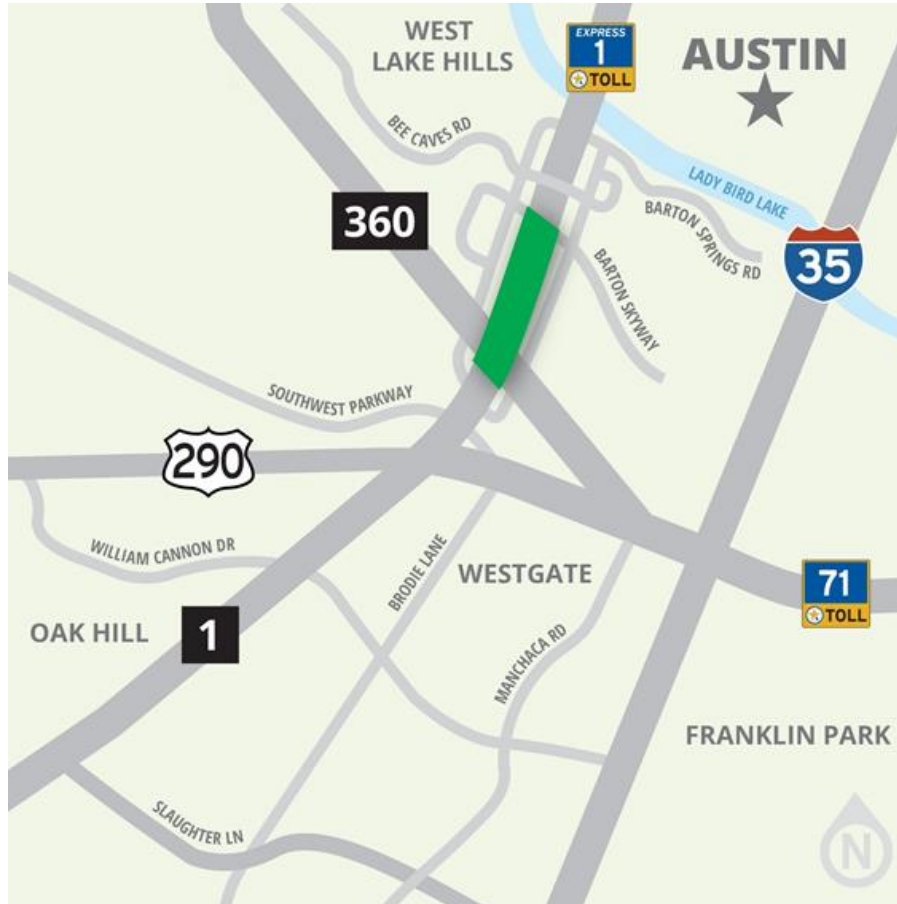
12

Mike Sexton, P.E.

Acting Director of Engineering



Barton Skyway Ramp Relief Project



- » **Project Description:** Construction of a continuous auxiliary lane on southbound MoPac from Barton Skyway to just south of Loop 360 and an acceleration lane at the Barton Skyway entrance ramp.
- » **Limits:** From Barton Skyway to Loop 360
- » **Total Project Cost:** \$10M



Procurement Timeline

Milestone	Date
Issuance of Request for Qualifications (RFQ)	February 24, 2021
Deadline for submitting Statement of Qualifications (SOQ)	March 18, 2021
CTRMA Proposer Evaluation / Scoring Meeting	April 5, 2021



» Response to RFQ

» Seventeen Firms Submitted Responsive SOQ Packages

FIRMS		
Aguirre & Fields, LP	Freese and Nichols, Inc.	Pape-Dawson Engineers, Inc.
American Structurepoint, Inc.	George Butler Associates, Inc.	RK&K
BGE, Inc.	Huitt-Zollars	SE3, LLC
Bridgfarmer & Associates, Inc.	Johnson, Mirmiran & Thompson, Inc.	Seiler Lankes Group, LLC
CONSOR Engineers, LLC	Lockwood, Andrews & Newnam, Inc.	Volkert, Inc.
CP&Y, Inc.	LJA Engineering, Inc.	



- » **SOQs Evaluated Based on Four Main Response Elements**
 - » **Firm Experience (15%)**
 - » **Approach to Services (40%)**
 - » **Team Organization and Qualifications (40%)**
 - » **Approach to DBE Utilization (5%)**

- » **Evaluation Committee Determined XXXXX to be Most Qualified Firm**



- » **Prime Firm: XXXX**
- » **Subconsultants:**





Recommendation

- » Staff recommends the Board award the contract for Design and Construction-Phase Services for the Barton Skyway Ramp Relief Project to XXXXX.

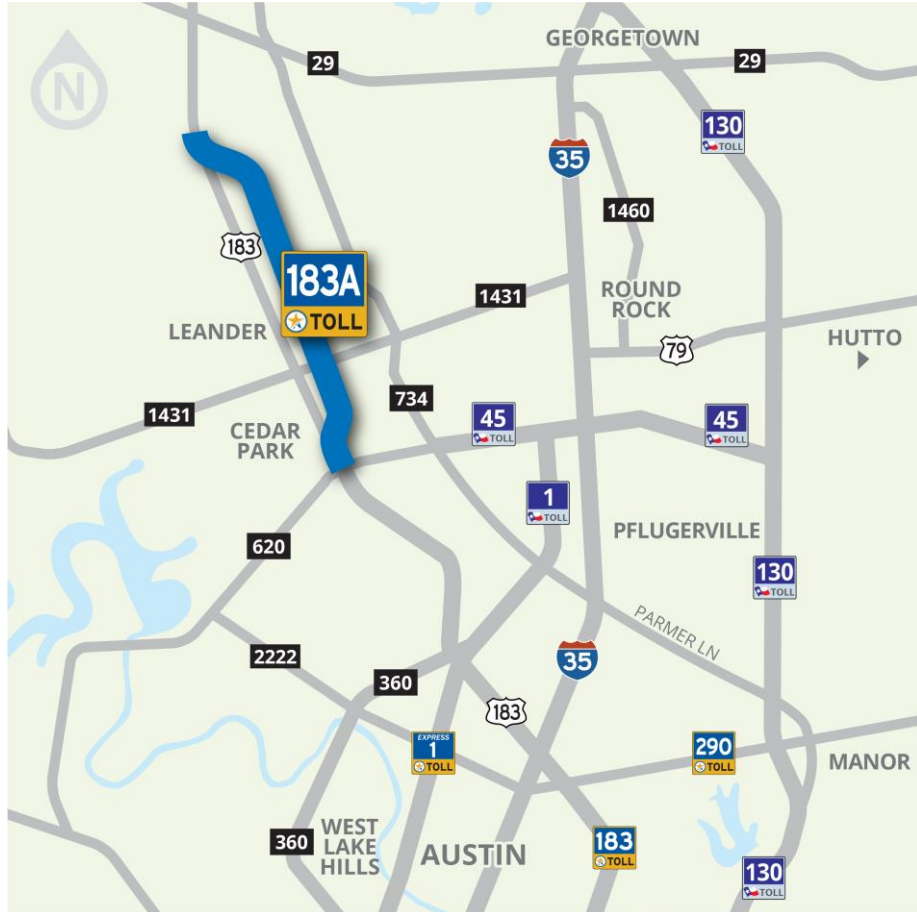
**Discuss and consider
approving a contract with
The Levy Company, Inc.
for construction of the
183A ITS Retrofit
Maintenance Project**

#13

Mike Sexton, P.E. - Acting Director of Engineering
Greg Mack - Assistant Director of Toll Systems and IT



183A ITS Retrofit Maintenance Project (Civil)



- » **Project Description:** Installation of ITS civil infrastructure including conduit, conductor, ground boxes, and sign structures.
- » **Limits:** From RM 2243 to Avery Ranch Blvd
- » **Total Project Cost:** \$1.1M
- » **Construction Cost:** \$948,643.40 This resolution allows for the award and execution of a construction contract



183A ITS Retrofit Goals – Technology

- » Goal is to increase communication with 183A customers and provide enhanced detection of incidents on the roadway thereby increasing efficiency
- » Kapsch WA #17 approved by the Mobility Authority's Board in March 2019; supplement approved in December 2020
- » WA#17 Overview
 - » 9 pan-tilt-zoom (PTZ) cameras
 - » 10 microwave vehicle detectors (MVDs)
 - » 2 dynamic message signs (DMSs)
 - » Advanced incident detection (AID) system that includes 36 fixed cameras and TrafficVision Software
- » 183A ITS retrofit technology hardware/software cost is \$926,807.92



183A ITS Retrofit Maintenance Project Schedule





Prequalified Contractors

» The Levy Company, Inc.





1 Responsive and Responsible Bid Received

Contractor	Bid Price
The Levy Company, Inc.	\$948,643.40



Recommendation

- » Staff recommends that the Board award the contract for construction of the 183A ITS Retrofit Maintenance Project to The Levy Company, Inc. and authorize the Executive Director to execute an agreement with The Levy Company, Inc. in an amount not to exceed \$948,643.40 for construction of the 183A ITS Retrofit Maintenance Project.

Discuss and consider approving an Interlocal Agreement with the City of Austin to design, procure, and construct a channel stabilization structure in Boggy Creek for the 183 South Project



14

Mike Sexton, P.E.

Acting Director of Engineering



» 183S Project Scope

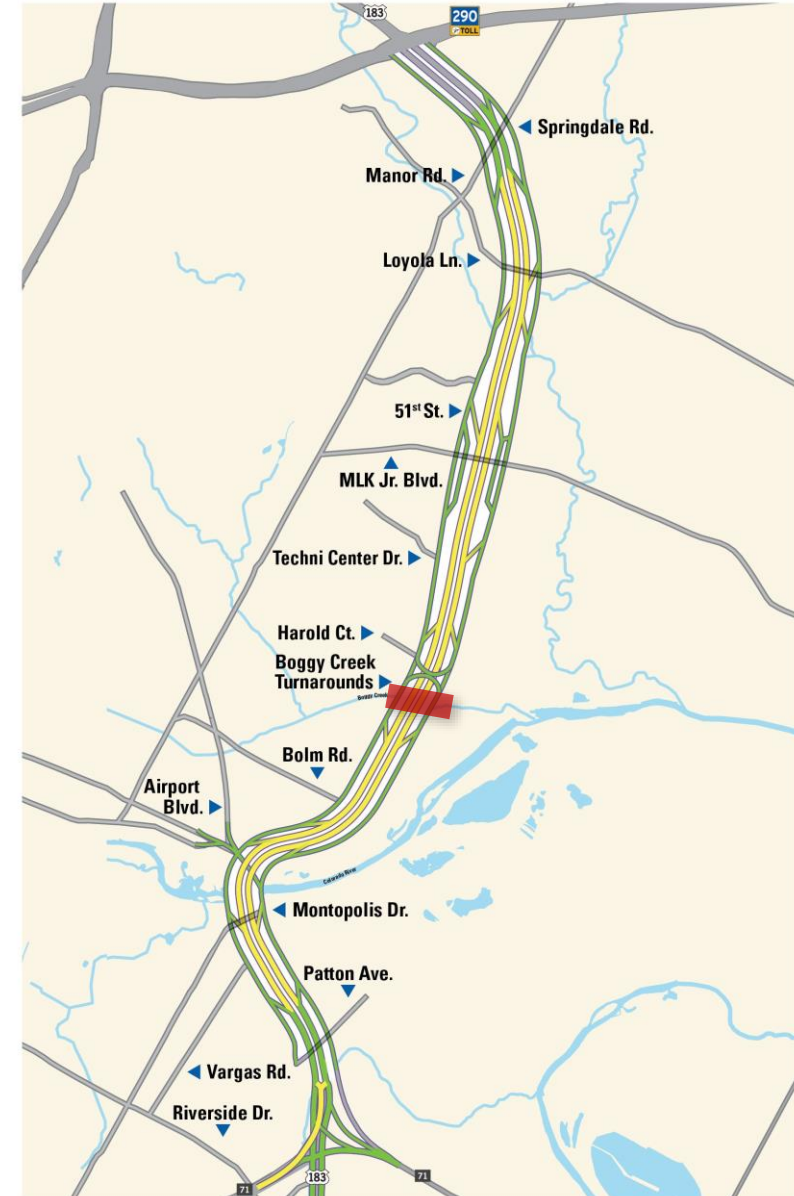
- » Stabilize Streambank in ROW
- » Protect existing drilled shafts and riprap (and repair)
- » Construct cut-off wall

» City Project Scope

- » Protect City shared-use-path on north bank
- » Mitigate further downstream erosion

» Proposed ILA

- » Completes 183S and City project scope
- » Mitigates risk to CTRMA and City facilities
- » City constructs & maintains improvements





- » **City's total project cost estimated at \$2.3M**
- » **CTRMA contribution \$600,000**
 - » **Offset by deductive change order from CRC**
 - » **Protects bridge structures and mitigates downstream erosion**



- » **Board Approval to Execute ILA**
- » **CTRMA Partially Executes ILA**
- » **City of Austin Executes ILA**
- » **City of Austin procures construction contract**

Briefings and Reports

15-17



Habitual Violator and JP Court Selection Process

15

Tracie Brown, Director of Operations



Violation Enforcement Program Goals



Encourage prompt payment



Promote the usage of electronic toll tags and other pre-paid forms of toll payment



Deter violators and ensure that all customers pay their fair share



Protect our stakeholders' investment



- » A **habitual violator** is a registered owner of a vehicle who a toll project entity determines:
 - » has been issued at least two notices of nonpayment;
 - » has an aggregate of 100 or more events of nonpayment within a 12-month period;
 - » has been issued notices containing a warning that failure to pay may result in habitual violator remedies; and
 - » has not paid the outstanding balance for those notices.



YTD HV Program Performance

YTD HV Activity	Issued
Pre-determination Letters	1,074
Determination Letters	1,150
Vehicle Registration Renewal Holds	785
Vehicle Prohibitions	731
Law Enforcement Stops	349

** Through March 2021; April numbers not finalized at time of report*



- » Failure or Refusal to Pay Toll is a criminal offense under Chapter 370.177 of the Texas Transportation Code.
- » An offense under this subsection is a class C misdemeanor, punishable by a fine up to \$250.00 per transaction.
- » Customers are notified by mail of the pending legal action and offered the opportunity to resolve their balance before the criminal complaint process moves forward.



YTD Court Program Performance

YTD Court Activity	Issued
Last Chance Letters	139
<i>Resolved</i>	3
Court Complaints Filed	0

** Through March 2021; April numbers not finalized at time of report*



» Habitual Violator

» Eligibility

- 100 unpaid transactions within a rolling 12-month period
- Issued at least 2 notices of non-payment

» Selection Process

- Highest balance customers selected first
- Commercial only groups upon request

» Justice Courts

» Eligibility

- Minimum \$25 in unpaid tolls
- Unpaid tolls are less than 18 months old
- Issued at least 2 notices of non-payment

» Selection Process

- Highest overall balance
- Unpaid toll balance = \$25.00 – 49.99
- Unpaid toll balance = \$50.00 – 99.99
- Unpaid toll balance = \$100.00 – 199.99
- Unpaid toll balance = \$200+



» **Habitual Violator**

- Finish installation of additional license plate reader technology on 183S and 290 Toll as well as MoPac Express Lane
- Complete automation of HV program to increase efficiencies and output
- Finalize agreement with Travis County law enforcement agency to provide prohibition enforcement on 183S and 290

• **Justice Courts**

- Continue Last Chance Letter Mailings
- Electronically submit criminal complaints to applicable Justice Courts

Innovation and Technology update

16

Jeff Dailey - Deputy Executive Director



- » Implement **innovative**, multi-modal transportation solutions
- » Reduce congestion and create transportation choices
- » Enhance quality of life and economic vitality



Background



- » **In 2018, the Mobility Authority launched an innovation program to:**
 - » Incubate new ideas
 - » Study and test emerging technology
 - » Identify best practices
 - » Promote regional collaboration
 - » Deploy transformative solutions through public and private partnerships

- » **Initiatives are developed, prioritized and pursued based on their ability to achieve the following program goals:**
 - » Exceed customer expectations
 - » Maximize regional mobility
 - » Turbocharge agency performance



» Some key questions to ponder about innovation and our future:

- » How will the transition to Roadway Usage Charges (RUC) impact toll road operators like the Mobility Authority?
- » How will the growth of Connected Autonomous Shared Electric (CASE) vehicles change the way we design, construct, operate and maintain our roadways?
- » How might remote work, shared vehicle ownership, air taxis, delivery drones and autonomous public transit change the mobility paradigm?

What strategies do we need to ensure we make wise decisions and smart investments given:

- the rapid pace of change
- the limited lifespan of new technology
- a future that is hard to predict



Emerging Technology Trends

» Tolling

- » Roadway Usage Charges – Pilot projects ongoing in various states
- » Third-party tolling, GPS Tolling, Tolling as a Service - Mainstream by 2025

» Vehicles

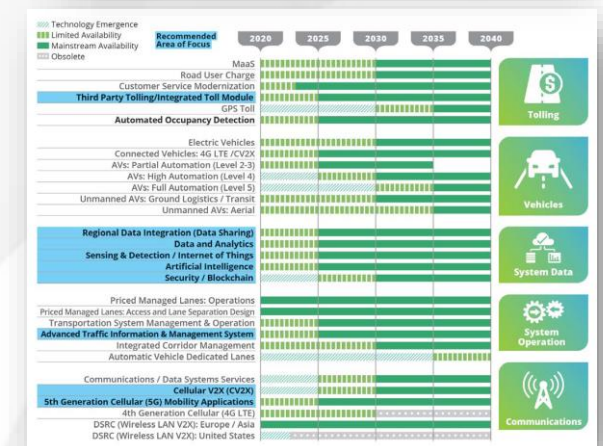
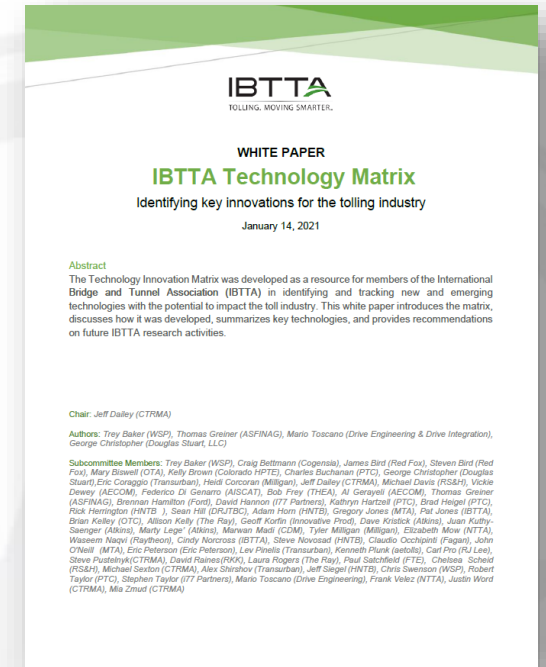
- » Connected – Most new vehicles by 2025
- » Electric – 50% of new vehicles by 2030
- » Automated – Limited applications through 2030
- » Manned Drones – Mainstream by 2030

» Data and Operations

- » Data and Analytics / Artificial Intelligence – Rapidly evolving
- » Data Sharing / Mobility as a Service – Mainstream 2025-2030
- » Advanced Traffic Information and Management – Mainstream 2025-2030
- » Unmanned Drones – Mainstream by 2025

» Communications

- » 5G Cellular – Mainstream 2025-2030
- » Cellular Vehicle to Everything (CV2X) – Mainstream 2025-2030





Projects and Programs to Date

Technology Plan	Research and Demonstration	Regional Partnerships
ITS Master Plan	Wrong Way Driving - 45SW	Regional Technology Summit
Toll Integrator	Ford C2VX Tolling Pilot	Regional Data-sharing Agreement(s)
Data Platform	Integrated Reward Program	Texas Technology Task Force
Process Improvements	CTRMA Telecommuting Pilot	State Technology Innovation Council
Data Analytics Platform	Customer Experience Survey's	Texas Innovation Alliance
TIM Center Transition to Lonestar	Customer Engagement Panel	Texas CAV Committee
Connected Corridor Technology	MoPac Traveler Behavior	
Procurement Process Innovation	CTX Navigator – Customer Insights	Industry Engagement
Waze Connected Citizen	Emissions & Benefits Studies	IBTTA
Movability Partnership		Transportation Research Board
Streetlight Data Analytics		OmniAir
Habitual Violator Program		Society of Automotive Engineers



Innovation Program: Plans & Briefs

MOBILE APP OPPORTUNITIES FOR TOLL AGENCIES
August 2019

AUTHORS
• Dan Crisp, PE, & Fricco + Associates
• Caroline Lafollette, PE, & Fricco + Associates

REWARDS PROGRAM OPPORTUNITIES FOR TOLL AGENCIES
August 2019

AUTHORS
• Dan Crisp, PE, & Fricco + Associates
• Caroline Lafollette, PE, & Fricco + Associates

Procurement and Contracting Lessons Learned from Smart City and Connected Vehicle Initiatives
February 2019

AUTHORS
• Troy Baker, Consultant (WSP)

COMBINED REGIONAL TRAFFIC MANAGEMENT CENTER
April 2020

AUTHORS
Joseph Sander, WSP TAC Program Director

MOVEFWD Job Training Program

What Are We Doing?
The MOVEFWD program is a partnership with Austin Community College (ACC) to provide job training for toll agency employees. The program includes a curriculum of toll agency-specific skills and a hands-on training experience at the toll agencies.

What Have We Done So Far?
The MOVEFWD program is currently in its second year. The program has successfully trained over 100 employees and has received positive feedback from both the toll agencies and the participants.

Augmented Reality on the 45SW Trail

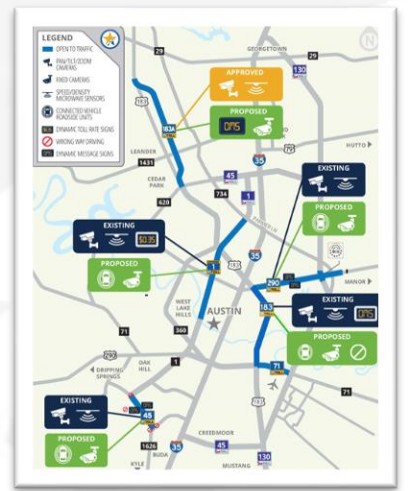
What is Augmented Reality?
Augmented reality (AR) is a technology that overlays digital information onto the real world. This technology can be used to provide users with additional information and context as they interact with the physical world.

The Mobility Authority's Goals
The Mobility Authority is committed to providing a high-quality tolling experience for our customers. By using AR, we can provide users with additional information and context as they interact with the physical world, enhancing their overall experience.

Mobility Innovation Roadmap

Leading the Way
The Mobility Authority is leading the way in mobility innovation by providing a high-quality tolling experience for our customers. This roadmap outlines the key areas of focus for the Authority's innovation program, including smart city and connected vehicle initiatives.

Our Goals
The Mobility Authority is committed to providing a high-quality tolling experience for our customers. This roadmap outlines the key areas of focus for the Authority's innovation program, including smart city and connected vehicle initiatives.





- 1. Connected vehicle communication systems**
- 2. Advanced traffic information and management**
- 3. Data and analytics**
- 4. Toll system modernization**
- 5. Customer satisfaction and behavioral analysis**



Connected Vehicle Communications Systems

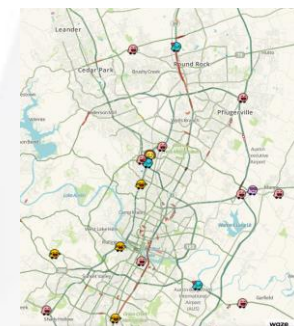
» Program Highlights

- » Use Connected Vehicle (CV2X) and/or smart phone technology to send real-time travel information directly to vehicles
 - Travel alerts such as lane closures, backups, accidents and weather conditions
 - Speed limits
 - Roadway signs
 - Toll rates and in-vehicle payment



WAZE for cities

Working together for a smarter, more sustainable future



MoPac Toll Rate	
01/23/2019 4:38 PM	
Northbound	
2222 to Parmer	
TxTag: \$3.08	Mail: \$4.62
CVZ to 183	
TxTag: \$3.79	Mail: \$5.69
CVZ to Parmer	
TxTag: \$6.87	Mail: \$10.31
Southbound	
2222 to 5th/CVZ	
TxTag: \$5.99	Mail: \$8.99
Parmer to 2222	
TxTag: \$0.30	Mail: \$0.45
Parmer to 5th/CVZ	
TxTag: \$6.29	Mail: \$9.44

Strategic Relevance:

Engage with technology partners to better understand the evolving world of connected vehicles and their potential to impact and benefit our industry

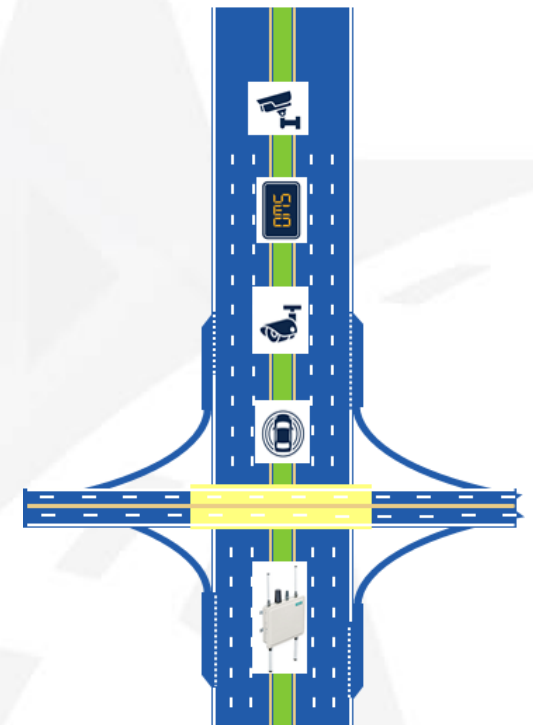




Advanced Traffic Information and Management

» Program Highlights

- » Regional interoperability with Lonestar traffic management system and video/data sharing
- » Aggregation of connected vehicle data and use of artificial intelligence-based data analysis for crash detection, prediction and customer notification (WayCare)
- » Video-based automated incident detection and notification
- » Wrong-way vehicle detection and notification
- » Smart work zones



Strategic Relevance:

Be at the forefront of enhancing safety, minimizing travel delays and improving the overall customer experience



» Program Highlights

- » Develop and deploy cloud-based data platform
- » Consolidate toll and traffic information and enhance accessibility
- » Develop big data analytics capabilities



Strategic Relevance:

Ability of the agency to manage data and track performance metrics, while retaining the flexibility to evolve quickly to accommodate rapidly changing technology



» Program Highlights

- » Transition to enhanced toll collection system
- » Pursue opportunities to offer innovative third-party toll payment options to customers and expand interoperability of payment products
- » Enhance payment compliance with expanded use of Automatic Vehicle License Plate Reader technology and other innovative technology
- » Pursue and evaluate next generation in-vehicle toll systems (GPS)

Strategic Relevance:

Need for enhanced payment options, to safeguard revenue collection and to prepare for the dramatic changes potentially associated with Roadway Usage Charges



» Program Highlights

- » Expand customer participation in and use of the CTX Navigators survey panel
- » Continue to collect, analyze and track customer satisfaction and agency performance metrics through randomized customer experience surveys
- » Monitor roadway usage trends and user demographics via origin and destination research

Strategic Relevance:

Understand customer expectations and experiences, to inform decision-making and improve agency operations and performance

Executive Director Board Report

- A. Draft FY 2022 Operating Budget
- B. Potential Policy Code Changes – Executive Director Authority regarding procurements and Work Authorizations, Conflict of Interest Determinations, and Permitted uses for Mobility Authority facilities

17A

William Chapman

Interim Executive Director and Chief Financial Officer

Executive Director Board Report

- A. Draft FY 2022 Operating Budget
- B. Potential Policy Code Changes – Executive Director Authority regarding procurements and Work Authorizations, Conflict of Interest Determinations, and Permitted uses for Mobility Authority facilities

17B

William Chapman, Interim Executive Director and CFO
Robert Goode, Deputy Executive Director

Executive Session

Please remain seated and quiet while the Executive Session agenda is read into the record.

17. 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)
18. Discuss legal issues relating to procurement and financing of Mobility Authority transportation projects, as authorized by §551.071 (Consultation with Attorney)
19. Discuss personnel matters as authorized by §551.074 (Personnel Matters)



#17-19

Bobby Jenkins
Chairman

Adjourn Meeting

20

Bobby Jenkins
Chairman

Regular Meeting of the Board of Directors



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

April 28, 2021

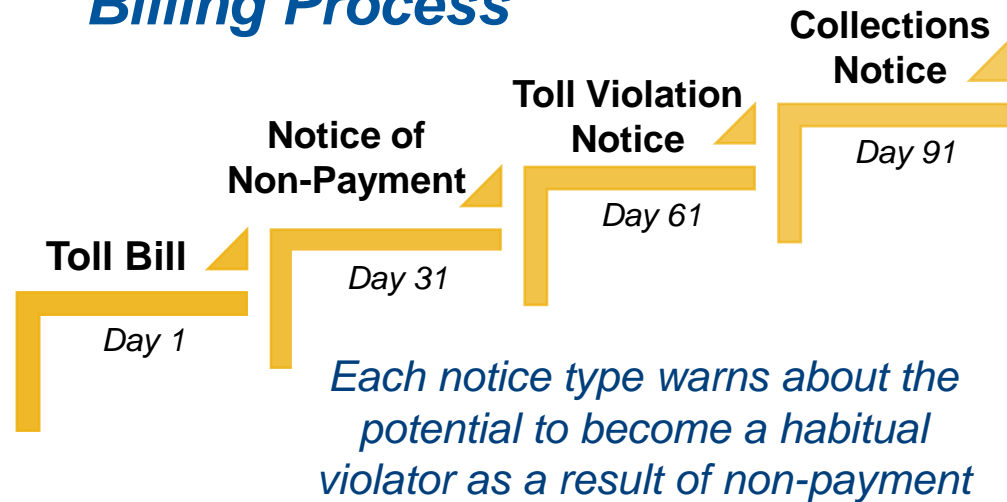
CONSENT AGENDA BACKUP MATERIALS



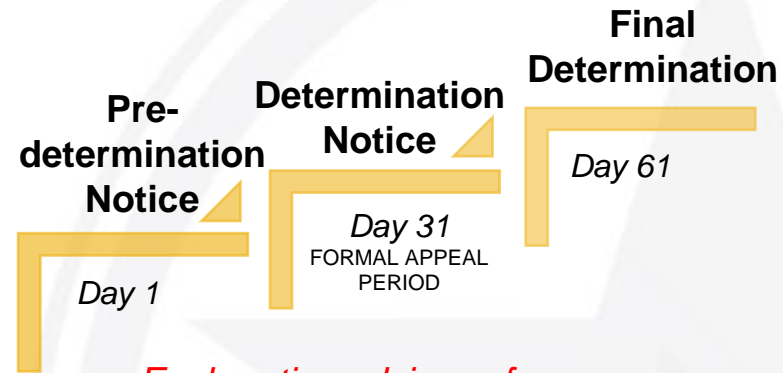
CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY



Pay By Mail Billing Process



Habitual Violator Process



Each notice advises of outstanding balance, penalties for continued non-payment and resolution information

OUTCOMES

1. Vehicle Registration Renewal Block
2. Notice of Vehicle Prohibition
3. On-road Enforcement





» Approval of a *Vehicle Prohibition Order* for the identified habitual violator customers.

- » Number of prohibited vehicles: TBD
- » Total number of unpaid tolls: TBD
 - Median number of outstanding tolls per vehicle: TBD
 - Median unpaid toll balance: TBD
 - Median unpaid admin fee balance: TBD

» Next Steps

- » Customers will receive *Prohibition Order* by mail
- » Customers found to be in violation of prohibition are subject to warning, citation with up to \$500 fine and/or vehicle impoundment

Regular Meeting of the Board of Directors



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

April 28, 2021