



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

April 26 2023
AGENDA ITEM #5

Approve an Interlocal Agreement with the City of Cedar Park for real time kinematics technology to conduct traffic investigations, construction monitoring and other traffic surveillance services

Strategic Plan Relevance:	Collaboration, Innovation, and Safety
Department:	Operations
Contact:	Tracie Brown, Director of Operations
Associated Costs:	\$18,500.00
Funding Source:	General Fund
Action Requested:	Consider and act on draft resolution

Project Description/Background: Unmanned aircraft systems, also known as drones, are exploding in popularity due to their ability to enhance safety, save time, and reduce costs. Many toll agencies like CTRMA are using drones to investigate and reconstruct accidents. This allows law enforcement to open the roadways more quickly. Once specific use case is accident investigation and reconstruction. Drone technology is an emerging tool proven to reduce accident investigation road closure times. The drone services initiative is part of the Authority's innovation program and efforts to reduce time lost to traffic disruptions due to incidents. The initiative also aligns with CAMPO's Open Road Policy and Regional Incident Management Study.

Real-time kinematics (RTK) technology are cost-effective accident investigation tools. RTK is a GPS correction technology technique that provides real-time corrections to location data when the survey drone is capturing photos of a site. The high accuracy and near real-time mapping using RTK technology improves the speed of accident investigation and reduces the risk to investigating officers.

Action requested: Through the proposed Interlocal Agreement, the City of Cedar Park will utilize drone and RTK technology to reduce the duration of crash and other law enforcement investigations which adversely impact traffic flows on 183A Toll, and to provide the Mobility Authority real time information affecting traffic flows and aerial

video records. In particular, the Cedar Park Police Department shall:

- Conduct corridor drone flights as directed by Mobility Authority staff/consultants to monitor traffic conditions and provide video records of 183A Toll and adjacent construction progress on a quarterly basis. Additional drone flights shall be performed from time to time at the request of the Mobility Authority.
- Provide quarterly reports to the Mobility Authority's Manager of Traffic & Incident Management documenting all use of the RTK equipment including date, time and purpose.

The cost of the proposed services is \$18,500, payable within thirty (30) days of the ILA's full execution. The term is 60 months and provides recourse for early termination (Section 4. Term & Termination).

Previous Actions: The CTRMA Board approved a similar resolution and Agreement with the City of Leander on April 28, 2021. The \$18,500 amount and 5-year term are mirrored in the City of Leander Agreement. Sgt. Ryan Doyle of the Leander Police Department provided the following feedback regarding the benefits experienced with the Leander PD drone and RTK system for crash investigations.

- Consistently cuts down the total time of crash investigations by ~50%. Two recent fatality crashes were worked and then investigated in 6-8 hours vs 12-18 hours using prior equipment (total station).
- Reduces the need for officers to be physically on the road while investigating resulting in a safer scene.
- Provides an efficient way to investigate reducing officer workload.
- Reduces road closure time (in some cases they used to close on two separate days).

In addition, drones have been used for patrolling during festivals and large events, searching for wanted/missing persons, and during dangerous calls.

Financing: FY 2023 Operating Budget

Staff Recommendation: Staff recommends approving the ILA with the City of Cedar Park for accident investigations and toll system maintenance utilizing unmanned aircraft systems.

Backup provided:

Draft Resolution

Interlocal Agreement – City of Cedar Park & CTRMA



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

TO: James Bass, Executive Director, Central Texas Regional Mobility Authority
FROM: Tracie Brown, Director of Operations, Central Texas Regional Mobility Authority
DATE: March 7, 2023
SUBJECT: Drone Use for Accident Investigation and City of Cedar Park Interlocal Agreement

Unmanned aircraft systems, also known as drones, are exploding in popularity due to their ability to enhance safety, save time, and reduce costs. Once specific use case is accident investigation and reconstruction. History has shown that there are three areas that delay us in getting roadways open quicker after a serious or fatal collision – retrieving the injured; processing the scene; and removing the vehicles and cleaning up the debris from the roadway.

After a motor vehicle accident occurs, particularly one resulting in severe injuries or death, it will usually be investigated and sometimes be reconstructed. The police will investigate an accident with the intention of determining if any criminal action took place in the accident. Some of the things the police look for are speeding, hours-of-service violations, mechanical violations, alcohol use, drug use, etc. An accident investigation can consist of many aspects. However, the investigation usually starts with an inspection of the accident site.

At the site, measurements are taken of evidence left by the vehicles such as point of impact, final resting positions, skid marks, scrub marks, and gouge marks. These measurements are usually taken using electronic surveying equipment. With this equipment, a computer-generated scale diagram can be produced and may be used to reconstruct the accident. With the accident investigation complete, an accident reconstruction can be performed. Reconstruction is the process of using physics to determine the speeds of the vehicles, and/or their relative positions at different times during the accident sequence. Information such as pre- and post-impact direction of travel, length of pre-impact skid marks, post-impact distances moved, friction values for the various surfaces the vehicles traveled over, point of impact, impact angles, and weights of the vehicles are all used as inputs into the equations used to reconstruct an accident.

These investigations often require law enforcement to close Authority operated toll roads or, in the case of accidents on adjacent frontage roads, divert traffic onto tolled facilities. Both actions come at considerable cost to the Authority in the form of reduced revenues. The use of photogrammetry equipment and potentially new state-of-the-art technology could reduce delay caused by investigations

of fatal crashes. Regional partners such as the Austin Police Department also use drones to assist in crash investigations, with an anticipated resulting decrease in investigation time from 3-5 hours to 2 hours, about 50% reduction on average.

In April of 2021 the Mobility Authority's Board of Directors approved the execution of an Interlocal Agreement with the City of Leander for the purchase of a drone and real-time kinesis (RTK) system technology. This technology has been used numerous since then. Sgt. Doyle at the Leander Police Department provided the following feedback regarding the benefits of their drone and RTK system for crash investigations.

- Consistently cuts down the total time of crash investigations by ~50%. Two recent fatality crashes were worked and then investigated in 6-8 hours versus the 12-18 hours it would have taken using the prior method and technology.
- Reduces the need for officers to be physically on the road while investigating resulting in a safer scene.
- Provides an efficient way to investigate reducing officer workload.
- Reduces road closure time (in some cases they used to close on two separate days).
- Drones have been used for patrolling during festivals and large events, searching for wanted/missing persons, and during dangerous calls.

Through the proposed Interlocal Agreement, the City of Cedar Park will provide drone technology monitoring, investigation, and reporting services. These services are anticipated to reduce the duration of crash and other law enforcement investigations which adversely impact traffic flows and toll revenues on the portions of the 183A Toll that fall within the City of Cedar Park's jurisdiction. I highly encourage the approval of this ILA which has been proven to benefit the traveling public as well as the Mobility Authority.

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

RESOLUTION NO. 23-0XX

**APPROVING AN INTERLOCAL AGREEMENT WITH THE CITY OF CEDAR PARK FOR REAL
TIME KINEMATICS TECHNOLOGY TO CONDUCT TRAFFIC INVESTIGATIONS,
CONSTRUCTION MONITORING AND OTHER TRAFFIC SURVEILLANCE SERVICES**

WHEREAS, vehicle accident investigations and reconstructions often require law enforcement to close Mobility Authority operated toll roads or divert traffic directly onto Mobility Authority facilities from adjacent frontage roads when on which accidents occur; and

WHEREAS, closures to Mobility Authority facilities due to vehicle accident investigations and reconstructions negatively affect the mobility of the traveling public and impact toll revenues; and

WHEREAS, Mobility Authority staff and the City of Cedar Park have determined that drone and real time kinematics (RTK) technology are cost-effective accident investigation tools, and that the high accuracy and near real-time mapping provided by RTK technology will improve the speed of accident investigations and reduce the risk to investigating offices; and

WHEREAS, to reduce the impact of extended closures times and impact to revenue, the Mobility Authority desires the use of RTK technology for accident investigations and maintenance inspections on the 183A Toll; and

WHEREAS, Chapter 791 of the Texas Government Code and Chapter 370 of the Texas Transportation Code authorize a regional mobility authority to enter into an agreement with a governmental entity for the performance of governmental functions and services; and

WHEREAS, the Executive Director and the City of Cedar Park have negotiated a proposed interlocal agreement for RTK technology for the 183A Toll which is attached hereto as Exhibit A.

WHEREAS, the Executive Director requests that the Board authorize him to execute the proposed interlocal agreement with the City of Cedar Park for RTK technology for the 183A Toll in an amount not to exceed \$18,500 and in the form or substantially the same form attached hereto as Exhibit A.

NOW THEREFORE, BE IT RESOLVED that the Board hereby authorizes the Executive Director to execute an interlocal agreement with the City of Cedar Park for real time kinematics technology for the 183A Toll in an amount not to exceed \$18,500 and in the form or substantially the same form attached hereto as Exhibit A.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 26th day of April 2023.

Submitted and reviewed by:

Approved:

James M. Bass
Executive Director

Robert W. Jenkins, Jr.
Chairman, Board of Directors

Exhibit A

RESOLUTION NO. R060.23.01.12.F5

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CEDAR PARK, TEXAS, AUTHORIZING AND DIRECTING THE CITY MANAGER TO NEGOTIATE AND EXECUTE AN INTERLOCAL AGREEMENT WITH CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY FOR DRONE AND RTK TECHNOLOGY OPERATIONS BY THE CEDAR PARK POLICE DEPARTMENT; AND FINDING AND DETERMINING THAT THE MEETING AT WHICH THIS RESOLUTION IS PASSED WAS NOTICED AND IS OPEN TO THE PUBLIC AS REQUIRED BY LAW.

WHEREAS, the Interlocal Cooperation Act (the "Act"), Texas Government Code Chapter 791, authorizes local governments to contract with one another for the performance of governmental functions and services, including services related to police protection and streets and roads; and

WHEREAS, the Central Texas Regional Mobility Authority (CTRMA) is a political subdivision of the State of Texas formed pursuant to Chapter 370 of the Texas Transportation Code; and

WHEREAS, the City of Cedar Park and CTRMA are local governments, as defined by the Act; and

WHEREAS, the City and CTRMA desire to enter into an interlocal agreement (the "ILA") for operation of drone and RTK technology by the Cedar Park Police Department in connection with serious accident investigations and general traffic operations reporting on portions of the 183A Toll Road within the City limits; and

WHEREAS, in consideration of the services to be provided by the Police Department, CTRMA agrees to pay \$18,500 to the City; and

WHEREAS, City Council finds it is in the interest of the public health, safety, and welfare to enter into the ILA with CTRMA.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF CEDAR PARK, TEXAS:

SECTION 1. That the City Manager is hereby authorized and directed to negotiate and execute an Interlocal Agreement with the Central Texas Regional Mobility Authority (CTRMA) for drone and RTK technology operations by the Cedar Park Police Department, subject to final review by the City Attorney.

SECTION 2. That it is hereby officially found and determined that the meeting at which this resolution is passed is open to the public and that public notice of the time, place, and purpose of said meeting was given as required by law.


PASSED AND APPROVED this the 12th day of January, 2023.

CITY OF CEDAR PARK, TEXAS

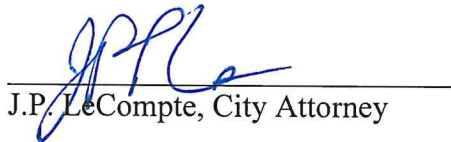
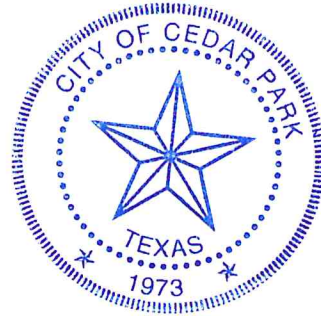
ATTEST:



LeAnn M. Quinn, TRMC
City Secretary


James Penniman-Morin, Mayor

APPROVED AS TO FORM
AND CONTENT:


J.P. LeCompte, City Attorney

RESOLUTION NO. R060.23.01.12.F5

INTERLOCAL AGREEMENT

THIS INTERLOCAL AGREEMENT (the “Agreement”) is effective as of _____, 2023, and is between the CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY (the “Mobility Authority”) and the CITY OF CEDAR PARK (the “City”), political subdivisions of the State of Texas (collectively, the “Parties”).

WITNESSETH:

WHEREAS, the Mobility Authority is a regional mobility authority created pursuant to the request of Travis and Williamson Counties and operating pursuant to Chapter 370 of the Texas Transportation Code (the “RMA Act”) and 43 TEX. ADMIN. CODE §§ 26.1 *et seq.* (the “RMA Rules”); and

WHEREAS, the City is a home rule city and municipal corporation; and

WHEREAS, Chapter 791 of the Texas Government Code provides that any one or more local governments may contract with each other for the performance of governmental functions or services in which the contracting parties are mutually interested; and

WHEREAS, Section 370.033(a)(5)&(6) of the RMA Act provides that a regional mobility authority may enter into contracts or agreements with another governmental entity; and

WHEREAS, Section 370.033(a)(15) of the RMA Act provides that a regional mobility authority may do all things necessary or appropriate to carry out the powers and duties expressly granted or imposed by the RMA Act; and

WHEREAS, the Mobility Authority operates a portion of the 183A Toll within and around the corporate limits of the City; and

WHEREAS, serious vehicle crashes and other types of incidents on 183A Toll can require City law enforcement to restrict access or completely close sections of the toll road for extended periods of time to conduct required investigative activities; and

WHEREAS, the Mobility Authority and the City have determined that drone and real time kinematics (RTK) technology are cost-effective accident investigation tools. RTK is a GPS correction technology technique that provides real-time corrections to location data when the survey drone is capturing photos of a site. The high accuracy and near real-time mapping using RTK technology will improve the speed of accident investigation and reduce the risk to investigating officers; and

WHEREAS, reopening 183A Toll in a more expedited manner reduces the inconvenience to the travelling public, reduces the strain on City law enforcement resources and provides ancillary benefits to the Mobility Authority; and

WHEREAS, the Mobility Authority could benefit from the use of drone and RTK technology from time to time to monitor and document traffic operations on existing sections of 183A Toll in the City; and

Interlocal Agreement
City of Cedar Park and Central Texas Regional Mobility

WHEREAS, the Parties have agreed that it would be to their mutual benefit for the Mobility Authority and the City to enter into this agreement to provide RTK technology and reporting services to conduct traffic investigations, construction monitoring and other traffic surveillance services on 183A Toll, generally from Brushy Creek Loop to North of Scottsdale Drive.

NOW, THEREFORE, the Parties agree as follows:

1. Recitals. The recitals set forth above are incorporated into this Agreement for all purposes and are found by the Parties to be true and correct. The Parties have further found and determined that each Party has authorized and approved the Agreement by resolution, order, or other action by its respective governing body, and that this Agreement will be in full force and effect when approved by each Party.

2. Purchase of RTK Technology. The Mobility Authority agrees to provide up to \$18,500 in funds towards the City's purchase of RTK technology to be used by the Cedar Park Police Department but, in no event shall the Mobility Authority's payment exceed the actual cost of the RTK technology documented by vendor invoice(s).

3. Use of Drone and RTK Technology for Monitoring, Investigation and Reporting. The City shall utilize drone and RTK technology to reduce the duration of crash and other law enforcement investigations which adversely impact traffic flows on 183A Toll, and to provide the Mobility Authority real time information affecting traffic flows and aerial video records. In particular, the Cedar Park Police Department shall:

- a.** Conduct corridor drone flights as directed by Mobility Authority staff/consultants to monitor traffic conditions and provide video records of 183A Toll and adjacent construction progress on a quarterly basis. Additional drone flights shall be performed from time to time at the request of the Mobility Authority. The City will make a reasonable effort to provide the City staff resources necessary to fulfill such requests.
- b.** Provide quarterly reports to the Mobility Authority's Manager of Traffic & Incident Management documenting all use of the RTK equipment including date, time and purpose. The reports should include information regarding the benefits the RTK system provided to the City and/or the Mobility Authority. Reports shall be submitted within 15 days of the end of the preceding calendar quarter (ie. April 15, July 15, October 15, January 15).

4. Term and Termination. The term of this Agreement shall be for 60 months from the date it is fully executed. If this Agreement is terminated by the City in advance of the full term for a reason other than breach of this Agreement by the Mobility Authority, the City shall reimburse the Mobility Authority as follows:

- a.** 0 to 12 months, \$12,000.00
- b.** 13 to 24 months, \$8,000.00
- c.** 25 to 36 months, \$4,000.00

Interlocal Agreement
City of Cedar Park and Central Texas Regional Mobility

d. 37 to 60 months, no reimbursement is required.

5. Liability. The City agrees that the Mobility Authority shall not be liable for any claims or losses of any kind arising out of acts or omissions by the City. The Mobility Authority agrees that the City shall not be liable for any claims or losses of any kind arising out of acts or omissions by the Mobility Authority.

6. Notices. All notices, demands or other requests, and other communications required or permitted under this Agreement or which any Party may desire to give to the other Party shall be in writing and shall be deemed to be given on the date of receipt by the Party to whom the notice is either (i) hand-delivered, with written receipt of the notice provided by the receiving Party, or (ii) delivered by fax or electronic mail transmission at the respective addresses set forth below, or at such other address as a Party may from time to time designate by written notice to the other Party as herein required:

MOBILITY AUTHORITY: James Bass, Executive Director
Central Texas Regional Mobility Authority
3300 N. IH-35, Suite 300
Austin, TX 78705
(512) 966-9784 (facsimile)
Email address: jbass@ctrma.org

WITH COPY TO: Geoff Petrov, General Counsel
Central Texas Regional Mobility Authority
3300 N. IH-35, Suite 300
Austin, TX 78705
(512) 996-9784 (facsimile)
Email address: gpetrov@ctrma.org

Fabiola Bowers, Traffic & Incident Management Manager
Central Texas Regional Mobility Authority
3300 N. IH-35, Suite 300
Austin, TX 78705
(512) 996-9784 (facsimile)
Email address: fbowers@ctrma.org

CITY: Brenda Eivens, City Manager
City of Cedar Park
450 Cypress Creek Road
Building One
Cedar Park, TX 78613
(512) 250-8602 (facsimile)
Email address: brenda.eivens@cedarparktexas.gov

WITH A COPY TO: J.P. LeCompte, City Attorney
City of Cedar Park
450 Cypress Creek Road

Interlocal Agreement
City of Cedar Park and Central Texas Regional Mobility
Building One
Cedar Park, TX 78613
(512) 250-8602 (facsimile)
Email address: jp.lecompte@cedarparktexas.gov

7. Calculation of Days. Unless otherwise specified, each reference in this Agreement to a day or days refers to a calendar day; however, if the last day of any period described in this Agreement is a Saturday, Sunday, or legal holiday observed by either Party, the period is extended to include the next day that is not a Saturday, Sunday, or legal holiday observed by either Party.

8. Prior Written Agreements. This Agreement is without regard to any and all prior written contracts or agreements between the Parties regarding any other subject matter and does not modify, amend, ratify, confirm, or renew any such other prior contract or agreement between the Parties.

9. Other Services. Nothing in this Agreement shall be deemed to create, by implication or otherwise, any duty or responsibility of either of the Parties to undertake or not to undertake any other service, or to provide or not to provide any service, except as specifically set forth in this Agreement or in a separate written instrument executed by both Parties.

10. Governmental Immunity. Nothing in this Agreement shall be deemed to waive, modify, or amend any legal defense available at law or in equity to either of the Parties nor to create any legal rights or claims on behalf of any third party. Neither of the Parties waives, modifies, or alters to any extent whatsoever the availability of the defense of governmental immunity against third party claims under the laws of the State of Texas and of the United States.

11. Amendments and Modifications. This Agreement may not be amended or modified except in writing and executed by both Parties to this Agreement and authorized by their respective governing bodies.

12. Severability. If any provision of this Agreement shall be held invalid or unenforceable by any court of competent jurisdiction, such holding shall not invalidate or render unenforceable any other provision hereof, but rather this entire Agreement will be construed as if not containing the particular invalid or unenforceable provision(s), and the rights and obligations of the Parties shall be construed and enforced in accordance therewith. The Parties acknowledge that if any provision of this Agreement is determined to be invalid or unenforceable, it is their desire and intention that such provision be reformed and construed in such a manner that it will, to the maximum extent practicable, give effect to the intent of this Agreement and be deemed to be validated and enforceable.

13. Venue. The parties agree that all disputes that arise out of this Agreement are governed by the laws of the State of Texas and venue for all purposes herewith shall be in Williamson County, Texas.

14. Assignment. Except as otherwise provided in this Agreement, a party may not assign this Agreement or subcontract the performance of services without first obtaining the written consent of the other party.

Interlocal Agreement
City of Cedar Park and Central Texas Regional Mobility

15. Responsibilities of the Parties. Each party acknowledges that it is not an agent, servant, or employee of the other party. Each party is responsible for its own acts and deeds and for those of its agents, servants, or employees.

16. Compliance with Laws. The parties shall comply with all federal, state, and local laws, statutes, ordinances, rules, and regulations and with the orders and decrees of any courts or administrative bodies or tribunals in any manner affecting the performance of this agreement.

17. Execution in Counterparts. This Agreement may be simultaneously executed in several counterparts, each of which shall be an original and all of which shall be considered fully executed as of the date first written above, when both Parties have executed an identical counterpart, notwithstanding that all signatures may not appear on the same counterpart.

The Parties are signing this agreement to be effective on the date stated in the introductory paragraph.

CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY

By: _____
James Bass, Executive Director

CITY OF CEDAR PARK

Brenda Eivens

By: _____
Brenda Eivens, City Manager


LM


MH


KC