

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

RESOLUTION NO. 19-020

**AWARDING A CONTRACT FOR
HUMAN RESOURCES ADVISORY SERVICES**

WHEREAS, the Mobility Authority issued a request for proposals for human resources advisory services on August 29, 2018 (the "RFP"), and four responsive proposals were received by the submittal deadline of September 25, 2018 established in the RFP; and

WHEREAS, the four proposals were reviewed and evaluated in accordance with the Mobility Authority's procurement policies; and

WHEREAS, after a review and analysis of the proposals by the Mobility Authority's Controller and the Executive Director, the Executive Director recommends awarding a contract to BDO USA LLP for human resource advisory services; and


WHEREAS, the Executive Director and BDO USA LLP have discussed and agreed to a proposed contract attached hereto as Exhibit A for human resources advisory services for an initial term of three years with two renewal options of one year each.

NOW THEREFORE, BE IT RESOLVED that the Board of Directors awards a contract to BDO USA LLP for human resources advisory services for an initial term of three years with two renewal options of one year each; and

BE IT FURTHER RESOLVED that the Board authorizes the Executive Director to finalize and execute the proposed contract with BDO USA LLP in the form or substantially the same form as attached hereto as Exhibit A.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 29th day of May 2019.

Submitted and reviewed by:



Geoffrey Petrov, General Counsel

Approved:



Ray A. Wilkerson
Chairman, Board of Directors

Exhibit A

**HUMAN RESOURCES ADVISORY SERVICES AGREEMENT
BETWEEN THE
CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY
AND
BDO USA, LLP**

This Human Resources Advisory Services Agreement (the “Agreement”) is made and entered into by and between the **Central Texas Regional Mobility Authority** (the “Mobility Authority”), a political subdivision of the State of Texas, and **BDO USA, LLP** (the “Consultant”), a Delaware Limited Liability Partnership, to be effective as of the 29th day of May, 2019 (the “Effective Date”) with respect to human resources advisory services to be performed by the Consultant, as an independent contractor, for the Mobility Authority.

WITNESSETH:

WHEREAS, the Mobility Authority desires to obtain the services of a firm to provide human resources advisory services; and

WHEREAS, on August 29, 2018, the Mobility Authority issued a request for proposals (the “RFP”) from firms interested in providing human resources advisory services; and

WHEREAS, the Mobility Authority received four (4) proposals in response to the RFP; and

WHEREAS, on May 29, 2019, the Mobility Authority Board of Directors selected Consultant as the most qualified respondent and authorized the Mobility Authority Executive Director to negotiate and execute this Agreement.

NOW, THEREFORE, the Mobility Authority and the Consultant, in consideration of the mutual covenants and agreements herein contained, do hereby agree as follows:

**ARTICLE 1
RETENTION OF THE CONSULTANT**

Based on the representations and commitments made herein by the Consultant, the Mobility Authority has concluded that the Consultant possesses the demonstrated competence and requisite qualifications to perform the Services (as defined below) pursuant to this Agreement. The Mobility Authority agrees to and hereby retains the Consultant as an independent contractor, and the Consultant agrees to provide the Services to the Mobility Authority, in accordance with the terms and conditions of this Agreement and at the direction of the Mobility Authority as set forth in this Agreement. In return for payment (as more particularly described in this Agreement), the Consultant agrees to have adequate staff and resources at all times throughout the term of this Agreement to provide the Services promptly and professionally as mutually agreed upon by the Mobility Authority and Consultant.

ARTICLE 2 SCOPE OF SERVICES

The Consultant covenants and agrees to provide those services generally described above and more specifically listed in the Scope of Services set forth in the attached Appendix A (the “Services”). The terms and conditions of this Agreement shall apply to all services the Consultant performs at the Mobility Authority’s request, even if such services are not expressly covered in Appendix A. The Consultant shall perform the Services in a professional and complete manner in all respects. Without limiting any of its other rights under this Agreement or otherwise, the Mobility Authority may withhold payment of fees or reimbursement of expenses to the Consultant for certain Services if there is a good faith, reasonable basis to determinate that due to Consultant’s gross negligence or intentional misconduct, the Consultant’s performance fails to materially comply with any deadline or other provision of this Agreement regarding those Services, and the failure is not due to the fault of the Mobility Authority.

ARTICLE 3 TERM AND TERMINATION

1. **Term.** This Agreement is for a term of three (3) years from the Effective Date, terminating on May 31, 2022. This Agreement may be renewed for up to two (2) additional one-year periods by mutual agreement of the parties hereto.

2. **Termination.** This Agreement may be terminated with or without cause by either party upon the giving of at least sixty (60) days’ prior written notice to the other party of its intention to terminate, specifying in such notice the effective date of such termination. No penalty will be assessed for termination of this Agreement. Without limiting the foregoing, the Mobility Authority may also terminate this Agreement upon receipt of all desired deliverables resulting from the Services and a determination that no further work is required or desired.

In the event of termination under this Article 3, the Consultant will be entitled to any undisputed compensation and unreimbursed expenses, if any, that accrued under this Agreement through the date of termination but will not be entitled to any additional compensation or reimbursement after such date.

ARTICLE 4 COMPENSATION

1. **Compensation.** As sole and sufficient compensation for the Services under this Agreement, the Mobility Authority agrees to pay and the Consultant agrees to accept compensation as set forth in the attached Appendix B, which is incorporated in this Agreement for all purposes. Said compensation constitutes full payment for all services, liaison, products, materials, and equipment required to provide and deliver the Services, including, but not limited to, materials, training, equipment used, overhead, and administrative expenses. No compensation shall be payable for work performed that has not been previously authorized in writing by the Mobility Authority.

2. **Reimbursement.** In the event Consultant is directed by the Mobility Authority to travel in order to perform the Services, the Mobility Authority shall reimburse the Consultant for reasonable, ordinary, and necessary travel expenses incurred by the Consultant.

3. **Invoicing.** The Consultant shall document the Services rendered and related reimbursable expenses incurred, if any, by providing the Mobility Authority with a statement which must detail the Services performed, hours worked and rate, a copy of the written authorization from the Mobility Authority for the Services in the statement, and the reimbursable expenses, if any, incurred by the Consultant. The Consultant shall deliver the statement upon completion of the work that was the subject of written authorization from the Mobility Authority. In the event the Mobility Authority requests a statement prior to the completion of the authorized work, Consultant shall submit the statement within ten (10) days of receipt of the request. Each statement must include the total amounts payable for the Services in the statement, the total amount paid during the then-current calendar year, and such other detail or information as the Mobility Authority reasonable requests from time to time. The Consultant represents and warrants that each statement as true and correct.

Statements shall be sent via e-mail to invoices@ctrma.org, with mtemple@ctrma.org copied on the e-mail transmittal. The Consultant's standard practice is to render statements on a monthly basis. Statements that are unpaid 30 days past the date received by the Mobility Authority are deemed delinquent. If an account has fees that are not paid in a timely manner, then the Consultant reserves the right to suspend the Services, withhold delivery of any deliverables, or withdraw from this engagement entirely if any payment of the statements is delinquent.

ARTICLE 5 KEY PERSONNEL

The Consultant acknowledges and agrees that the key personnel identified in Appendix C are key and integral to the satisfactory performance of the Consultant under this Agreement. Throughout the term of this Agreement, the Consultant agrees that the identified individual(s) will remain in charge of the performance of the Services and shall devote the necessary time and attention to the performance of the Services. In the event of the death or disability of any such individual, his/her disassociation from the Consultant, or his/her failure or inability to devote sufficient time and attention to the Services, at the Mobility Authority's option, the Consultant shall promptly replace said individual with a person suitably qualified and otherwise acceptable to the Mobility Authority. In no event shall the Consultant remove, transfer, or reassign any individual identified in Appendix C except due to death or disability of such individual, his/her disassociation from the Consultant or as instructed by, or with the prior written consent of, the Mobility Authority.

The Consultant shall use its best efforts to enhance continuity in the key personnel and other employees regularly performing the Services. The Consultant shall notify and consult with the Mobility Authority if such key personnel shall be materially unavailable to perform Services, and Consultant shall not assign such other work to any key personnel performing the Services that would conflict with, or impede, their ability to perform the Services as requested or directed under this Agreement. Individuals may be added to Appendix C with the mutual written consent of the Consultant and the Mobility Authority.

ARTICLE 6
REMOVAL OF PERSONNEL

All persons providing the Services shall have such knowledge and experience as will enable them to perform the duties assigned to them. Any such person who, in the reasonable opinion of the Mobility Authority, is not competent to provide the Services or by his or her conduct becomes detrimental to the provision of the Services shall, upon request of the Mobility Authority, immediately be removed from the Services. The Consultant shall furnish the Mobility Authority with a fully qualified candidate for the removed person within ten (10) days thereafter, provided, however, said candidate shall not begin work under this Agreement unless and until approved by the Mobility Authority.

ARTICLE 7
RELATIONSHIP BETWEEN THE PARTIES

The parties recognize that the Mobility Authority, through the Executive Director and assigned staff, shall manage the day-to-day business and affairs of the Mobility Authority and that only an independent contractor relationship, and no other type of relationship, exists between the Mobility Authority and the Consultant. The Consultant acknowledges and agrees that neither it, nor any of the Consultant's employees, officers, agents, or contractors, shall be considered an employee of the Mobility Authority for any purpose.

The Consultant has no authority to enter into any contract binding upon the Mobility Authority, or to create any obligation on behalf of the Mobility Authority. Under no circumstances may the Consultant represent to suppliers, contractors, subcontractors, or any other parties that the Consultant, its employees, and affiliates are employed by the Mobility Authority or serve the Mobility Authority in any capacity other than as independent contractors. The Consultant shall clearly inform others that it has no authority to bind the Mobility Authority.

In the performance of the Services, the Consultant as an independent contractor possesses the sole right to supervise, manage, operate, control, and direct the performance of the details incident to the Services. The Consultant is not entitled to any insurance, pension, vacation, sick leave, or other benefits customarily afforded to employees of the Mobility Authority. Nothing in this Agreement is deemed or construed to create a partnership, joint venture, or joint enterprise; relationship of employee-employer or principal-agent; or to otherwise create any liability for the Mobility Authority whatsoever with respect to the liabilities, obligations, or acts of the Consultant or any other person. The employees of Consultant performing the Services shall abide by all applicable laws and the rules and regulations of the Mobility Authority.

ARTICLE 8
REPRESENTATION AND WARRANTIES

The Consultant represents and warrants to the Mobility Authority that the Consultant (a) is under no contractual or other restriction or obligation, the compliance with which is inconsistent with or would hinder the execution of this Agreement, the performance of the Consultant's obligations hereunder or of the rights of the Mobility Authority hereunder; (b) without limiting the representation in preceding clause, and except has otherwise been disclosed to the Mobility

Authority, to its knowledge, after exercising reasonable diligence, each of the employees of Consultant performing the Services hereunder is not an employee, contractor, or representative of, or consultant for any other firm currently under contract with the Mobility Authority or intending to bid for any contract; (c) is under no financial constraints at this time that would hinder the full performance of the obligations under this Agreement; and (d) to its knowledge, after exercising reasonable diligence, each of the employees of Consultant performing the Services hereunder is not under contract, and must not without the Mobility Authority's prior written consent contract, with any company, organization, or person that the Consultant reasonably believes to be in opposition or hostile to the Mobility Authority's operation and mission as such contract may relate to the subject matter in opposition to the Mobility Authority's operation and mission. The Consultant further represents and warrants that employees of Consultant intended to perform the Services have disclosed, to its knowledge, any business relationship with Mobility Authority board members, employees, or agents, and that the employees of Consultant intended to perform the Services have, to its knowledge, no other business relationship with Mobility Authority board members, employees, or agents that would disqualify the Consultant from providing the requested Services.

ARTICLE 9 CONFIDENTIAL INFORMATION

1. All materials and ideas developed during the performance of this Agreement in whole or in part by the Consultant is proprietary and confidential information and is owned by the Mobility Authority, and the Mobility Authority will retain ownership of all work-in-progress. The Confidential Information of Mobility Authority and information may only be used by the Consultant during the term of this Agreement as necessary to carry out the purposes of this Agreement. "Confidential Information" means all non-public information that is marked as "confidential" or "proprietary" or that otherwise should be understood by a reasonable person to be confidential in nature that is obtained by Consultant from Mobility Authority. The Consultant shall return all Confidential Information of Mobility Authority in the Consultant's possession to the Mobility Authority upon termination of this Agreement except for (a) copies retained in work paper files retained to comply with Consultant's professional or legal obligations and (b) such Confidential Information retained in accordance with Consultant's normal data back-up procedures; provided that any such Confidential Information so retained shall remain subject to the confidentiality obligations as set forth in this Article 9. The Consultant agrees not to disclose during the period of retention under this Agreement or at any time thereafter to any unauthorized person, association, firm, corporation, or other party any Confidential Information of the Mobility Authority, and the Consultant confirms that such Confidential Information constitutes the exclusive property of the Mobility Authority.

The parties agree that each of the provisions in this Article 9 are important and material, and significantly affect the successful conduct of the Mobility Authority's business, as well as its reputation and goodwill. Any breach of the terms of this Agreement, including but not limited to the provisions of this Article 9, is a breach of this Agreement, from which Mobility Authority may seek that the Consultant may be enjoined and for which Mobility Authority may seek that the Consultant also shall be liable to the Mobility Authority for all damages arising or resulting from the breach. The Consultant understands and acknowledges that the Consultant's responsibilities

under this Article 9 continue in full force and effect after the Consultant's contractual relationship with the Mobility Authority ends for any reason.

Notwithstanding anything in this Agreement to the contrary, the Consultant has no obligation of confidentiality with respect to information that (a) is or becomes part of the public domain through no act or omission of the Consultant; (b) was in the Consultant's lawful possession prior to the disclosure and had not been obtained by the Consultant either directly or indirectly from the Mobility Authority; (c) is lawfully disclosed to the Consultant by a third party without restriction on disclosure; (d) is independently developed by the Consultant without use of or reference to the Mobility Authority's confidential information; or (e) is required to be disclosed by law or judicial, arbitral or governmental order or duly executed process, provided the Consultant gives the Mobility Authority prompt written notice of the requirement sufficient to permit the Mobility Authority a reasonable opportunity to seek a protective order or other appropriate relief. Notwithstanding anything to the contrary herein, Consultant shall retain exclusive ownership to and in its (i) work papers (e.g. its internal documentation to substantiate the Services) and (ii) professional methodologies, techniques, processes and procedures or general know-how.

ARTICLE 10 INDEMNIFICATION AND LIMITATION OF LIABILITY

Indemnification by the Consultant. THE CONSULTANT SHALL INDEMNIFY AND HOLD HARMLESS THE MOBILITY AUTHORITY AND ITS OFFICERS, DIRECTORS, AND EMPLOYEES FROM ANY CLAIMS, COSTS OR LIABILITIES OF ANY TYPE OR NATURE AND BY OR TO ANY PERSONS WHOMSOEVER, TO THE EXTENT CAUSED BY THE CONSULTANT'S GROSS NEGLIGENCE, FRAUD OR INTENTIONAL MISCONDUCT BY THE CONSULTANT OR ANY OF ITS EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE SERVICES. IN SUCH EVENT, THE CONSULTANT SHALL ALSO INDEMNIFY AND HOLD HARMLESS THE MOBILITY AUTHORITY, ITS OFFICERS, DIRECTORS, AND EMPLOYEES FROM ANY AND ALL REASONABLE AND NECESSARY EXPENSES, INCLUDING REASONABLE ATTORNEYS' FEES INCURRED BY THE MOBILITY AUTHORITY IN LITIGATING OR OTHERWISE RESISTING SUCH SAID CLAIMS, COSTS OR LIABILITIES. IN THE EVENT THE MOBILITY AUTHORITY, ITS OFFICERS, DIRECTORS, OR EMPLOYEES, IS/ARE FOUND TO BE PARTIALLY AT FAULT, THE CONSULTANT SHALL, NEVERTHELESS, INDEMNIFY THE MOBILITY AUTHORITY FROM SUCH SAID CLAIMS FROM AND AGAINST THE PERCENTAGE OF FAULT ATTRIBUTABLE TO THE CONSULTANT, ITS OFFICERS, DIRECTORS, EMPLOYEES, AND AGENTS IN THE PERFORMANCE OF THE SERVICES.

Indemnification by the Mobility Authority. TO THE EXTENT PROVIDED BY LAW, THE MOBILITY AUTHORITY AGREES TO RELEASE, INDEMNIFY AND HOLD HARMLESS THE CONSULTANT AND ITS MEMBERS, PARTNERS, EMPLOYEES, CONTRACTORS, AGENTS AND AFFILIATES (COLLECTIVELY THE "CONSULTANT GROUP") FROM AND AGAINST ANY AND ALL CLAIMS, LIABILITIES, OR EXPENSES (INCLUDING

REASONABLE ATTORNEYS' FEES) RELATING TO THE SERVICES IN CONTRACT, STATUTE, OR TORT (INCLUDING WITHOUT LIMITATION NEGLIGENCE) (COLLECTIVELY, THE "SUBJECT CLAIMS") ASSERTED BY A THIRD PARTY ARISING OUT OF RELATED TO ANY USE OR RELIANCE ON THE SERVICES BY A THIRD PARTY AS A RESULT OF CLIENT'S ACT OR OMISSION. THE MOBILITY AUTHORITY FURTHER AGREES TO RELEASE, INDEMNIFY AND HOLD HARMLESS THE CONSULTANT GROUP FROM ANY DIRECT OR THIRD PARTY SUBJECT CLAIMS RELATING TO THE SERVICES ATTRIBUTABLE TO ANY MISREPRESENTATIONS MADE BY THE MOBILITY AUTHORITY ON WHICH BDO DIRECTLY RELIED TO ITS DETRIMENT WITH RESPECT TO THE SERVICES.

Limitation of Liability. Except to the extent finally determined to have resulted from the Consultant Group's fraud or intentional misconduct, the Consultant Group shall not be liable to the Mobility Authority for any direct or third party Subject Claim in excess of an amount equal to three times the aggregate amount of fees paid by the Mobility Authority to the Consultant for the Services giving rise to the claim during the 12 months preceding the date of the claim. In no event shall the Consultant Group be liable for consequential, special, indirect, incidental, punitive, or exemplary losses or damages relating to the Agreement. Nothing herein shall be deemed to be a waiver of the Mobility Authority's governmental immunity with respect to any claim or potential claim asserted hereunder.

ARTICLE 11 GENERAL PROVISIONS

1. **Compliance with Laws.** The Consultant shall comply with all applicable federal, state, and local statutory and regulatory laws, ordinances, codes, and regulations, and with the applicable orders and decrees of any courts, administrative bodies, or tribunals, in each case as applicable to the performance of Services under this Agreement, which may include, without limitation, workers' compensation laws, antidiscrimination laws, minimum and maximum salary and wage statutes and regulations, health and safety codes, and licensing laws and regulations.

2. **Audit.** The Mobility Authority may audit the records of the Consultant directly related to the Services to verify the costs or expenses incurred in the performance of this Agreement. Materials, documentation, and work products produced must be archived for a period of three (3) years by the Consultant and made available to the Mobility Authority upon reasonable prior written request. In the event an audit conducted by the Mobility Authority reveals material overcharges by the Consultant for any statement, the Consultant shall pay the reasonable, documented and out of pocket costs incurred by the Mobility Authority in connection with the audit.

3. **Entire Agreement.** This Agreement is the entire agreement of the parties, and supersedes any and all oral representations, warranties, understandings, stipulations, agreements, or promises pertaining to this Agreement that are not incorporated in writing in this Agreement.

4. **Choice of Law.** This Agreement shall be construed and given effect in accordance with the laws of the State of Texas.

5. **Venue.** The parties acknowledge that venue is proper in Travis County, Texas, for all disputes.

6. **Invalidity.** If any part of this Agreement is declared legally invalid or unenforceable by a court of competent jurisdiction, that decision does not affect the validity of any remaining portion of this Agreement. Those portions not declared invalid remain in full force and effect as if this Agreement had been executed without the inclusion of the invalid portion. The invalid portion, if any, may be modified by the court to the extent necessary to become enforceable.

7. **Modification.** This Agreement may not be changed, altered, or modified unless in writing and signed by the parties.

8. **Binding Effect.** The rights and benefits of the Consultant under this Agreement are personal to each of Mobility Authority and the Consultant and may not be subject to voluntary or involuntary alienation, assignment, subletting, or transfer without the written consent of the other party.

9. **Waiver.** Waiver by either party of any breach of this Agreement by the other party is not effective unless in writing, and no such waiver operates as a waiver of any subsequent breach.

10. **Acknowledgment.** Each party hereto agrees by its signature to this Agreement that it (a) fully understands this Agreement's purposes, terms, and provisions and (b) expressly acknowledges receipt of a copy of this Agreement.

11. **Dispute Resolution.** The parties shall make every reasonable effort to communicate and cooperate with each other to resolve any disputes. Should informal resolution fail, the parties may attempt to resolve the dispute through mediation, using a mediator mutually agreed upon by the Consultant and the Mobility Authority, prior to initiating litigation. EACH PARTY HERETO IRREVOCABLY WAIVES, TO THE FULL EXTENT PERMITTED BY LAW, ALL RIGHT TO TRIAL BY JURY IN ANY ACTION, PROCEEDING OR COUNTERCLAIM ARISING OUT OF OR RELATING TO THIS AGREEMENT OR ANY OF THE TRANSACTIONS CONTEMPLATED HEREBY OR THEREBY.

12. **Benefits Inured.** This Agreement is solely for the benefit of the parties and their permitted successors and assigns. Nothing contained in this Agreement is intended to, nor shall be deemed or construed to, create or confer any rights, remedies, or causes of action in or to any other persons or entities, including the public in general.

13. **Survival.** Articles 7, 8, 9, 10 and 11 survive the expiration or termination of this Agreement for any reason.

14. **Availability of Funds.** The awarding of this Agreement is dependent upon the availability of funding. In the event that funds do not become available, this Agreement may be terminated or the scope may be amended; provided that Consultant shall have no obligation to perform services unless the parties have mutually agreed upon the terms as to such services. A thirty (30) day written notice shall be issued to the Consultant, and there will be no penalty or removal of charges incurred by the Mobility Authority. Notwithstanding the foregoing, if any

Services have been provided by the Consultant to the Mobility Authority under this Agreement prior to such termination, the Mobility Authority will be liable for the undisputed fees incurred.

15. **Notices.** Notice is deemed given under this Agreement (a) when delivered by hand; (b) one business day after being deposited with a reputable overnight air courier service; or (c) three business days after being mailed by United States mail, registered or certified mail, return receipt requested, and postage prepaid. Any notices provided under this Agreement must be sent or delivered to:

In the case of the Consultant:

Mike Conover
Managing Director, Compensation Consulting
BDO USA, LLP
One International Place
Boston, MA 02110

With a copy to:

BDO USA, LLP
330 North Wabash, Suite 3200
Chicago, IL 60611
Attention: Office of General Counsel

In the case of the Mobility Authority:

Geoff Petrov, General Counsel
Central Texas Regional Mobility Authority
3300 N IH-35, Suite 300
Austin, TX 78705

16. **Third-Parties and Use.** All Services hereunder shall be solely for the Mobility Authority's use and benefit pursuant to the client relationship hereunder. This engagement does not create privity between the Consultant and any person or party other than the Mobility Authority, and is not intended for the express or implied benefit of any third party. Although the Mobility Authority may disclose the Consultant's advice, opinions, reports, or other services (but not the work papers) to any person without limitation, no third party is entitled to rely, in any manner or for any purpose, on the Services or deliverables of the Consultant hereunder.

17. **Data and Information.** Consultant shall be entitled to rely on and assume, without independent verification, that all representations, assumptions, information and data supplied by Mobility Authority, its personnel, representatives, and agents shall be complete and accurate. Unless otherwise agreed to by the parties, Consultant shall not assume any responsibility for any financial reporting with respect to the Services.

18. **Non-Certified Public Accountant ("CPA") Owner Notice Requirement.** Consultant is owned by professionals who hold CPA licenses as well as by professionals who are

not licensed CPAs. Therefore, depending on the nature of the Services being provided, non-CPA owners may be involved in providing certain Services hereunder.

19. **Email Communications.** The Consultant disclaims and waives, and the Mobility Authority releases the Consultant from, any and all liability for the interception or unintentional disclosure of e-mail transmissions or for the unauthorized use or failed delivery of e-mails transmitted or received by the Consultant in connection with the performance of the Services.

20. **External Computing Options.** The Consultant shall not be required to use external commercial services, including but not limited to services for cloud storage, remote control, and/or file sharing options (collectively “External Computing Options”), that are outside of the Consultant’s standard security protocol.

IN WITNESS WHEREOF, the parties have executed this Agreement effective on the date and year first written above.

THE CONSULTANT

BDO USA, LLP



By:

Mike Conover
Managing Director, Compensation Consulting

THE MOBILITY AUTHORITY

**CENTRAL TEXAS REGIONAL MOBILITY
AUTHORITY**

By: _____

Mike Heiligenstein
Executive Director

Appendix A

SCOPE OF SERVICES

The Scope of Services under the Agreement is described as follows:

1. Evaluating and providing advice concerning employee compensation and benefits, including conducting compensation surveys.
2. Providing general employment information and guidance.
3. Assisting the Mobility Authority with recruitment efforts.
4. Advising the Mobility Authority on employee relations matters.

Notwithstanding anything herein to the contrary, any service not specifically described in this Appendix A is outside the scope of this Agreement. Any additional services will be subject to mutual written agreement of Mobility Authority and Consultant pursuant to an amendment to this Agreement.

Appendix B

COMPENSATION

Payment

The Mobility Authority agrees to pay, and the Consultant agrees to accept, as full and sufficient compensation for the performance of all Services, payments based on approved statements, to be submitted to the Mobility Authority by the Consultant consistent with the requirements of Section 3 of Article 4. Payment under this Agreement shall be made within thirty (30) days of an approved statement; provided that if Mobility Authority fails to contact Consultant within twenty (20) business days of such statement with any reasonable objections, then Mobility Authority acknowledges and agrees that such statement shall be deemed approved. This compensation constitutes full payment for all of the Services, including, but not limited to overhead and administrative expenses (but excluding reimbursements pursuant to Section 2 of Article 4).

The Consultant's hourly rate schedule for the project is as follows:

Service	Hourly or Flat Rate	Cost	Delivery Timeline
Evaluation of employee compensation & benefits	\$350.00/hour*	\$25,000 +/- 15%	4-6 weeks
Conduct compensation survey per position	\$425.00/hour*		Generally within 3-5 business days
Assist in recruitment	\$425.00/hour*		Generally within 3-5 business days
Advise on employee relations issues	\$425.00/hour*		Generally within 3-5 business days
Provide general employment information and guidance	\$425.00/hour*		Generally within 3-5 business days

** Project tasks are assigned to different levels of professional staff appropriate for the task at hand. Hourly rates range from \$250 to \$600 per hour.*

Appendix C

IDENTIFICATION OF KEY PERSONNEL

Mike Conover	Managing Director, Compensation Consulting
Dennis Koletsos	Manager, Executive Compensation & Strategic Service

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

RESOLUTION NO. 19-021

**APPROVING AN AGREEMENT WITH CAPITAL METROPOLITAN AUTHORITY
TO SHARE CLOSED-CIRCUIT TV FEEDS**

WHEREAS, the Mobility Authority regularly pursues methods that aid in facilitating traffic and incident management coordination with its regional transportation partners, including the Capital Metropolitan Transportation Authority (“Cap Metro”); and

WHEREAS, Mobility Authority and Cap Metro staff have developed a proposed agreement to allow Cap Metro access to closed circuit TV (CCTV) feeds of the Mobility Authority’s roadways in an effort to better coordinate during traffic incidents; and

WHEREAS, Cap Metro has approved and executed the proposed agreement for the sharing of CCTV feeds of the Mobility Authority’s roadways in the form attached hereto as Exhibit A; and

WHEREAS, the Executive Director recommends Board approval of the proposed agreement in the form or substantially the same form as attached hereto as Exhibit A.

NOW THEREFORE, BE IT RESOLVED that the proposed agreement to provide Cap Metro with access to the Mobility Authority’s CCTV feeds is hereby approved; and

BE IT FURTHER RESOLVED that the Executive Director is hereby authorized and directed to execute the agreement in the form or substantially the same form as Exhibit A.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 29th day of May 2019.

Submitted and reviewed by:



Geoffrey Petrov, General Counsel

Approved:



Ray A. Wilkerson
Chairman, Board of Directors

Exhibit A

STATE OF TEXAS §
COUNTY OF TRAVIS §

**AGREEMENT for SHARING
Close Circuit Television (CCTV) video feeds**

CONTRACTING PARTIES (referred to collectively, the "Parties", and independently a "Party"):

Capital Metropolitan Transportation Authority	Cap Metro
Central Texas Regional Mobility Authority	CTRMA or "Owner"

B A C K G R O U N D

CTRMA is the owner of the Intelligent Transportation Systems infrastructure that consists of:

- a Field Network (including but not limited to sensors, cameras, signs, and communications links constructed along segments of right-of-way operated by CTRMA); and
- a Business Network that has produced and produces transportation-related information that is used for the purpose of traffic management in which CTRMA owns certain rights, title, and interests related thereto, including copyrights.

CTRMA desires to grant to Cap Metro a reciprocal right to receive and use transportation-related information ("Data") produced by the video feeds from CTRMA's Close Circuit Television (CCTV) system.

This Agreement for Sharing Close Circuit Television (CCTV) video feeds (the "Agreement") incorporates the provisions of Attachment A, Descriptions and Specifications of Rights Granted in Article 2 and Attachment B, Guidelines for Use of Equipment and Infrastructure.

Therefore, the Parties agree as follows:

A G R E E M E N T

ARTICLE 1. CONTRACT PERIOD

This Agreement becomes effective when signed and dated by the last Party whose signing makes the Agreement fully executed. This Agreement shall terminate five (5) years from that date, or when otherwise modified or terminated, as hereinafter provided.

ARTICLE 2. RIGHTS GRANTED

CTRMA hereby grants Capital Metro non-exclusive right, license, and privilege worldwide to use Data produced by video feeds from CTRMA CCTV system. The Parties agree that this Agreement does not transfer or convey any ownership or any rights other than those rights expressly granted by the Agreement.

CTRMA agrees to provide Capital Metro connectivity to CTRMA's C C T V v i d e o f e e d s as described in Attachment A to this Agreement, which is attached hereto and incorporated herein for all purposes.

ARTICLE 3. PROVISION OF INFRASTRUCTURE

CTRMA is responsible for providing and maintaining any hardware, software, and additional infrastructure necessary to obtain video feeds from the CCTV system. Each Party may provide unused infrastructure and facilities to support the additional infrastructure when possible, and when deemed to be in the best interest of that Party. The CTRMA does not guarantee a minimum response time to reestablish the availability of the CCTV connectivity made unavailable due to maintenance or network or system failures. A more detailed description of infrastructure to be provided by CTRMA is shown in Attachment A. Neither Party shall place an object or equipment in the right-of-way or on any other property without first obtaining written permission from the party who owns or controls the right-of-way or property. The Parties will agree, by written communication, on the method by which Cap Metro will access the video feeds. Such method may include remote VPN or dedicated network.

ARTICLE 4. FEE

As the shared use of the CTRMA's CCTV video feeds will result in social, economic, and environmental mitigation, by increasing situational awareness of mobility and assist with reducing congestion on public streets, thoroughfares and highways, each Party agrees to waive any monetary fee associated with the use of the CCTV video feeds for the first year of this Agreement. Beginning one (1) year after the effective date of this Agreement, the Parties may elect to enter in a written amendment to this Agreement that provides for fee for the use of the CCTV video feeds.

ARTICLE 5. COPYRIGHT INFRINGEMENT

Capital Metro shall notify the CTRMA of any infringement or potential infringement by a third party, of which it becomes aware, of the copyright or any other rights owned by CTRMA relating to the use of CCTV video feeds. Each Party shall provide the other Party, if feasible, any information or other assistance requested by the other Party to assist in the other party's prosecution of any breaches or infringements.

ARTICLE 6. NOT APPLICABLE

ARTICLE 7. ASSIGNMENT PROHIBITION

Each Party is prohibited from assigning any of the rights conferred by this Agreement to any third party without the prior written consent of the non-assigning Party. Any assignment of this Agreement shall be subject to the terms and conditions of this Agreement.

ARTICLE 8. TERMINATION

- a) Including the provisions established herein, this Agreement may be terminated by any of the following conditions:
 - i. Mutual agreement and consent of the Parties hereto.
 - ii. By Cap Metro for any reason and not subject to the approval of the CTRMA upon not less than thirty (30) days' notice to the CTRMA.
 - iii. By the CTRMA for any reason and not subject to the approval of Cap Metro upon not less than thirty (30) days' notice to Cap Metro.
 - iv. Immediately for breach of this Agreement as determined by either Party.
- b) Except as provided in Section 8(c) of this Agreement, termination of the Agreement shall extinguish all rights, duties, obligations and liabilities of the Parties of this Agreement. All rights granted shall revert to the owner.
- c) Termination or expiration of this Agreement shall not extinguish any of the CTRMA's or Cap Metro's obligations under this Agreement which by their terms continue after the date of termination or expiration.

ARTICLE 9. RELATIONSHIP BETWEEN 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 agents, servants, or employees.

ARTICLE 10. REMEDIES

A violation or breach of a provision of this Agreement by a Party shall be grounds for termination of the Agreement under Article 8.

ARTICLE 11. AMENDMENTS

Any changes in the contract period, character, or Agreement terms shall be enacted by a written amendment executed by both Parties. Amendments must be executed during the contract period established in Article 1.

ARTICLE 12. VENUE

This Agreement is governed by the laws of the State of Texas.

ARTICLE 13. NOTICES

All notices to either Party by the other Party required under this Agreement shall be written and delivered personally or sent by certified or U.S. Mail, postage prepaid, addressed to such Party at the following respective physical addresses:

Cap Metro: Capital Metropolitan Transportation Authority
ATTN: Director of Security
2910 E. 5th St.
Austin, TX 78702

CTRMA: Central Texas Regional Mobility Authority
ATTN: Director of Operations
3300 N. IH 35, Suite 300
Austin, Texas 78705

and shall be deemed to have been given on the date so delivered or so deposited in the mail, unless otherwise provided within. Either Party hereto may change the above address by sending written notice of such change to the other.

ARTICLE 14. PUBLIC INFORMATION AND CONFIDENTIALITY

Except as may be necessary to comply with requirements of the Texas Public Information Act (the "TPIA"), no Party shall disclose any information received from the other Party under this Agreement without the prior, express written consent of the Party whose information is to be disclosed. Each Party agrees to notify the other Party no later than five (5) business days after a Party receives a request for public information under the TPIA if that request seeks the disclosure of information provided by the other Party under this Agreement. The notice required by the preceding sentence shall include a copy of the request for public information received by the Party providing the notice.

ARTICLE 15. COMPLIANCE WITH LAWS

Each Party shall comply with all applicable federal, state, and local laws, statutes, ordinances, rules and regulations, and with the orders and decrees of any court or administrative bodies or tribunals in any manner affecting the performance of this Agreement. When requested by a Party, the other Party shall furnish satisfactory proof of compliance with this Article 15. Each Party shall provide or obtain all applicable permits, plans, or other documentation required by a federal or state entity to perform an obligation under this Agreement.

ARTICLE 16. PROHIBITION AGAINST VIDEOTAPING OF VIDEO FEED

Capital Metro shall not copy, duplicate, or allow to be copied or duplicated, any video feed provided by the other party under this agreement without prior written consent of the party providing the video feed.

ARTICLE 17. SOVEREIGN IMMUNITY

Nothing in this Agreement shall be construed to confer third party rights upon any entity or individual, including but not limited to either party's employees or students, or to constitute a waiver of any governmental immunity of the Parties.

ARTICLE 18. SIGNATORY WARRANTY

The signatories to this Agreement warrant that each has the authority to enter into this Agreement on behalf of the Party they represent.

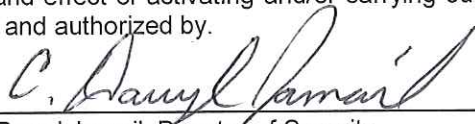
IN TESTIMONY WHEREOF, Cap Metro and the CTRMA have executed duplicate counterparts of this agreement.

CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY

By: _____ Date: _____
Mike Heiligenstein, Executive Director

CAPITAL METROPOLITAN TRANSPORTATION AUTHORITY

Executed for the Executive Director and approved for the Capital Metropolitan Transportation Authority for the purpose and effect of activating and/or carrying out the orders, established policies or work programs heretofore approved and authorized by.

By:  Date: 5-17-2019
Darryl Jamail, Director of Security

**ATTACHMENT A
 DESCRIPTIONS and SPECIFICATIONS of RIGHTS GRANTED**

RIGHTS GRANTED	
By Cap Metro	By CTRMA
	<ol style="list-style-type: none"> 1. Provide access to relevant CTRMA CCTV video feeds, from CTRMA CCTV deployed devices, including traffic camera full-motion images in accordance with the guidelines established in Attachment B. 2. Right to use CTRMA current software as a client at a secure level to be determined by CTRMA. 3. Provide video feeds determined by CTRMA necessary to support Capital Metro operations.

PROVISION OF INFRASTRUCTURE	
By Cap Metro	By CTRMA
	<ol style="list-style-type: none"> 1. Provide access to CTRMA's equipment for Cap Metro to receive CTRMA's CCTV video feeds. 2. As described in Article 3 Provision of Infrastructure, the CTRMA is responsible for providing and maintaining any communication links, hardware, software, and additional infrastructure that is necessary to provide CCTV video feeds to Cap Metro. 3. CTRMA shall retain ownership of and maintain all hardware, software and communications provided by the CTRMA. 4. CTRMA is completely responsible for all cost of CTRMA materials, operation and maintenance.

ATTACHMENT B
Guidelines for Use of Equipment and Infrastructure
(Applicable to Rights Granted in Attachment A)

FIELD EQUIPMENT: Closed Circuit Television (CCTV) Cameras

1. During periods of peak traffic flow, access shall normally be limited. Peak traffic flow is normally considered to exist regularly during two periods of the day, Monday through Friday. In general, one period of peak traffic flow exists in the early morning and the other period of peak traffic flow exists in the late afternoon. Additional periods of peak traffic flow may exist at other times during the weekday and weekend due to special events and public gatherings. Precise times of regular and additional anticipated peak periods of traffic flow shall be the sole determination of the owner and may change from time to time.
2. During an incident, access shall normally be limited to the owner and local emergency service agencies. An incident is defined as any condition in which traffic flow is not normal. As an example, abnormal traffic flow could be caused by debris in the road, such as a mattress or board, or could be caused by non-recurring congestion, such as on-lookers to an automobile accident, public gathering, construction, or roadway maintenance. The duration of the incident shall be considered complete once the Party's and/or emergency service personnel and vehicles have departed from the incident scene and traffic flow has returned to normal.
3. During periods described above in which the Party's normal daily operations have ceased or local emergency service agencies do not operate, access to the Party's equipment shall be limited to the following:
 - CCTV – pan, tilt, and zoom controls shall be limited to obtaining broad general traffic information. Panning, tilting, or zooming to obtain visual detailed information of an incident scene or traffic flow is limited to the owning Party's and emergency service agencies at all times.
4. During all other periods, not described above, access shall be limited to obtaining and providing transportation-related information only.
 - CCTV pan, tilt, and zoom for enforcement and any non-transportation related information purpose is forbidden at any time. A single breach of any of the above guidelines shall be grounds to immediately withdraw the privilege of pan, tilt, and zoom.
5. Access to field equipment may be withdrawn at any time by CTRMA without notice if access is determined to not be in the best interest of the CTRMA.

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

RESOLUTION NO. 19-022

**AUTHORIZING THE EXECUTIVE DIRECTOR TO CONTRACT WITH NORTEX
CONCRETE LIFT AND STABILIZATION, INC. FOR CONCRETE SLAB LIFTING
AND STABILIZATION ON THE MANOR EXPRESSWAY (290 TOLL)**

WHEREAS, the Mobility Authority performs regular inspections of its toll facilities to ensure their safety and quality are appropriately maintained for the traveling public; and

WHEREAS, in the course of these inspections the Mobility Authority has observed a degraded ride quality on the Manor Expressway (290 Toll) between US 183 and SH 130; and

WHEREAS, Nortex Concrete Stabilization, Inc. participates in the Texas Multiple Award Schedule ("TXMAS") Program administered by the State Comptroller's Office as part of Texas SmartBuy Membership Program (formerly known as the "State of Texas CO-OP Purchasing Program"); and

WHEREAS, in accordance of with Article 15 of the Mobility Authority Policy Code, purchases made through a cooperative program such as the Texas SmartBuy Membership Program are deemed to have satisfied Mobility Authority procurement requirements; and

WHEREAS, in order to address the ride quality issues on the Manor Expressway (290 Toll), the Executive Director requests authorization to contract with Nortex Concrete Lift and Stabilization, Inc. through the TXMAS Program for concrete slab lifting and stabilization services in an amount not to exceed \$206, 186.00.

NOW THEREFORE BE IT RESOLVED that the Board of Directors hereby authorizes the Executive Director to contract with Nortex Concrete Stabilization, Inc. through the TXMAS Program in an amount not to exceed \$206,186.00 to provide concrete slab lifting and stabilization services to address the degraded ride quality issues identified on the Manor Expressway (290 Toll).

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 29th day of May 2019.

Submitted and reviewed by:



Geoffrey Petrov, General Counsel

Approved:



Ray A. Wijkerson
Chairman, Board of Directors

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

RESOLUTION NO. 19-023

ACCEPT THE FINANCIAL STATEMENTS FOR APRIL 2019

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;

WHEREAS, the Executive Director, working with the Chief Financial Officer, has reviewed and authorized the disbursements necessary for the month of April 2019, and has caused financial statements to be prepared and attached to this resolution as Exhibit A; and

NOW THEREFORE, BE IT RESOLVED, that the Board of Directors accepts the financial statements for April 2019, attached hereto as Exhibit A.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 29th day of May 2019.

Submitted and reviewed by:



Geoffrey Petrov, General Counsel

Approved:



Ray A. Wilkerson
Chairman, Board of Directors

Exhibit A

Central Texas Regional Mobility Authority
Income Statement
For the Period Ending April 30, 2019

	Budget			
	Amount FY	Actual Year to	Percent of	Actual Prior
	2019	Date	Budget	Year to Date
REVENUE				
Operating Revenue				
Toll Revenue - Tags	73,700,000	67,441,011	91.51%	56,462,946
Video Tolls	17,587,500	15,894,332	90.37%	11,825,131
Fee Revenue	6,762,500	4,946,314		4,427,307
Total Operating Revenue	98,050,000	88,281,656	90.04%	72,715,385
Other Revenue				
Interest Income	950,000	4,250,763	447.45%	1,980,362
Grant Revenue	-	4,600,439	-	15,870,775
Reimbursed Expenditures	-	-	-	11
Misc Revenue	2,000	37,200	1860.00%	1,339
Gain/Loss on Sale of Asset	-	4,348	-	-
Total Other Revenue	952,000	8,892,750	934.11%	17,852,488
TOTAL REVENUE	\$99,002,000	\$97,174,406	98.15%	90,567,872
EXPENSES				
Salaries and Benefits				
Salary Expense-Regular	4,138,603	3,304,895	79.86%	2,942,273
Salary Reserve	80,000	-	-	-
TCDRS	579,405	409,863	70.74%	400,126
FICA	190,792	137,660	72.15%	128,536
FICA MED	65,880	44,171	67.05%	42,372
Health Insurance Expense	391,184	317,180	81.08%	280,815
Life Insurance Expense	11,165	6,290	56.34%	6,690
Auto Allowance Expense	10,200	8,075	79.17%	8,500
Other Benefits	136,476	144,517	105.89%	116,550
Unemployment Taxes	4,212	543	12.90%	4,233
Total Salaries and Benefits	5,607,917	4,373,194	77.98%	3,930,094

Central Texas Regional Mobility Authority
Income Statement
For the Period Ending April 30, 2019

	Budget			
	Amount FY	Actual Year to	Percent of	Actual Prior
	2019	Date	Budget	Year to Date
Administrative				
Administrative and Office Expenses				
Accounting	10,000	6,736	67.36%	6,741
Auditing	125,000	74,571	59.66%	29,500
Human Resources	35,000	8,638	24.68%	25,339
Legal	-	-	-	28,983
IT Services	174,000	100,931	58.01%	102,437
Internet	4,550	4,950	108.80%	3,803
Software Licenses	85,700	43,978	51.32%	24,497
Cell Phones	16,100	13,593	84.43%	12,724
Local Telephone Service	12,000	7,506	62.55%	9,585
Overnight Delivery Services	500	93	18.57%	659
Local Delivery Services	600	87	14.51%	-
Copy Machine	24,000	13,503	56.26%	11,855
Repair & Maintenance-General	15,500	2,450	15.81%	1,147
Community Meeting/ Events	15,000	-	-	-
Meeting Expense	16,000	8,212	51.32%	6,718
Public Notices	100	-	-	25
Toll Tag Expense	3,150	1,956	62.10%	2,087
Parking / Local Ride Share	1,800	1,218	67.65%	546
Mileage Reimbursement	9,900	2,912	29.41%	4,374
Insurance Expense	251,000	157,961	62.93%	145,114
Rent Expense	650,000	462,095	71.09%	437,709
Building Parking	-	1,795	-	-
Legal Services	396,500	234,836	59.23%	148,759
Total Administrative and Office Expenses	1,846,400	1,148,020	62.18%	1,002,601
Office Supplies				
Books & Publications	5,700	3,915	68.69%	880
Office Supplies	16,000	9,357	58.48%	9,768
Misc Office Equipment	-	9,610	-	-
Computer Supplies	152,550	42,314	27.74%	12,210
Copy Supplies	3,000	1,188	39.62%	964
Other Reports-Printing	8,000	3,627	45.33%	-
Office Supplies-Printed	2,600	3,163	121.66%	1,795
Misc Materials & Supplies	750	-	-	-
Postage Expense	800	271	33.81%	367
Total Office Supplies	189,400	73,445	38.78%	25,984

Central Texas Regional Mobility Authority
Income Statement
For the Period Ending April 30, 2019

	Budget			
	Amount FY	Actual Year to	Percent of	Actual Prior
	2019	Date	Budget	Year to Date
Communications and Public Relations				
Graphic Design Services	55,000	47,965	87.21%	19,804
Website Maintenance	100,300	32,131	32.03%	30,342
Research Services	450,000	(56,385)	-12.53%	179,589
Communications and Marketing	800,000	343,155	42.89%	162,896
Advertising Expense	821,500	612,867	74.60%	460,516
Direct Mail	15,800	31,663	200.40%	726
Video Production	258,820	92,898	35.89%	8,904
Photography	12,500	5,039	40.31%	5,426
Radio	75,000	77,896	103.86%	12,153
Other Public Relations	60,000	73,693	122.82%	38,448
Promotional Items	20,000	6,300	31.50%	163
Displays	5,000	-	-	2,124
Annual Report printing	5,000	3,712	74.25%	-
Direct Mail Printing	5,000	4,261	85.21%	-
Other Communication Expenses	70,000	10,144	14.49%	52,882
Total Communications and Public Relations	2,753,920	1,285,340	46.67%	973,972
Employee Development				
Subscriptions	3,050	1,321	43.32%	942
Agency Memberships	53,500	42,310	79.08%	37,137
Continuing Education	15,500	385	2.48%	694
Professional Development	19,000	7,786	40.98%	10,779
Other Licenses	1,700	243	14.28%	248
Seminars and Conferences	41,000	21,605	52.69%	14,282
Travel	70,000	68,019	97.17%	29,482
Total Employee Development	203,750	141,669	69.53%	93,564
Financing and Banking Fees				
Trustee Fees	45,000	35,750	79.44%	31,200
Bank Fee Expense	6,500	2,392	36.80%	4,090
Continuing Disclosure	15,000	3,500	23.33%	9,812
Arbitrage Rebate Calculation	13,000	8,395	64.58%	8,355
Rating Agency Expense	30,000	16,000	53.33%	15,500
Total Financing and Banking Fees	109,500	66,037	60.31%	68,956
Total Administrative	5,102,970	2,714,511	53.19%	2,165,078

Central Texas Regional Mobility Authority
Income Statement
For the Period Ending April 30, 2019

	Budget			
	Amount FY	Actual Year to	Percent of	Actual Prior
	2019	Date	Budget	Year to Date
Operations and Maintenance				
Operations and Maintenance Consulting				
GEC-Trust Indenture Support	169,000	151,293	89.52%	117,538
GEC-Financial Planning Support	51,000	67,233	131.83%	-
GEC-Toll Ops Support	249,786	123,633	49.50%	-
GEC-Roadway Ops Support	1,129,978	484,967	42.92%	452,476
GEC-Technology Support	857,428	492,300	57.42%	2,106
GEC-Public Information Support	120,000	9,876	8.23%	45,188
GEC-General Support	1,443,568	802,215	55.57%	823,538
General System Consultant	500,000	341,831	68.37%	200,458
Traffic Modeling	590,000	68,866	11.67%	104,644
Traffic and Revenue Consultant	150,000	111,909	74.61%	180,555
Total Operations and Maintenance Consulting	5,260,760	2,654,124	50.45%	1,926,504
Roadway Operations and Maintenance				
Roadway Maintenance	4,507,900	2,289,503	50.79%	2,324,180
Signal & Illumination Maint	-	-	-	12,554
Maintenance Supplies-Roadway	117,800	18,976	16.11%	91,020
Tools & Equipment Expense	1,000	442	44.16%	301
Gasoline	18,700	12,130	64.87%	11,990
Repair & Maintenance-Vehicles	6,500	4,008	61.67%	3,668
Roadway Operations	-	-	-	2,544
Electricity - Roadways	200,000	124,623	62.31%	121,107
Total Roadway Operations and Maintenance	4,851,900	2,449,682	50.49%	2,567,364
Toll Processing and Collection Expense				
Image Processing	3,200,000	1,165,220	36.41%	1,436,189
Tag Collection Fees	6,633,000	4,355,015	65.66%	4,938,940
Court Enforcement Costs	49,080	7,875	16.05%	25,575
DMV Lookup Fees	500	772	154.37%	354
Total Processing and Collection Expense	9,882,580	5,528,882	55.95%	6,401,057

Central Texas Regional Mobility Authority
Income Statement
For the Period Ending April 30, 2019

	Budget			
	Amount FY	Actual Year to	Percent of	Actual Prior
	2019	Date	Budget	Year to Date
Toll Operations Expense				
Generator Fuel	2,000	1,228	61.41%	382
Fire and Burglar Alarm	500	370	74.02%	370
Refuse	1,500	1,107	73.77%	1,164
Telecommunications	120,000	45,271	37.73%	50,498
Water - Irrigation	10,000	3,024	30.24%	3,847
Electricity	2,500	1,058	42.31%	1,094
ETC spare parts expense	50,000	5,573	11.15%	-
Repair & Maintenance Toll Equip	5,000	-	-	-
Law Enforcement	290,000	182,675	62.99%	239,098
ETC Maintenance Contract	1,988,386	1,493,468	75.11%	1,314,296
ETC Toll Management Center System Operation	360,000	-	-	1,364
ETC Development	1,636,000	560,184	34.24%	-
ETC Testing	100,000	52,536	52.54%	-
Total Toll Operations Expense	4,565,886	2,346,495	51.39%	1,612,113
Total Operations and Maintenance	24,561,126	12,979,183	52.84%	12,507,039
Other Expenses				
Special Projects and Contingencies				
HERO	148,000	110,872	74.91%	574,878
Special Projects	500,000	53,203	10.64%	-
71 Express Net Revenue Payment	3,635,405	3,362,688	92.50%	3,048,844
Technology Task Force	650,000	156,240	24.04%	-
Other Contractual Svcs	150,000	167,548	111.70%	56,528
Contingency	250,000	-	-	828
Total Special Projects and Contingencies	5,333,405	3,850,551	72.20%	3,681,077

Central Texas Regional Mobility Authority
Income Statement
For the Period Ending April 30, 2019

	Budget			
	Amount FY	Actual Year to	Percent of	Actual Prior
	2019	Date	Budget	Year to Date
Non Cash Expenses				
Amortization Expense	487,699	367,844	75.42%	422,511
Amort Expense - Refund Savings	1,027,860	869,236	84.57%	863,660
Dep Exp- Furniture & Fixtures	3,014	2,178	72.26%	2,178
Dep Expense - Equipment	15,999	13,333	83.33%	14,090
Dep Expense - Autos & Trucks	37,437	22,198	59.29%	16,386
Dep Expense-Buildng & Toll Fac	176,748	136,979	77.50%	147,382
Dep Expense-Highways & Bridges	22,541,478	18,681,575	82.88%	17,527,385
Dep Expense-Toll Equipment	2,485,026	2,215,300	89.15%	2,057,810
Dep Expense - Signs	326,893	271,578	83.08%	271,578
Dep Expense-Land Improvemts	884,934	737,445	83.33%	737,445
Depreciation Expense-Computers	20,317	8,480	41.74%	14,647
Total Non Cash Expenses	28,007,405	23,326,144	83.29%	22,075,072
Total Other Expenses	33,340,810	27,176,694	81.51%	25,756,149
Non Operating Expenses				
Bond issuance expense	1,413,508	2,443,880	172.89%	188,961
Loan Fee Expense	-	47,619	-	-
Interest Expense	40,371,558	28,406,662	70.36%	26,447,982
CAMPO RIF Payment	2,000,000	2,000,000	100.00%	-
Community Initiatives	275,000	55,942	20.34%	50,000
Total Non Operating Expenses	44,060,066	32,954,103	74.79%	26,686,943
TOTAL EXPENSES	\$112,672,889	\$80,197,685	71.18%	\$71,045,302
Net Income	(\$13,670,889)	\$16,976,722		19,522,570

Central Texas Regional Mobility Authority
Balance Sheet
as of April 30, 2019

	as of 04/30/2019	as of 04/30/2018
ASSETS		
Current Assets		
Cash		
Regions Operating Account	\$ 1,702,878	\$ 417,018
Cash in TexStar	233,185	410,933
Regions Payroll Account	292,040	34,802
Restricted Cash		
Goldman Sachs FSGF 465	264,753,522	173,209,337
Restricted Cash - TexSTAR	141,778,380	151,651,654
Overpayments account	351,713	194,274
Total Cash and Cash Equivalents	<u>409,111,718</u>	<u>325,918,016</u>
Accounts Receivable		
Accounts Receivable	1,141,083	-
Due From Other Agencies	36,690	3,736
Due From TTA	1,243,798	905,949
Due From NTTA	864,409	607,024
Due From HCTRA	1,128,548	1,889,335
Due From TxDOT	1,007,587	491,740
Interest Receivable	482,617	232,964
Total Receivables	<u>5,904,731</u>	<u>4,130,747</u>
Short Term Investments		
Treasuries	9,968,179	-
Agencies	159,203,906	79,981,897
Total Short Term Investments	<u>169,172,085</u>	<u>79,981,897</u>
Total Current Assets	<u>584,188,534</u>	<u>410,030,660</u>
Total Construction in Progress	732,851,677	740,292,079
Fixed Assets (Net of Depreciation and Amortization)		
Computers	21,653	33,519
Computer Software	659,095	962,886
Furniture and Fixtures	10,455	13,068
Equipment	6,039	22,038
Autos and Trucks	75,573	63,957
Buildings and Toll Facilities	4,976,720	5,143,157
Highways and Bridges	879,104,791	746,992,273
Toll Equipment	16,487,188	13,932,185
Signs	10,385,200	10,658,885
Land Improvements	9,001,560	9,886,494
Right of way	88,149,606	88,149,606
Leasehold Improvements	125,216	139,689
Total Fixed Assets	<u>1,009,003,095</u>	<u>875,997,757</u>
Other Assets		
Intangible Assets-Net	102,597,930	103,653,945
2005 Bond Insurance Costs	4,110,034	4,323,542
Prepaid Insurance	230,695	76,839
Prepaid Expenses	275	-
Deferred Outflows (pension related)	290,396	711,563
Pension Asset	826,397	355,139
Total Other Assets	<u>108,055,726</u>	<u>109,121,028</u>
Total Assets	<u><u>\$ 2,434,099,032</u></u>	<u><u>\$ 2,135,441,524</u></u>

Central Texas Regional Mobility Authority
Balance Sheet
as of April 30, 2019

	as of 04/30/2019	as of 04/30/2018
LIABILITIES		
Current Liabilities		
Accounts Payable	\$ 439,844	\$ 429,265
Construction Payable	1,055,459	-
Overpayments	354,757	197,059
Interest Payable	18,458,634	17,286,642
Deferred Compensation Payable	142	142
TCDRS Payable	63,370	57,137
Due to other Agencies	4,080,859	2,013,244
Due to TTA	1,154,540	1,085,742
Due to NTTA	118,505	11,137
Due to HCTRA	82,436	145,586
Due to Other Entities	843,138	3,274,251
71E TxDOT Obligation - ST	1,072,587	960,164
Total Current Liabilities	27,724,272	25,460,368
Long Term Liabilities		
Compensated Absences	541,425	182,441
Deferred Inflows (pension related)	278,184	286,449
Long Term Payables	819,609	468,891
Bonds Payable		
Senior Lien Revenue Bonds:		
Senior Lien Revenue Bonds 2010	76,426,215	72,764,960
Senior Lien Revenue Bonds 2011	16,238,444	15,266,715
Senior Refunding Bonds 2013	136,405,000	139,885,000
Senior Lien Revenue Bonds 2015	298,790,000	298,790,000
Senior Lien Put Bnd 2015	68,785,000	68,785,000
Senior Lien Refunding Revenue Bonds 2016	358,030,000	358,030,000
Senior Lien Revenue Bonds 2018	44,345,000	-
Sn Lien Rev Bnd Prem/Disc 2013	6,602,635	8,409,655
Sn Lien Revenue Bnd Prem 2015	19,780,261	20,976,766
Sn Lien Put Bnd Prem 2015	2,173,404	4,036,708
Senior lien premium 2016 revenue bonds	48,097,427	52,417,676
Sn Lien Revenue Bond Premium 2018	3,993,939	-
Total Senior Lien Revenue Bonds	1,079,667,325	1,039,362,480
Sub Lien Revenue Bonds:		
Sub Lien Refunding Bonds 2013	98,295,000	100,530,000
Sub Lien Refunding Bonds 2016	73,905,000	74,305,000
Subordinated Lien BANs 2018	46,020,000	-
Sub Refunding 2013 Prem/Disc	1,464,942	1,917,726
Sub Refunding 2016 Prem/Disc	8,440,074	9,299,157
Sub Lien BANs 2018 Premium	1,411,022	-
Total Sub Lien Revenue Bonds	229,536,038	186,051,883
Other Obligations		
TIFIA note 2015	228,670,480	51,773,309
SIB loan 2015	32,818,916	31,544,527
State Highway Fund Loan 2015	32,818,946	31,544,557
State 45SW Loan	55,000,000	22,080,000
71E TxDOT Obligation - LT	62,332,058	65,000,000
Regions 2017 MoPAC Note	19,060,000	17,000,000
Total Other Obligations	430,700,399	218,942,392
Total Long Term Liabilities	1,740,723,372	1,444,825,646
Total Liabilities	1,768,447,643	1,470,286,014

Central Texas Regional Mobility Authority
Balance Sheet
as of April 30, 2019

	as of 04/30/2019	as of 04/30/2018
	NET ASSETS	
Contributed Capital	121,202,391	136,725,550
Net Assets Beginning	527,520,601	508,907,391
Current Year Operations	16,928,396	19,522,570
Total Net Assets	<u><u>665,651,389</u></u>	<u><u>665,155,511</u></u>
Total Liabilities and Net Assets	<u><u>\$ 2,434,099,032</u></u>	<u><u>\$ 2,135,441,524</u></u>

Central Texas Regional Mobility Authority
Statement of Cash Flow
as of April 30, 2019

Cash flows from operating activities:

Receipts from toll revenues	\$	87,540,293
Receipts from other fees		37,200
Receipts from interest income		(290,133)
Payments to vendors		(23,838,853)
Payments to employees		(4,147,349)
Net cash flows provided by (used in) operating activities		59,301,158

Cash flows from capital and related financing activities:

Proceeds from notes payable		307,508,090
Refunding of bonds		(2,242,769)
Receipts from Department of Transportation		4,438,178
Payments on principal		(9,868,520)
Interest payments		(51,271,862)
Acquisition of capital assets		(282,988)
Acquisitions of construction in progress		(110,936,517)
Net cash flows provided by (used in) capital and related financing activities		137,343,611

Cash flows from investing activities:

Interest income		1,004,294
Purchase of investments		(370,031,118)
Proceeds from sale or maturity of investments		270,311,462
Net cash flows provided by (used in) investing activities		(98,715,362)
Net increase (decrease) in cash and cash equivalents		97,929,407
Cash and cash equivalents at beginning of period		169,170,746
Cash and cash equivalents at end of period	\$	267,100,153

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

Operating income	\$	40,218,865
Adjustments to reconcile change in net assets to net cash provided by operating activities:		
Depreciation and amortization		22,456,908
Changes in assets and liabilities:		
(Increase) decrease in accounts receivable		(1,180,975)
(Increase) decrease in prepaid expenses and other assets		(184,451)
(Decrease) increase in accounts payable		(2,830,979)
Increase (decrease) in accrued expenses		821,791
Total adjustments		19,082,293
Net cash flows provided by (used in) operating activities	\$	59,301,158

Reconciliation of cash and cash equivalents:

Unrestricted cash and cash equivalents	\$	2,346,632
Restricted cash and cash equivalents		264,753,522
Total	\$	267,100,153

INVESTMENTS by FUND

		Balance April 30, 2019		
Renewal & Replacement Fund				
TexSTAR	395,847.95		TexSTAR	142,011,564.28
Goldman Sachs	14,824.53		Goldman Sachs	259,622,610.49
Agencies/ Treasuries		410,672.48	Agencies & Treasury Notes	<u>169,172,084.86</u>
Grant Fund				\$ 570,806,259.63
TexSTAR	4,372,145.99			
Goldman Sachs	540,150.62			
Agencies/ Treasuries	4,976,260.80	9,888,557.41		
Senior Debt Service Reserve Fund				
TexSTAR	5,879,055.47			
Goldman Sachs	36,719,714.49			
Agencies/ Treasuries	39,872,745.21	82,471,515.17		
2010 Senior Lien DSF				
Goldman Sachs	2,562,542.67			
TexSTAR		2,562,542.67		
2011 Debt Service Acct				
Goldman Sachs	774,164.68	774,164.68		
2013 Sr Debt Service Acct				
Goldman Sachs	3,365,894.30	3,365,894.30		
2013 Sub Debt Service Account				
Goldman Sachs	2,442,970.04	2,442,970.04		
2015 Sr Capitalized Interest				
Goldman Sachs	1.27	32,280,956.36		
TexSTAR	32,280,955.09			
2015B Debt Service Account				
Goldman Sachs	1,152,998.40	1,152,998.40		
2016 Sr Lien Rev Refunding Debt Service Account				
Goldman Sachs	7,027,865.25	7,027,865.25		
2016 Sub Lien Rev Refunding Debt Service Account				
Goldman Sachs	1,260,299.27	1,260,299.27		
2016 Sub Lien Rev Refunding DSR				
Goldman Sachs	1,880,344.90			
Agencies/ Treasuries	4,976,260.80	6,856,605.70		
Operating Fund				
TexSTAR	233,184.71			
TexSTAR-Trustee	2,259,840.54			
Goldman Sachs	86,608.74	2,579,633.99		
Revenue Fund				
Goldman Sachs	3,409,922.53	3,409,922.53		
General Fund				
TexSTAR	25,573,785.98			
Goldman Sachs	22,645,791.53	88,049,544.18		
Agencies/ Treasuries	39,829,966.67			
2013 Sub Debt Service Reserve Fund				
TexSTAR	5,185,859.00			
Goldman Sachs	3,579,567.26	8,765,426.26		
71E Revenue Fund				
Goldman Sachs	6,960,610.01	6,960,610.01		
MoPac Revenue Fund				
Goldman Sachs	38,762.43	38,762.43		
MoPac Construction Fund				
Goldman Sachs	6,864,336.32	6,864,336.32		
MoPac General Fund				
Goldman Sachs	5,278,033.73	5,278,033.73		
MoPac Operating Fund				
Goldman Sachs	925,026.87	925,026.87		
MoPac Loan Repayment Fund				
Goldman Sachs	62,072.83	62,072.83		
2015B Project Account				
Goldman Sachs	10,377,706.04			
Agencies/ Treasuries	29,903,105.95			
TexSTAR	1,187,524.37	41,468,336.36		
2015 TIFIA Project Account				
Goldman Sachs	54,727,532.64			
TexSTAR	48,924,371.91			
Agencies/ Treasuries	49,613,745.43	153,265,649.98		
2011 Sr Financial Assistance Fund				
Goldman Sachs	4.24	15,718,997.51		
TexSTAR	15,718,993.27			
2018 Sr Lien Project Cap I				
Goldman Sachs	7,825,016.91	7,825,016.91		
2018 Sr Lien Project Account				
Goldman Sachs	39,349,171.34	39,349,171.34		
2018 Sub Lien Project Account				
Goldman Sachs	24,299,078.03	24,299,078.03		
2018 Sub Debt Service Account				
Goldman Sachs	615,029.82	615,029.82		
45SW Project Fund				
Goldman Sachs	14,836,568.80	14,836,568.80		
		<u>\$ 570,806,259.63</u>		

CTRMA INVESTMENT REPORT

Month Ending 4/30/19						
Balance 4/1/2019	Additions	Discount Amortization	Accrued Interest	Withdrawals	Balance 4/30/2019	Rate April
Amount in Trustee TexStar						
2011 Sr Lien Financial Assist Fund			31,258.61		15,718,993.27	2.4243%
2013 Sub Lien Debt Service Reserve			10,312.54		5,185,859.00	2.4243%
General Fund			50,855.72		25,573,785.98	2.4243%
Trustee Operating Fund	3,000,000.00		5,952.21	4,000,000.00	2,259,840.54	2.4243%
Renewal and Replacement			787.19		395,847.95	2.4243%
Grant Fund			8,694.37		4,372,145.99	2.4243%
Senior Lien Debt Service Reserve Fund			11,691.01		5,879,055.47	2.4243%
2015A Sr Ln Project Cap Interest			64,193.49		32,280,955.09	2.4243%
2015B Sr Ln Project			2,361.49		1,187,524.37	2.4243%
2015C TIFIA Project			97,290.41		48,924,371.91	2.4243%
142,494,982.53	3,000,000.00		283,397.04	4,000,000.00	141,778,379.57	
Amount in TexStar Operating Fund						
232,721.02	4,000,000.00		463.69	4,000,000.00	233,184.71	2.4243%
Goldman Sachs						
Operating Fund	3,003,814.67		163.51	3,001,058.45	86,608.74	2.3495%
45SW Project Fund			33,564.29	2,009,033.84	14,836,568.80	2.3495%
2015B Project Account	262,500.00		21,455.05		10,377,706.04	2.3495%
2015C TIFIA Project Account	30,193,750.00		75,830.63	7,231,696.38	54,727,532.64	2.3495%
2011 Sr Financial Assistance Fund			0.01		4.24	2.3495%
2010 Senior DSF	635,693.41		3,244.91		2,562,542.67	2.3495%
2011 Senior Lien Debt Service Acct			1,529.48		774,164.68	2.3495%
2013 Senior Lien Debt Service Acct	828,625.46		4,280.36		3,365,894.30	2.3495%
2013 Sub Debt Service Reserve Fund			7,072.00		3,579,567.26	2.3495%
2013 Subordinate Debt Service Acct	597,628.76		3,117.52		2,442,970.04	2.3495%
2015 Sr Capitalized Interest			0.00		1.27	2.3495%
2015B Debt Service Acct	284,658.21		1,463.94		1,152,998.40	2.3495%
2016 Sr Lien Rev Refunding Debt Service Account	1,170,602.87		10,537.26		7,027,865.25	2.3495%
2016 Sub Lien Rev Refunding Debt Service Account	310,770.60		1,601.26		1,260,299.27	2.3495%
2016 Sub Lien Rev Refunding DSR			3,714.92		1,880,344.90	2.3495%
2018 Sr Lien Project Cap I			15,456.93		7,825,016.91	2.3495%
2018 Sr Lien Project Account			77,727.31		39,349,171.34	2.3495%
2018 Sub Lien Project Account			57,638.55	4,875,762.30	24,299,078.03	2.3495%
2018 Sub Debt Service Account	153,367.34		776.45		615,029.82	2.3495%
Grant Fund			1,067.15		540,150.62	2.3495%
Renewal and Replacement			29.29		14,824.53	2.3495%
Revenue Fund	10,025,645.60		7,207.10	12,602,508.97	3,409,922.53	2.3495%
General Fund	2,821,157.82		56,922.00	451,036.88	22,645,791.53	2.3495%
Senior Lien Debt Service Reserve Fund	20,250,000.00		35,072.60		36,719,714.49	2.3495%
71E Revenue Fund	1,295,586.62		12,304.88	84,117.82	6,960,610.01	2.3495%
MoPac Revenue Fund	2,455,440.38		825.38	2,508,692.01	38,762.43	2.3495%
MoPac General Fund	2,308,692.01		6,236.53	339,512.99	5,278,033.73	2.3495%
MoPac Operating Fund	200,000.00		1,944.02	347,054.86	925,026.87	2.3495%
MoPac Loan Repayment Fund	63,241.40		25.82	57,912.36	62,072.83	2.3495%
MoPac Managed Lane Construction Fund			16,614.66	814,177.28	6,864,336.32	2.3495%
216,626,575.67	76,861,175.15	0.00	457,423.81	34,322,564.14	259,622,610.49	
Amount in Fed Agencies and Treasuries						
Amortized Principal		157,432.24		49,931,180.76	169,172,084.86	
	0.00	157,432.24	0.00	49,931,180.76	169,172,084.86	
Certificates of Deposit						
Total in Pools	7,000,000.00		283,860.73	8,000,000.00	142,011,564.28	
Total in GS FSGF	76,861,175.15		457,423.81	34,322,564.14	259,622,610.49	
Total in Fed Agencies and Treasuries	0.00	157,432.24		49,931,180.76	169,172,084.86	
Total Invested	83,861,175.15	157,432.24	741,284.54	92,253,744.90	570,806,259.63	

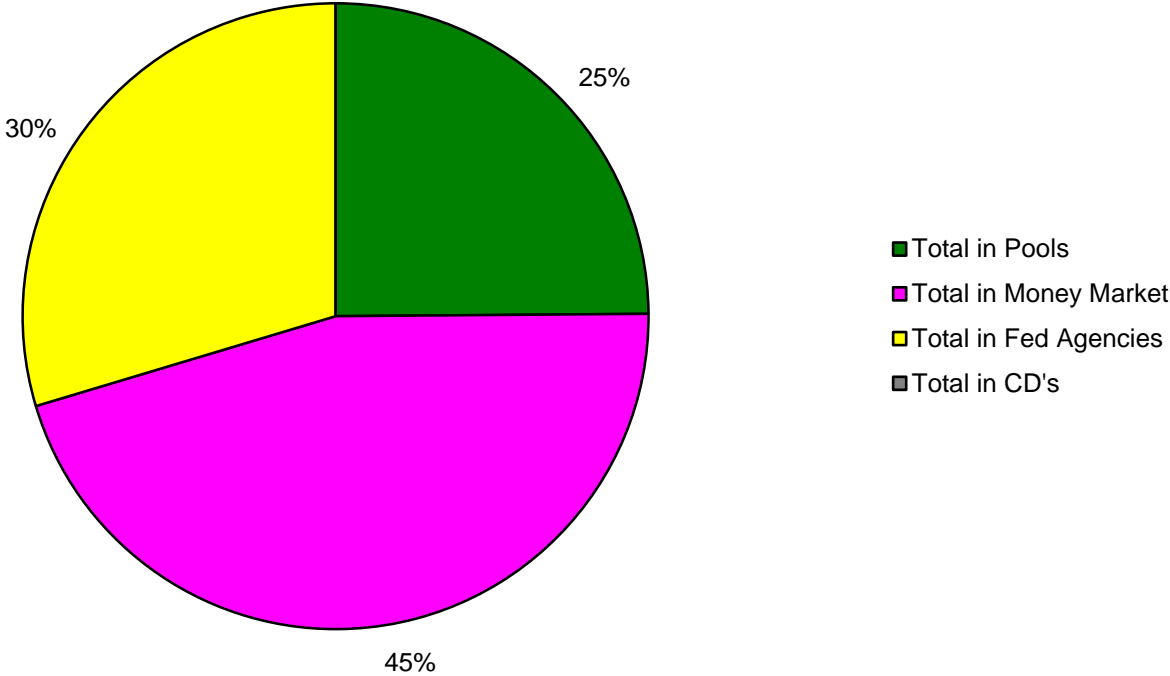
All Investments in the portfolio are in compliance with the CTRMA's Investment policy and the relevant provisions of the Public Funds Investment Act Chapter 2256.023

William Chapman, CFO

Mary Temple, Controller

4/30/2019

Allocation of Funds



Amount of Investments As of April 30, 2019

Agency	CUSIP #	COST	Book Value	Market Value	Yield to Maturity	Purchased	Matures	FUND
Federal Home loan Bank	3135G0P49sub	4,921,265.00	4,976,260.80	4,975,661.85	2.4520%	7/20/2018	8/28/2019	2016 Sub DSRF
US Treasury Note	912828F39	9,955,859.38	9,967,701.99	9,969,531.30	2.5137%	3/5/2019	9/30/2019	Senior DSRF
Federal Home loan Bank	3135G0P49	19,685,060.00	19,905,043.22	19,902,647.40	2.4520%	7/20/2018	8/28/2019	Senior DSRF
US Treasury Note	912828C65	MATURED	MATURED	MATURED	1.9260%	1/25/2018	4/1/2019	Senior DSRF
Farmer Mac	3132X0W64	10,000,000.00	10,000,000.00	9,999,493.90	2.3297%	5/8/2018	5/15/2019	Senior DSRF
Fannie Mae	3135G0P49gnt	4,921,265.00	4,976,260.80	4,975,661.85	2.4520%	7/20/2018	8/28/2019	Grant Fund
Farmer Mac	31422BDL1	20,000,000.00	20,000,000.00	20,061,358.00	2.5995%	3/11/2019	9/25/2020	General Fund
Fannie Mae	3135G0T29	19,795,960.00	19,829,966.67	19,858,145.80	2.5600%	3/5/2019	2/28/2020	General Fund
US Treasury Note	912828F39A	29,867,578.13	29,903,105.95	29,908,593.90	2.5317%	3/5/2019	9/30/2019	2015B Sr Project
US Treasury Note	912828UF5	49,525,228.76	49,613,745.43	49,562,500.00	2.3352%	3/5/2019	12/31/2019	2015C TIFIA Project
US Treasury Note	912828D23	MATURED	MATURED	MATURED	2.3250%	7/20/2018	4/30/2019	2015C TIFIA Project
Federal Home loan Bank	3137EADZ9	MATURED	MATURED	MATURED	2.3352%	7/20/2018	4/15/2019	2015C TIFIA Project
		<u>168,672,216.27</u>	<u>169,172,084.86</u>	<u>169,213,594.00</u>				

Agency	CUSIP #	COST	Cummulative Amortization	4/30/2019 Book Value	Maturity Value	Interest Income April 30, 2019		
						Accrued Interest	Amortization	Interest Earned
Federal Home loan Bank	3135G0P49sub	4,921,265.00	54,995.80	4,976,260.80	25,000,000.00	4,166.67	5,934.80	10,101.47
US Treasury Note	912828F39	9,955,859.38	11,842.61	9,967,701.99	10,000,000.00	14,583.34	6,459.60	21,042.94
Federal Home loan Bank	3135G0P49	19,685,060.00	219,983.22	19,905,043.22	20,000,000.00	16,666.67	23,739.20	40,405.87
US Treasury Note	912828C65	MATURED	MATURED	MATURED	20,000,000.00	27,083.33	5,022.32	32,105.65
Farmer Mac	3132X0W64	10,000,000.00	-	10,000,000.00	10,000,000.00	19,416.67	-	19,416.67
Fannie Mae	3135G0P49gnt	4,921,265.00	54,995.80	4,976,260.80	5,000,000.00	4,166.67	5,934.80	10,101.47
Farmer Mac	31422BDL1	20,000,000.00	-	20,000,000.00	20,000,000.00	43,333.33	-	43,333.33
Fannie Mae	3135G0T29	19,795,960.00	34,006.67	19,829,966.67	20,000,000.00	25,000.00	17,003.33	42,003.33
US Treasury Note	912828F39A	29,867,578.13	35,527.82	29,903,105.95	30,000,000.00	43,750.00	19,378.81	63,128.81
US Treasury Note	912828UF5	49,525,228.76	88,516.67	49,613,745.43	50,000,000.00	46,875.00	48,281.82	95,156.82
US Treasury Note	912828D23	MATURED	MATURED	MATURED	10,000,000.00	13,541.67	5,775.67	19,317.34
Federal Home loan Bank	3137EADZ9	MATURED	MATURED	MATURED	20,000,000.00	18,750.00	19,901.89	38,651.89
		<u>168,672,216.27</u>	<u>499,868.59</u>	<u>169,172,084.86</u>	<u>240,000,000.00</u>	<u>277,333.35</u>	<u>157,432.24</u>	<u>434,765.59</u>

ESCROW FUNDS

Travis County Escrow Fund - Elroy Road

	Balance		Accrued		Balance
	4/1/2019	Additions	Interest	Withdrawals	4/30/2019
Goldman Sachs	1,254,060.68		2,637.54	194,548.01	1,062,150.21

Campo Regional Infrastructure Fund

	Balance		Accrued		Balance
	4/1/2019	Additions	Interest	Withdrawals	4/30/2019
Goldman Sachs	4,070,704.14		8,056.87	-	4,078,761.01



183 South Design-Build Project
Contingency Status
 April 30, 2019



Original Construction Contract Value: \$581,545,700

Total Project Contingency	\$47,860,000
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Obligations	CO#1 City of Austin ILA Adjustment	(\$2,779,934)
	CO#2 Addition of Coping to Soil Nail Walls	\$742,385
	CO#4 Greenroads Implementation	\$362,280
	CO#6 51st Street Parking Trailhead	\$477,583
	CO#9 Patton Interchange Revisions	\$3,488,230
	Others Less than \$300,000 (6)	\$948,630
	CO#10 City of Austin Utility (\$1,010,000 - no cost to RMA)	\$0
	Executed Change Orders	\$3,239,174
	Change Orders Under Negotiation	\$4,570,000
	Potential Contractual Obligations	\$10,510,000

(-) Total Obligations	\$18,319,174
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Remaining Project Contingency	\$29,540,826
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**SH 45SW Construction
Contingency Status**
April 30, 2019



Original Construction Contract Value: \$75,103,623

Total Project Contingency		\$ 7,520,000
Obligations	CO #04 Installation of PEC and TWC Conduits	\$ 458,439
	CO #05 Installation of SSTR Drilled Shafts and Moment Slab	\$ 538,945
	Total of Others Less than \$300,000 (14)	\$ 326,266
	Executed Change Orders	\$ 1,323,650
	Change Orders in Negotiations	\$ 1,481,513
	Potential Contractual Obligations	\$ 1,050,460
	(-) Total Obligations	\$ 3,855,623
	Remaining Project Contingency	\$ 3,664,377



MOPAC Construction
Financial Status
 April 30, 2019



Original Construction Contract Value: \$ 136,632,100

Change Orders	CO#01B	5th & Cesar Chavez SB Reconfig (Construction)	\$593,031	Approved = \$12.9M
	CO#05B	FM 2222 Bridge NB Ret Wall Abutment Repair (Construction)	\$850,000	
	CO#07	FM 2222 Exit Storage Lane	\$426,000	
	CO#08C	Refuge Area: Added Shoulder Adjustment Sound Wall #1	\$2,508,548	
	CO#09	Westover SB Frontage Repairs	\$450,000	
	CO#12	Barrier Rail Opaque Seal	\$542,419	
	CO#17	Bike and Ped Improvements at Far West Blvd Bridge/FM 2222	\$971,889	
	CO#20	Northern Terminus Sound Wall #3	(\$1,210,540)	
	CO#32	Void of CO#05B, #09, #10, UPRR	(\$1,501,437)	
	CO#33	Shared Use Path at US 183	(\$1,000,000)	
	CO#34	Undercrossing Fire Protection	\$1,412,574	
	CO#35	TxDOT Duct Bank Interference	\$1,357,196	
	CO#36	Non-Compliant Existing Illumination	\$2,226,189	
	CO#37	NB Pavement Cross Slope and Profile Corrections	\$3,635,477	
	CO#38	SB Pavement Cross Slope and Profile Corrections	\$3,100,298	
CO#39	Unidentified Utilities	\$1,215,854		
CO#42	NB04, NB08, and Westminster Wall Revisions	(\$402,964)		
	Total of Others Less than \$300,000 (21)	\$1,572,258		
Executed Change Orders			\$ 16,746,792	
Revised Construction Contract Value			\$ 153,378,892	
Change Orders under Negotiation			\$ -	
Potential Construction Contract Value			\$ 153,378,892	
Incentive/Milestone			\$ 21,500,000	
Potential Construction Contract Value with Incentive/Milestone			\$ 176,931,304	
Amount paid CH2M for Incentives/Milestones			\$ (16,825,210)	
Amount paid CH2M through April 2019 draw (as of 4/30/2019)			\$ (127,352,152)	
Assessed Liquidated Damages			\$ (20,000,000)	
Potential Amount Payable to CH2M			\$ 11,579,153	



290E Ph. III
Contingency Status
 April 30, 2019



Original Construction Contract Value: \$71,236,424

Total Project Contingency	\$25,926,282
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Obligations	Others Less than \$300,000 (0)	\$0
	Executed Change Orders	\$0
	Change Orders Under Negotiation	\$140,000
	Potential Contractual Obligations	\$360,000

(-) Total Obligations	\$500,000
------------------------------	------------------

Remaining Project Contingency	\$25,426,282
--------------------------------------	---------------------



MOPAC Misc. Construction
Financial Status
 April 30, 2019



Original Construction Contract Value: \$ **4,583,280**

Change Orders		
	Total of Others Less than \$300,000 (6 Taken out of Contingency)	\$ -
Executed Change Orders		\$ -
Revised Construction Contract Value		\$ 4,583,280
Change Orders under Negotiation		\$ 578,199
Potential Construction Contract Value		\$ 5,161,479
Amount paid McCarthy through April 2019 draw (as of 4/30/2019)		\$ (3,646,463)
Potential Amount Payable to McCarthy		\$ 1,515,015



Monthly Newsletter - April 2019

Performance

As of April 30, 2019

Current Invested Balance	\$8,464,290,753.69
Weighted Average Maturity (1)	20 Days
Weighted Average Maturity (2)	98 Days
Net Asset Value	1.000004
Total Number of Participants	895
Management Fee on Invested Balance	0.06%*
Interest Distributed	\$17,104,876.79
Management Fee Collected	\$413,104.85
% of Portfolio Invested Beyond 1 Year	9.37%
Standard & Poor's Current Rating	AAAm

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

April Averages

Average Invested Balance	\$8,377,029,822.99
Average Monthly Yield, on a simple basis	2.4243%
Average Weighted Average Maturity (1)*	26 Days
Average Weighted Average Maturity (2)*	101 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.

New Participants

We would like to welcome the following entities who joined the TexSTAR program in April:

★ Athens Economic Development Corp

★ Guadalupe Regional Medical Center

Holiday Reminders

In observance of **Memorial Day, TexSTAR will be closed on Monday, May 27, 2019.** All ACH transactions initiated on Friday, May 24th will settle on Tuesday, May 28th. Notification of any early transaction deadlines on the business day preceding this holiday will be sent by email to the primary contact on file for all TexSTAR participants. Please plan accordingly for your liquidity needs.

Economic Commentary

The risk asset rally continued into April as global equities continued soar, reaching new highs, and credit spreads tightened. Improvements in economic data combined with soft inflation prints bolstered the conviction that the cycle isn't quite over and alleviated near term recession fears. The Federal Reserve kept rates unchanged at 2.25%-2.50%, a move that was widening anticipated given rhetoric shift this year. Chair Powell emphasized that the committee does not see a strong case to move rates in either direction at this time. Tailwinds for growth are also building given the significant easing in financial conditions year to date as the Fed has turned to a neutral policy stance which should boost growth and help the housing market as well as other interest rate sensitive sectors. With the labor market moving increasingly tighter, we would expect gradual wage growth to continue and the pace to move higher above 3% as the year progresses. We also expect job growth to remain robust but the pace to slow gradually as the year progresses and the unemployment rate falls further.

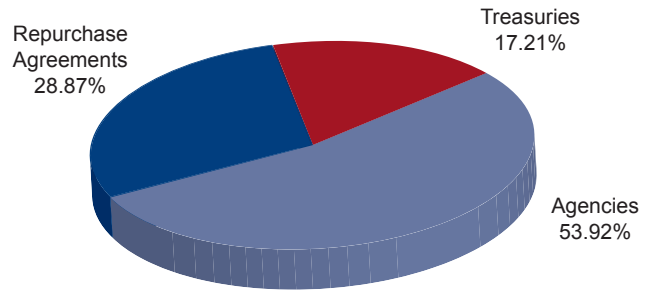
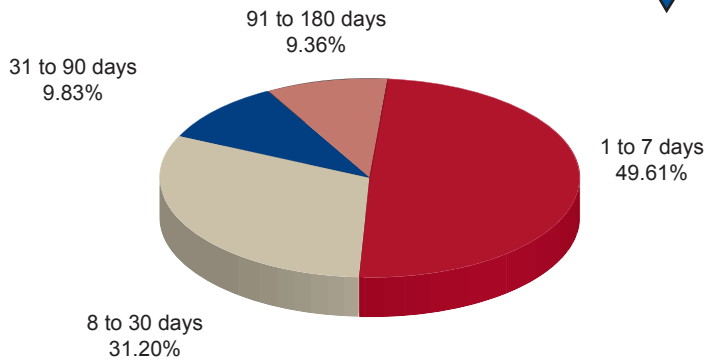
Government spending is expected to continue to contribute positively to growth through the first half of 2019. This will occur in tandem with an increase in the budget deficit which is expected to be nearly \$1 trillion in 2019. The Treasury has already ramped up issuance sufficiently in 2018 to fund this gap so little additional increase is necessary. The FOMC has indicated a strong preference to keep the current Federal Funds rate range (at 2.25 – 2.5%) unchanged. We expect the Fed to remain comfortable with this stance for most if not all of 2019. While growth is expected to be above trend and wages to glide higher, core PCE will not rise significantly enough above 2% to put pressure on the Fed to tighten policy in 2019. The most likely outcome is for the policy rate to remain unchanged in 2019 however we do not expect the growth or employment backdrop to deteriorate such that rate cuts would be necessary. In order for the Fed to shift back to a hiking bias, the Committee would need to see significant evidence that inflation is rising above the 2% objective as well as continued robust job growth, rising wages and above-trend GDP. In addition, more clarity on the balance of risks will be needed. This will take time and more data to determine the trajectory for the global and U.S. economy.

This information is an excerpt from an economic report dated April 2019 provided to TexSTAR by JP Morgan Asset Management, Inc., the investment manager of the TexSTAR pool.

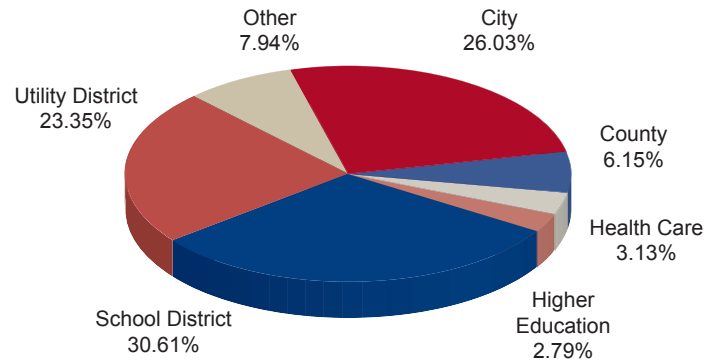
For more information about TexSTAR, please visit our web site at www.texstar.org.

Information at a Glance

Portfolio by Type of Investment As of April 30, 2019



Portfolio by Maturity As of April 30, 2019



Distribution of Participants by Type As of April 30, 2019

Historical Program Information

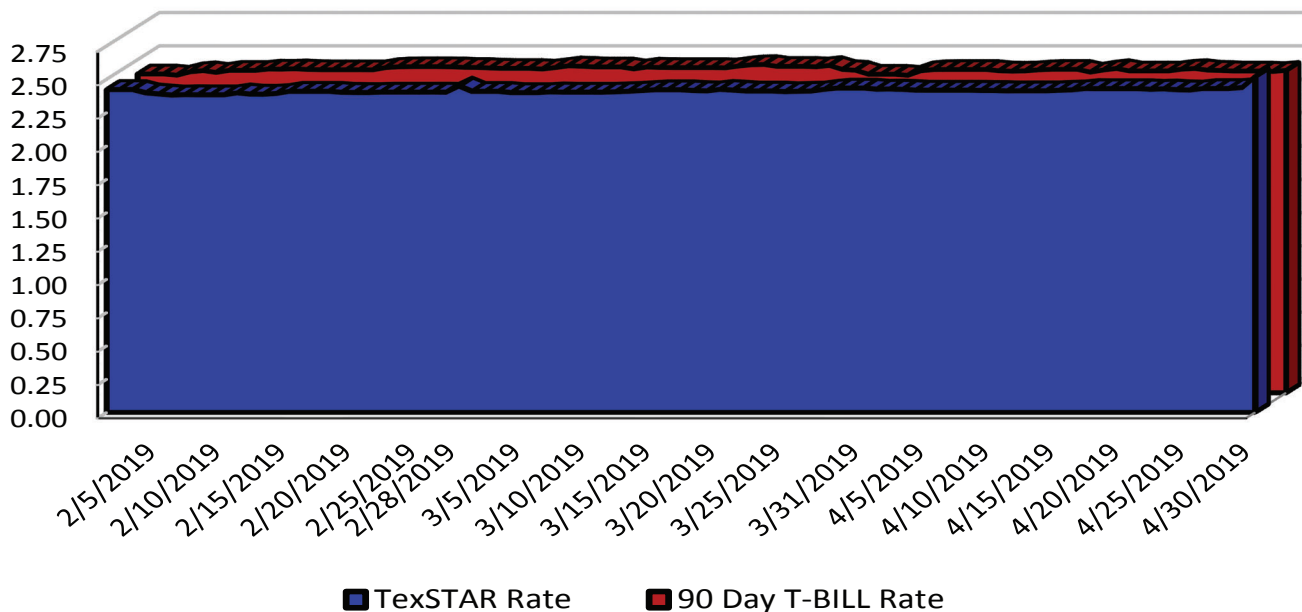
Month	Average Rate	Book Value	Market Value	Net Asset Value	WAM (1)*	WAM (2)*	Number of Participants
Apr 19	2.4243%	\$8,464,290,753.69	\$8,464,331,283.11	1.000004	26	101	895
Mar 19	2.4112%	8,378,300,782.34	8,378,032,817.90	0.999968	41	106	893
Feb 19	2.4001%	9,198,012,187.60	9,197,689,206.82	0.999964	45	99	891
Jan 19	2.3937%	8,624,044,987.80	8,623,938,284.28	0.999987	37	82	890
Dec 18	2.3069%	7,738,483,374.11	7,738,245,287.60	0.999940	40	95	888
Nov 18	2.2176%	6,683,233,268.87	6,682,898,473.43	0.999949	41	102	886
Oct 18	2.1615%	6,581,942,899.40	6,581,269,831.00	0.999897	41	101	884
Sep 18	1.9995%	6,458,418,968.50	6,458,002,746.78	0.999935	30	96	883
Aug 18	1.9225%	6,701,017,159.16	6,701,228,119.73	0.999971	24	91	879
Jul 18	1.8965%	6,837,425,331.68	6,837,427,966.67	1.000000	19	84	877
Jun 18	1.8300%	6,250,002,595.51	6,250,027,195.61	0.999991	26	99	874
May 18	1.7258%	6,489,773,533.02	6,489,474,005.73	0.999953	29	106	868

Portfolio Asset Summary as of April 30, 2019

	Book Value	Market Value
Uninvested Balance	\$ 2,892,725.69	\$ 2,892,725.69
Accrual of Interest Income	10,453,904.16	10,453,904.16
Interest and Management Fees Payable	(17,192,088.98)	(17,192,088.98)
Payable for Investment Purchased	0.00	0.00
Repurchase Agreement	2,444,489,999.79	2,444,489,999.79
Government Securities	6,023,646,213.03	6,023,686,742.45
Total	\$ 8,464,290,753.69	\$ 8,464,331,283.11

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. The TexSTAR yield is calculated in accordance with regulations governing the registration of open-end management investment companies under the Investment Company Act of 1940 as promulgated from time to time by the federal Securities and Exchange Commission.

Daily Summary for April 2019

Date	Mny Mkt Fund Equiv. [SEC Std.]	Daily Allocation Factor	TexSTAR Invested Balance	Market Value Per Share	WAM Days (1)*	WAM Days (2)*
4/1/2019	2.4236%	0.000066400	\$8,459,167,260.80	0.999975	32	107
4/2/2019	2.4250%	0.000066437	\$8,460,257,927.22	1.000000	31	106
4/3/2019	2.4223%	0.000066365	\$8,455,111,846.90	1.000004	30	105
4/4/2019	2.4167%	0.000066210	\$8,471,871,228.55	1.000010	30	104
4/5/2019	2.4162%	0.000066197	\$8,437,475,169.43	0.999987	27	102
4/6/2019	2.4162%	0.000066197	\$8,437,475,169.43	0.999987	27	102
4/7/2019	2.4162%	0.000066197	\$8,437,475,169.43	0.999987	27	102
4/8/2019	2.4163%	0.000066200	\$8,479,970,750.88	0.999985	27	101
4/9/2019	2.4145%	0.000066151	\$8,397,091,848.47	0.999990	26	101
4/10/2019	2.4140%	0.000066136	\$8,368,329,105.64	1.000010	26	100
4/11/2019	2.4109%	0.000066052	\$8,382,666,236.80	1.000008	25	99
4/12/2019	2.4115%	0.000066068	\$8,356,476,038.65	0.999998	23	97
4/13/2019	2.4115%	0.000066068	\$8,356,476,038.65	0.999998	23	97
4/14/2019	2.4115%	0.000066068	\$8,356,476,038.65	0.999998	23	97
4/15/2019	2.4159%	0.000066188	\$8,361,748,539.23	1.000001	25	99
4/16/2019	2.4190%	0.000066274	\$8,360,614,334.67	0.999999	29	105
4/17/2019	2.4286%	0.000066537	\$8,301,871,404.81	1.000010	28	105
4/18/2019	2.4278%	0.000066516	\$8,317,481,559.81	1.000006	26	101
4/19/2019	2.4278%	0.000066516	\$8,317,481,559.81	1.000006	26	101
4/20/2019	2.4278%	0.000066516	\$8,317,481,559.81	1.000006	26	101
4/21/2019	2.4278%	0.000066516	\$8,317,481,559.81	1.000006	26	101
4/22/2019	2.4232%	0.000066390	\$8,331,472,076.12	0.999998	25	101
4/23/2019	2.4261%	0.000066468	\$8,364,872,990.59	1.000002	25	100
4/24/2019	2.4198%	0.000066295	\$8,319,289,106.59	1.000006	24	100
4/25/2019	2.4175%	0.000066233	\$8,342,562,271.49	1.000012	23	102
4/26/2019	2.4286%	0.000066538	\$8,335,535,853.10	1.000012	23	100
4/27/2019	2.4286%	0.000066538	\$8,335,535,853.10	1.000012	23	100
4/28/2019	2.4286%	0.000066538	\$8,335,535,853.10	1.000012	23	100
4/29/2019	2.4362%	0.000066745	\$8,331,319,584.39	1.000001	22	100
4/30/2019	2.5183%	0.000068994	\$8,464,290,753.69	1.000004	20	98
Average	2.4243%	0.000066418	\$8,377,029,822.99		26	101



TexSTAR Participant Services
1201 Elm Street, Suite 3500
Dallas, TX 75270
1-800-839-7827

TexSTAR Board Members

William Chapman	Central Texas Regional Mobility Authority	Governing Board President
Nell Lange	City of Frisco	Governing Board Vice President
Eric Cannon	City of Allen	Governing Board Treasurer
David Medanich	Hilltop Securities	Governing Board Secretary
Jennifer Novak	J.P. Morgan Asset Management	Governing Board Asst. Sec./Treas.
Monte Mercer	North Central TX Council of Government	Advisory Board
Becky Brooks	City of Grand Prairie	Advisory Board
Nicole Conley	Austin ISD	Advisory Board
David Pate	Richardson ISD	Advisory Board
James Mauldin	University of North Texas System	Advisory Board
Sandra Newby	Tarrant Regional Water District/Non-Participant	Advisory Board
Ron Whitehead	Qualified Non-Participant	Advisory Board



The material provided to TexSTAR from J.P. Morgan Asset Management, Inc., the investment manager of the TexSTAR pool, is for informational and educational purposes only, as of the date of writing and may change at any time based on market or other conditions and may not come to pass. While we believe the information presented is reliable, we cannot guarantee its accuracy. HilltopSecurities is a wholly owned subsidiary of Hilltop Holdings, Inc. (NYSE: HTH) located at 1201 Elm Street, Suite 3500, Dallas, Texas 75270, (214) 859-1800. Member NYSE/FINRA/SIPC. Past performance is no guarantee of future results.

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

RESOLUTION NO. 19-024

**AUTHORIZING THE EXECUTIVE DIRECTOR TO CONTRACT WITH
DATA TRANSFER SOLUTIONS, LLC FOR PAVEMENT CONDITION AND ASSET DATA
COLLECTION SERVICES ON MOBILITY AUTHORITY TOLL FACILITIES**

WHEREAS, the Mobility Authority has established a Transportation Asset Management Program (“TAMP”) to create a more robust method for organizing, communicating and planning the maintenance needs for Mobility Authority facilities; and

WHEREAS, the Mobility Authority initiated the implementation of TAMP, by collecting and recording initial inventory data and pavement condition data of Mobility Authority facilities which is maintained in VUEWorks, a web-enabled Integrated Graphic Information System, Enterprise Asset Management software program; and

WHEREAS, it is necessary to collect asset and pavement condition data for new Mobility Authority facilities becoming operational in the near future and to regularly recollect pavement condition data to update in VUEWorks to be utilized in evaluating routine maintenance and restoration and replacement needs; and

WHEREAS, Data Transfer Solutions, LLC, the company that manages and updates VUEWorks, participates in the Houston-Galveston Area Council Cooperative Purchasing Program (HGACbuy); and


WHEREAS, in accordance with Article 15 of the Mobility Authority Policy Code, purchases made through a cooperative program such as HGACbuy are deemed to have satisfied Mobility Authority procurement requirements; and

WHEREAS, the Executive Director requests authorization to contract with Data Transfer Solutions, LLC in an amount not to exceed \$117,345.00 through HGACbuy to collect initial asset and pavement condition data for the SH 45SW corridor and to recollect pavement condition data to update VUEWorks for existing Mobility Authority facilities consisting of 290 Toll Phases I & II, 183A Toll Phases I & II, SH71 Toll and MoPac Express.

NOW THEREFORE BE IT RESOLVED that the Board of Directors hereby authorizes the Executive Director to contract with Data Transfer Solutions, LLC through HGACbuy in an amount not to exceed \$117,345.00 to collect initial asset and pavement condition data for new Mobility Authority facilities becoming operational in the near future and to recollect and inventory pavement condition data on existing Mobility Authority facilities


Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 29th day of May 2019.

Submitted and reviewed by:



Geoffrey Petrov, General Counsel

Approved:



Ray A. Wilkerson
Chairman, Board of Directors



Data Transfer Solutions, LLC
3680 Avalon Park Blvd E, Suite 200
Orlando, FL 32828
Tel: +1 407-382-5222
Fax: +1 407-382-5420

dtsgis.com
snclavalin.com

Central Texas Regional Mobility Authority
3300 N. IH 35, Suite 300
Austin, TX 78705

Attn: Lisa Pohlmeier
Senior Project Manager – Asset Management
Central Texas Regional Mobility Authority

April 12, 2019

Subject: Central Texas Regional Mobility Authority
HGACBuy Contract (No. HP10-17) for Pavement and Asset Data Collection Services
and VUEWorks Implementation

Dear Ms. Pohlmeier:

This is an Agreement between DATA TRANSFER SOLUTIONS, LLC, a Florida corporation, having offices at 3680 Avalon Park Blvd, Suite 200, Orlando, FL 32828 (DTS), and the CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY, having offices at 3300 North IH35, Suite 300, Austin, TX 78705 (Mobility Authority) for 2019 Pavement and Asset Data Collection Services and VUEWorks implementation. DTS shall provide to Client the requested services as described herein the following documents, attached for your information:

Exhibit 1: 2019 Pavement Data Collection Services for 290 Toll Phases I & II, US 183A Toll Phases I & II, SH71 Toll and MoPac Express
Attachment A HGACBuy Contract Pricing Worksheet (No. HP10-17)
Attachment B Contract Scope of Work

Exhibit 2: 2019 Pavement and Asset Data Collection Services for SH45 SW
Attachment A HGACBuy Contract Pricing Worksheet (No. HP10-17)
Attachment B Contract Scope of Work

The Mobility Authority will execute separate purchase orders through the HGACBuy Cooperative Program consistent with the Pricing Worksheet in Attachment A for each referenced Exhibit for the applicable scope of work.

Compensation to be paid based on percentage complete on each task to DTS for providing the requested services shall be in accordance with the Attachments.

DTS requests your signature to execute this Agreement on page 3 of 3 of this document.



Data Transfer Solutions, LLC
3680 Avalon Park Blvd E, Suite 200
Orlando, FL 32828
Tel: +1 407-382-5222
Fax: +1 407-382-5420

dtsgis.com
snclavalin.com

If you have any questions or need additional information, please contact Allen Ibaugh at (407)382-5222 or email at aibaugh@dtsgis.com.

Sincerely,

A handwritten signature in blue ink that reads "Allen Ibaugh".

Allen Ibaugh, AICP, GISP
Business Unit Director




Data Transfer Solutions, LLC
3680 Avalon Park Blvd E, Suite 200
Orlando, FL 32828
Tel: +1 407-382-5222
Fax: +1 407-382-5420

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HGACBuy Contract (No. HP10-17)
Central Texas Regional Mobility Authority
Member Number 18-6487
VUEWorks Implementation

Data Transfer Solutions, LLC

By: 
Name: A.M. "Trey" Fragala III, AICP, PMP
Title: Chief Operating Officer

05.16.19
Date

Central Texas Regional Mobility Authority

By: _____
Name: Mike Heiligenstein
Title: Executive Director

Date

Exhibit 1: 2019 Pavement Data Collection Services
Corridors: 290 Toll Phases I & II, US 183A Toll Phases I & II,
SH71 Toll, and MoPac Express
Central Texas Regional Mobility Authority



Prepared by:
Data Transfer Solutions, LLC
3680 Avalon Park East Blvd., Suite 200
Orlando, FL 32828
www.dtsgis.com



CONTRACT PRICING WORKSHEET
For Catalog & Price Sheet Type Purchases

Contract No.: HP10-17

Date Prepared: 5/3/2019

This Worksheet is prepared by Contractor and given to End User. If a PO is issued, both documents MUST be faxed to H-GAC @ 713-993-4548. Therefore please type or print legibly.

Buying Agency:	Central Texas Regional Mobility Authority	Contractor:	Data Transfer Solutions, LLC
Contact Person:	Lisa Pohlmeier	Prepared By:	Bart Williamson
Phone:	(512) 996-9778	Phone:	210-837-5249
Fax:	(512) 996-9784	Fax:	
Email:	lpohlmeier@ctrma.org	Email:	bwilliamson@dtsgis.com

Catalog / Price Sheet Name:	
General Description of Product:	

A. Catalog / Price Sheet Items being purchased - Itemize Below - Attach Additional Sheet If Necessary

Quan	Description	Unit Pr	Total
1	Centerline Identification	1600	1600
1	Field Set-up & GPS Network Creation	5000	5000
1	Senior Pavement Engineer	4950	4950
1	Project Calibration Site Survey	1,500	1500
112	Mobile Asset Data Collection (Units = Lane Miles)	60	6720
112	Pavement Condition Evaluation (Per TxDOT PMIS) (Units = Lane Miles)	100	11200
1	GIS and Metadata Documentation	10200	10200
1	Pavement Final Report	5000	5000
40	Integration Services (VUEWorks) (units = hours)	250	10000
Total From Other Sheets, If Any:			
DTS will bill lump sum based on percent complete for each task item.			Subtotal A: 56170

B. Unpublished Options, Accessory or Service items - Itemize Below - Attach Additional Sheet If Necessary
(Note: Unpublished Items are any which were not submitted and priced in contractor's bid.)

Quan	Description	Unit Pr	Total
			0
Total From Other Sheets, If Any:			
DTS will bill lump sum based on percent complete for each task item.			Subtotal B: 0
Check: Total cost of Unpublished Options (B) cannot exceed 25% of the total of		For this transaction the percentage is:	0%

C. Other Allowances, Discounts, Trade-Ins, Freight, Make Ready or Miscellaneous Charges		
Subtotal C:		

Delivery Date:		D. Total Purchase Price (A+B+C):	56170
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ATTACHMENT B
Central Texas Regional Mobility Authority (CTRMA)
Pavement Data Collection Services
Contract Scope of Work

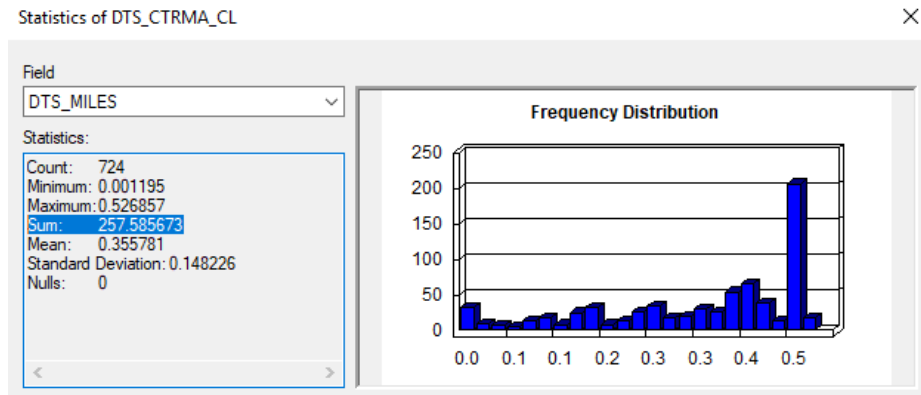
Task 1 - Project Setup

1.1 Project Initiation

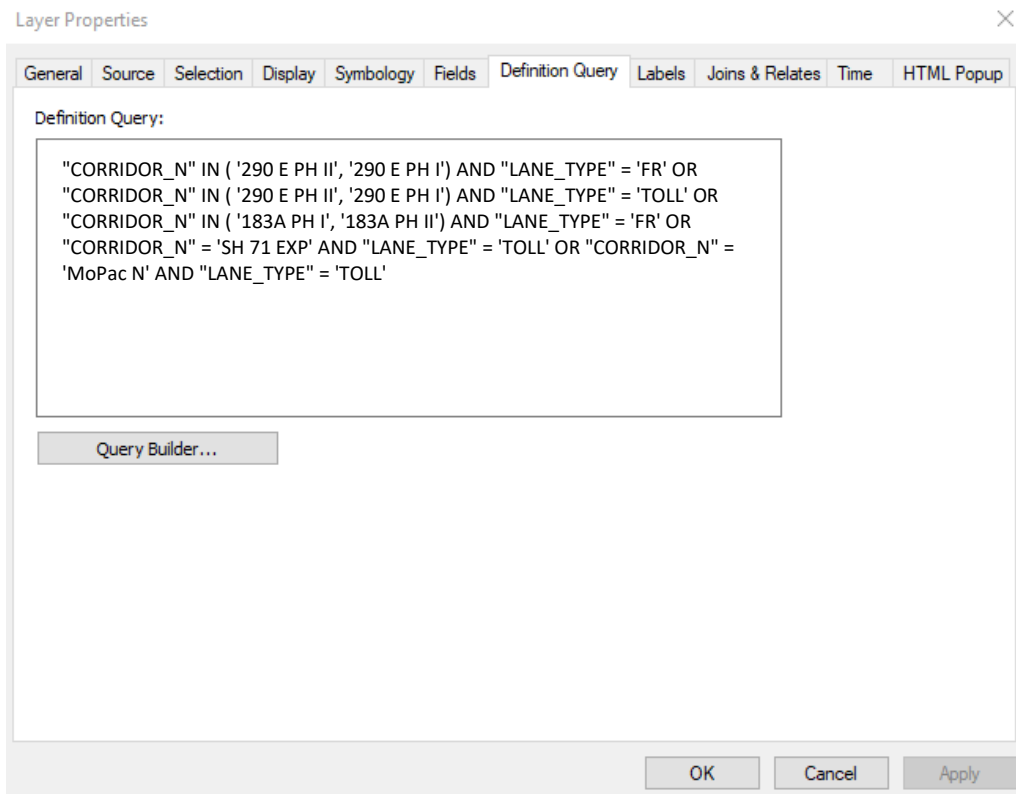
Upon notice to proceed the CONSULTANT will arrange a kick-off meeting to confirm the project requirements and scheduling. The kick-off meeting will include proposed key personnel and the OWNER's project members. During the meeting, CONSULTANT will present the proposed Project Approach, which includes project equipment, software, methodology, schedules and deliverables. The proposed approach will be finalized based on the OWNER requirements and decisions during the meeting. Data collection will be based on the current GIS data, initially provided to CONSULTANT by the OWNER and imported into VUEWorks. Project communication protocol, documentation, accounting methodologies, data format and standards will be confirmed during the meeting. It is essential that the OWNER provide prompt and efficient communication in order that workflow continues as planned in the schedule. Changes to data model may contribute to workflow disruptions and result in a change to the project schedule and cost estimate. Deliverables will be transmitted to CTRMA's Project Manager for review. Pavement management and asset extraction will be managed by Kathy Anamisis. VUEWorks implementation will be managed by Ryan Francoforte.

1.2 GIS Centerline/Data Import and Data Preparation

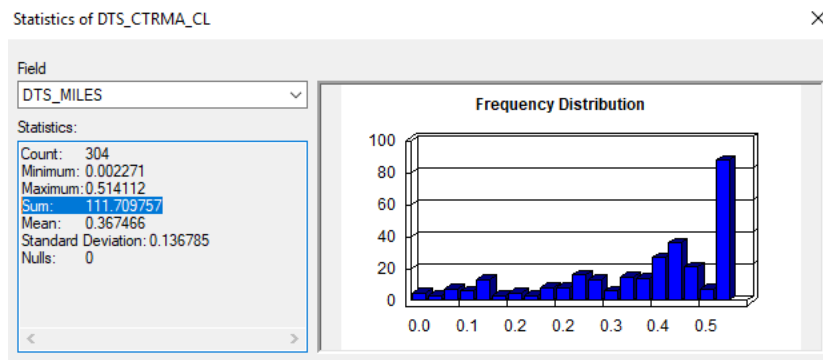
For this centerline assessment, DTS used the half-mile centerline provided by CTRMA (CTRMA_Phase1and2_PaveTesting) geodatabase. This file has 724 records totaling 258 centerline miles.



DTS was instructed that the following segments should be collected: 290E toll lanes and frontage lanes, 183A frontage lanes, SH71 toll lanes, and MoPac toll lanes. The following query was used on the centerline provided by CTRMA: "CORRIDOR_N" IN ('290 E PH II', '290 E PH I') AND "LANE_TYPE" = 'FR' OR "CORRIDOR_N" IN ('290 E PH II', '290 E PH I') AND "LANE_TYPE" = 'TOLL' OR "CORRIDOR_N" IN ('183A PH I', '183A PH II') AND "LANE_TYPE" = 'FR' OR "CORRIDOR_N" = 'SH 71 EXP' AND "LANE_TYPE" = 'TOLL' OR "CORRIDOR_N" = 'MoPac N' AND "LANE_TYPE" = 'TOLL'



After performing the above query on the half-mile centerline provided by CTRMA the centerline now has 304 records and 112 centerline miles.



CONSULTANT will use the previous geodatabase provided by the OWNER to collect data. Once data has been validated through the QC process, it will be published in VUEWorks. Each lane segment record, in the respective layers, will have a corresponding record in the pavement database.

The project schedule and cost estimate may be impacted if a timely response is not received from the OWNER and/or changes are made to the centerline after data collection and processing has been initiated. Cost estimate may also be revised if centerline analysis and mileage calculation changes.

CONSULTANT will utilize the TxDOT Pavement Management Information System (PMIS) methodology for determining the Distress Score which will be combined with the IRI values to determine the Pavement Condition Score (PCS).

CONSULTANT will provide the OWNER with a GPS “breadcrumb” file of data collection routes and image locations containing X, Y, and Z in WGS-84 Coordinates.

1.3 *Project Management*

CONSULTANT will provide project management for the duration of the project, including coordinating and attending meetings via web meetings or in person with OWNER, data research and collection efforts as required, preparing weekly progress reports and schedule updates. CONSULTANT’s Asset Management Services Project Manager will review project progress on a weekly basis and be involved with any changes to the daily schedule to increase efficiency and accuracy in data collection. Project management will also oversee implementation of the data and coordination with the OWNER’s GIS support.

Task 1 Deliverables:

- Meeting minutes and project schedule.
- Weekly progress reports and schedule updates.

Task 2 - Pavement Data and Image Capture

The CONSULTANT will collect roadway data and images for the OWNER’s 81 centerline miles of roadway using a Mobile Asset Collection (MAC) data collection vehicle.

2.1 *System Setup, Mobilization and Pilot Project*

CONSULTANT will set up the data collection system and pavement management system so that all GIS and database system data are integrated and properly configured.

CONSULTANT will mobilize one or more Mobile Asset Collection (MAC) Laser Road Imaging Systems (LRIS) vehicles to OWNER site.

2.2 *Field Data and Image Capture*

The DTS team consists of a driver and operator (CONSULTANT) who will systematically drive the MAC LRIS vehicle on the road segment listings provided by the OWNER. The CONSULTANT will collect pavement data by driving our MAC vehicle in each mainline lane of the specified 33-lane mile project area. CONSULTANT proposes to use its MAC LRIS vehicle line scan camera with laser illumination and four right-of-way cameras to capture pavement and ROW images to be used during the pavement rating process. Unpaved roads will not be surveyed.



Mobile Asset Collection (MAC) Vehicle

The CONSULTANT Mobile Asset Collection vehicle is equipped with:

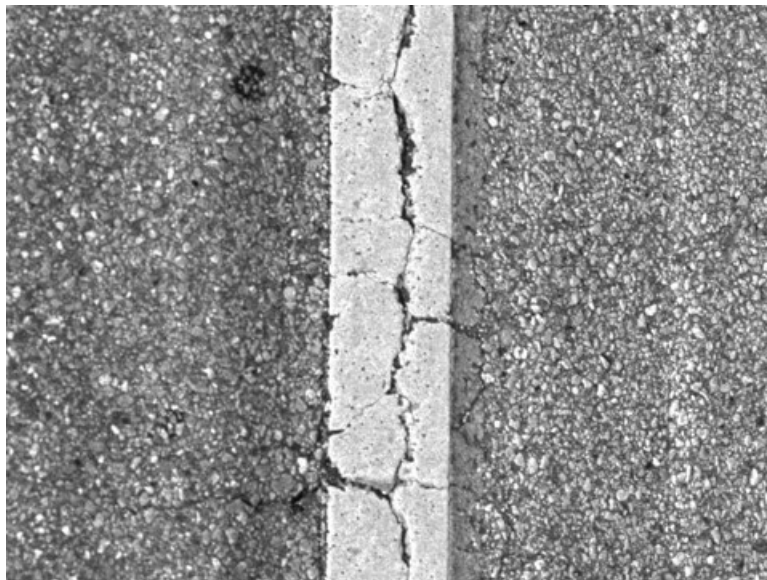
- High-resolution right-of-way digital cameras – Allied Vision Prosilica GX1920C GigE, frame rate of 15 images per second and 1936 x 1456 color resolution
- Laser Road Imaging System (LRIS) pavement imaging system – collects high-definition pavement images used to extract distress type severity and extent measurements. 4096 pixel/line, 28,000 lines/sec, 1mm resolution
- ApplanixPOS220V inertial measuring unit (IMU) – centimeter-level positioning of MAC van during collection
- DMI equipment – distance measuring instrument used for system integration
- GPS equipment – used for mapping level positioning of the vehicle, heading information and positional tagging of images. 2 positional units, 1 differential unit
- Servers – on board servers for storing data, processing images and storing profiler, GPS, DMI and IMU data
- Surface (road) profiler – used for precise pavement ride and rut measurement

The MAC system collects all pavement and right-of-way images, IMU, DMI and profiler data concurrently.

2.3 Pavement Surface Imaging Rating

CONSULTANT MAC LRIS vehicle pavement imaging sensors are oriented from nadir (straight-down) to achieve the best perspective, laser-illuminated to ensure uniform image contrast and GIS-integrated to provide geospatial distress vectors (points, lines and polygons) that can be loaded and verified using GIS.

- CONSULTANT will utilize a downward-facing, progressive line scan camera that provides high-resolution images (1mm pixel, 4,000 pixels wide, and ~12 feet width) of the pavement surface to clearly detect and quantify distresses.
- pavement surface imaging (JPEG format) will span, at a minimum, the data collection lane from left lane stripe to right lane stripe, and will provide 100% continuous pavement coverage
- image resolution will be such that all visual cracking distresses can be accurately identified and quantified
- images will have a minimum horizontal resolution of 4,000 pixels or better
- images will be synchronized with OWNER'S centerline file
- CONSULTANT will collect longitudinal profile and roughness data (IRI) to provide a ride condition index for each segment



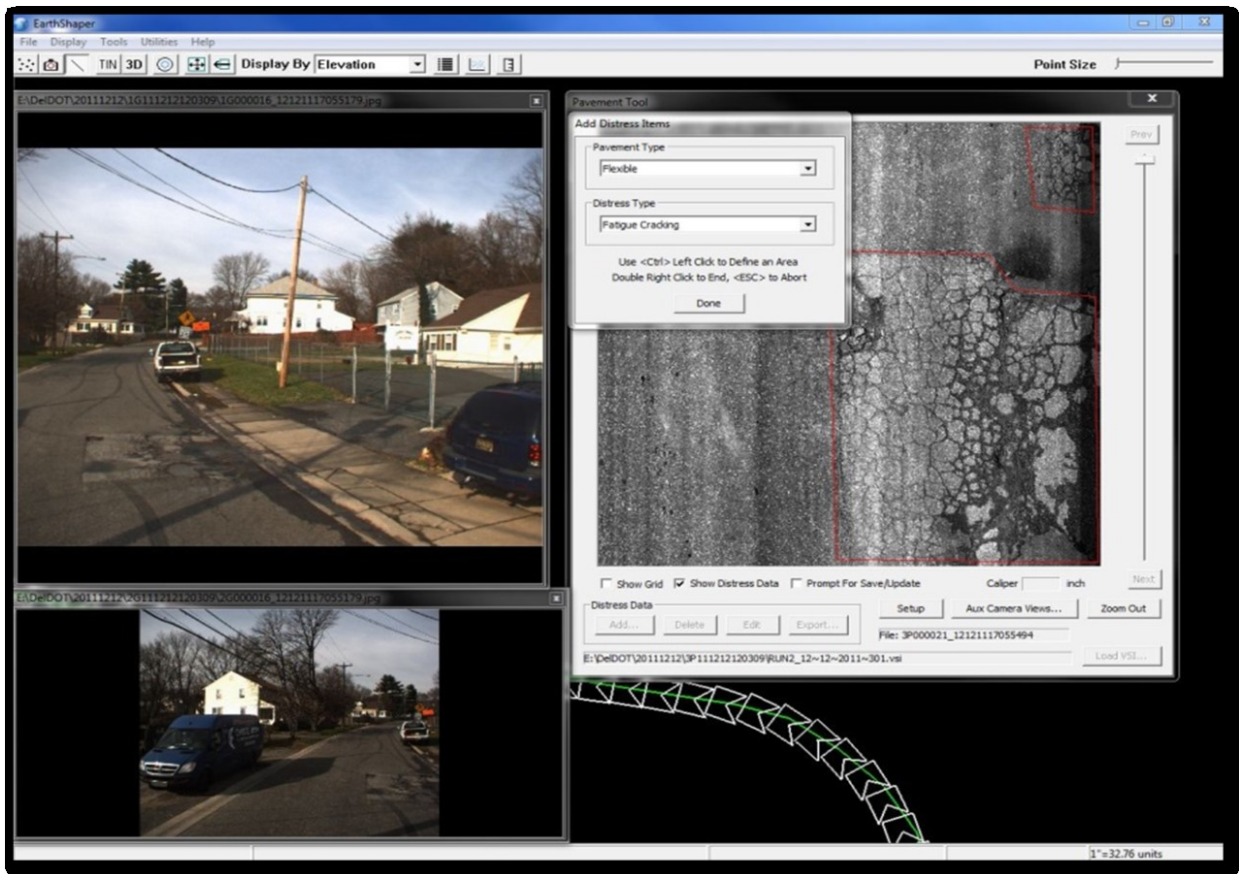
Pavement Image Captured with the 4K Laser Road Imaging System

2.4 Pavement Condition Evaluation

With the pavement image collection started, CONSULTANT will begin processing pavement images. This allows CONSULTANT to begin the pavement distress rating process concurrent with

the image collection.

Once pavement images and distress mapping processing is complete for each collection day, CONSULTANT'S experienced pavement evaluators will review each street segment's images for a complete and thorough evaluation of the existing pavement condition per the TxDOT pavement distress rating process. The EarthShaper™ software allows distress vectors to be viewed and edited through this workflow. The CONSULTANT has designed the EarthShaper asset data extraction software by optimizing the performance of visualization/QC of the roadway condition and inventory data. To improve accuracy to desired 97%, CONSULTANT will perform field validations of select segments to identify anomalies in the data and provide guidance in distress evaluations. A meeting will be conducted with the OWNER to review data. CONSULTANT's QA methodology is outlined in Task 5.



Pavement Condition Evaluation within EarthShaper™ software

IRI (International Roughness Index) will be collected using profiler equipment that meets TxDOT standards. CONSULTANT utilizes a surface profiling system manufactured by International Cybernetics Corporation (ICC) for evaluating the smoothness of pavement.

Task 2 Deliverables:

- CONSULTANT will provide right-of-way imagery for all segments collected in a JPEG format.
- CONSULTANT will provide downward-facing pavement imagery for all segments collected.
- CONSULTANT shall provide geodatabase of distresses containing the Type, Severity and Extent of distresses along the road segment as defined by the TxDOT PMIS methodology for 100% of the roadway for all lane types.
- CONSULTANT shall provide IRI data in accordance ASTM E950.
- CONSULTANT will format the database of pavement results 0.1 segmentation for IRI data and a 0.5-mile segmentation aligning with developed audible sections, for pavement distress and rutting data.

Task 3 - Pavement Final Report

Once the Pavement Condition Score (PCS) has been calculated, CONSULTANT will provide the following:

Task 3 Deliverables:

- Technical Memorandum compiling the results of the project.
- Final GIS file geodatabase containing collected pavement data and publish in VUEWorks, as applicable. CONSULTANT will use domains included in geodatabase where provided for the extraction attributes defined in the lists below.
- Assistance to OWNER to develop constraints and guidelines for development of budget scenarios and analysis for maintenance plan development to be performed by the OWNER.
- Assistance to OWNER to configure deterioration curves for the corridor.
- Pavement Condition forms.

Task 4 – Pavement Inventory & Condition

The vehicles will capture images at an interval of approximately 10 to 15 feet for both forward and side-facing directions and geo-referenced to the pavement inventory by segment. CONSULTANT will collect pavement with the following attributes:

Pavement Condition Attributes (Line Feature) Per CTRMA Domain Model

- CORRIDOR_NAME
- TRAVEL_DIRECTION
- LANE_TYPE
- PVMT_TYPE
- LANE_ID

- PVMT_COND_SCORE
- PVMT_VIS_DISTRESS
- PVMT_RD_QUALITY
- INSTALL_YEAR
- DATE_COLLECTED
- SRUT
- DRUT
- PATCH
- PCPATCH
- FAIL
- BLOCK
- ALG
- LONG_CRACK
- TCRACK
- SPALL
- PUNCH
- ACPATC
- FLJ
- SSLAB
- RAVELING
- FLUSHING
- CONCRETE_PATCHES
- AVG_TR_CRK_SPAC

Pavement IRI Attributes (Line Feature) per CTRMA Domain Model

- CORRIDOR_NAME
- TRAVEL_DIRECTION
- LANE_TYPE
- PVMT_TYPE
- LANE_ID
- IRI_SCORE
- DATE_COLLECTED

Task 4 Deliverables:

- CONSULTANT will deliver a pavement inventory with attributes identified above in a GIS file geodatabase and publish in VUEWorks.

Task 5-Quality Assurance and Quality Control

The CONSULTANT will perform quality assurance and quality control on all data collected.

CONSULTANT has a proven Quality Assurance (QA)/Quality Control (QC) procedure for all MAC image collection projects. CONSULTANT'S QC procedures begin with MAC vehicle collection process. For the OWNER, a MAC calibration site(s) will be established that consists of up to ten point locations nailed, painted and surveyed in a location easily accessible to the MAC LRIS vehicle. This calibration site will be recorded in at least two perpendicular directions at the beginning and end of each collection day.



Calibration Site Checked Daily to Ensure the Accuracy of Collection

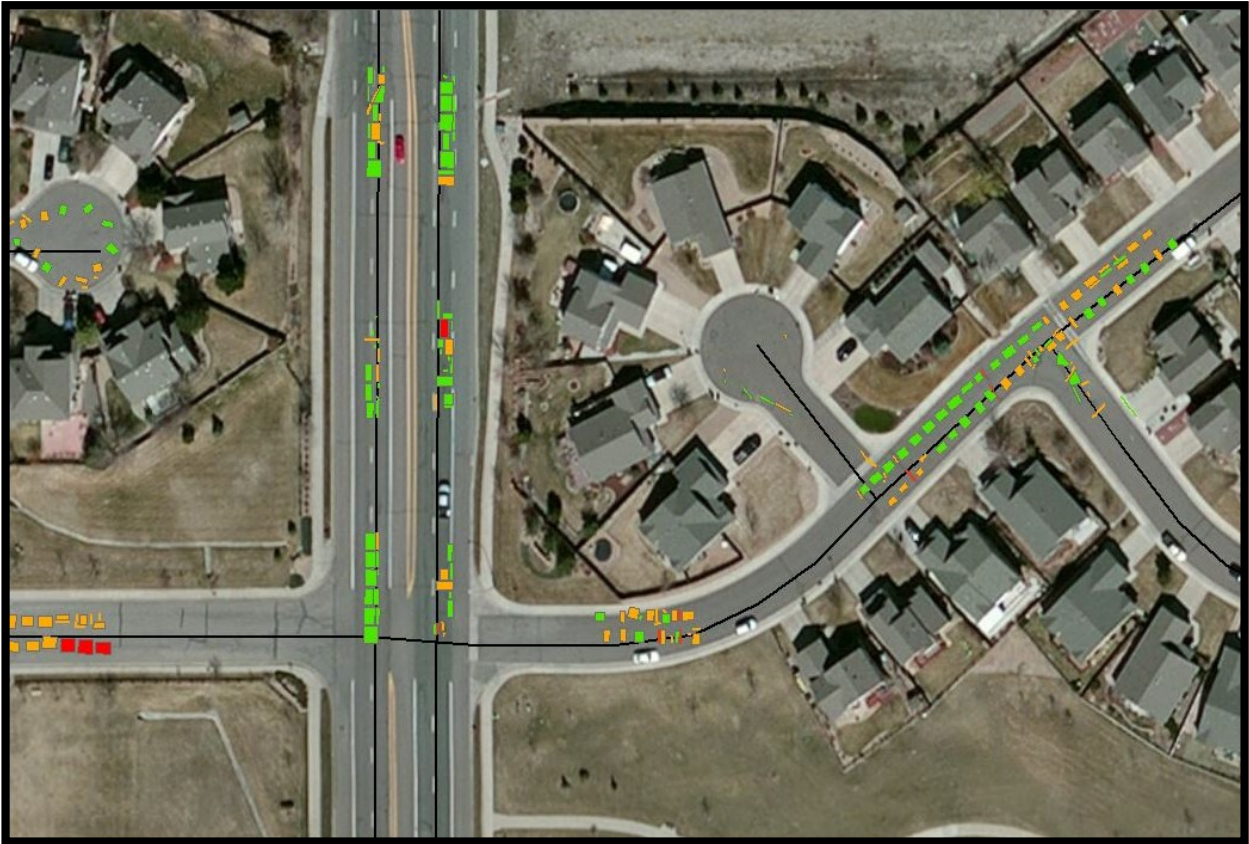
The MAC technician will check each camera's exposure rate, image quality and GPS and IMU operation to ensure the MAC system is recording the image, GPS, DMI and IMU data and that the GPS location is within the stated project tolerance. Each collection day's calibration collection will be documented in the MAC collection log book. The MAC collection log book also contains information such as date, location, technician, driver, any issue that developed during the collection day and DMI calibration runs. CONSULTANT will maintain a Microsoft Access database of any collection or other project issues. All project team personnel including OWNER personnel will have access to the database to log comments, check the status of issues and have one central repository to track project issues and resolutions.

During image collection, the MAC technician reviews the images collected on-screen as they are collected and any issue with image clarity requires the collection run to end and the image quality issue to be resolved. Once resolved, the collection run begins from the beginning for the road segment collected. The MAC technician also monitors GPS reception during collection. If GPS reception is lost (measured using PDOP – positional dilution of precision), the MAC technician stops the collection and resolves the GPS reception issue. Collection begins again once the GPS reception issue is resolved. All issues resulting in the collection run being stopped will be recorded in the MAC collection log book along with the resolution.

With a completed collection drive delivered to CONSULTANT headquarters in Orlando, images

are post processed and provided to the image QC Officer who will perform quality control checks on each delivery provided. The QC Officer will visually review the collection routes for image quality. All collection runs that are considered of low quality will be marked for recollection before the MAC vehicle(s) is allowed to leave the CTRMA.

Additionally, CONSULTANT will provide independent quality checks via field verification to confirm accuracy of automated data collection. CONSULTANT utilizes walk-out maps that display pavement distress data for field confirmation and acceptance. CONSULTANT's QA methodology is outlined in Task 5.



CONSULTANT field Maps utilized for field verification of pavement distress data

TASK 5 Deliverables:

- CONSULTANT will perform field verification of pavement condition scores with CTRMA staff to answer questions and resolve discrepancies in data and field observations.

ACCEPTANCE CRITERIA

The results of the data collection shall be quality checked for rating consistency by CONSULTANT to ensure the accuracy and quality of deliverables. Notes from field validations will be implemented into the distress evaluations to make any corrections for deficiencies in distress identification. Additionally, deliverables will be checked for missing and/or duplicate assets and

anomalies. A 97% accuracy rate is expected and Quality Control checks will be based on the batch/sample size of the delivery (see Table A below to determine sample size for the appropriate accuracy rate).

For any measurement that is needed, it must be accurate to the nearest foot. If the data has more errors than allowable the set of data will be corrected. This process will be repeated until each set of data is within the allowable limits.

Method of measurement of acceptable quality level (AQL)

Each attribute captured for an asset counts as one unit of measure. Each physical measurement required for an asset location counts as one attribute or unit of measure. The following location information also counts as an attribute or unit of measure for each asset: Physical presence (when captured as per source = correct, not captured or missed = incorrect) In the event of a duplicate capture of an asset, the total number of attributes or units of measure for the duplicate asset(s) will be deducted from the total units of the sample set, and one error or unit of measure (incorrect physical presence) is charged.

TABLE A

Batch size			Sample Size (Normal)	Acceptance Rate (%)				
				99.0	98.5	97.5	96.0	93.5
2	to	8	2	≤ 0	≤ 0	≤ 0	≤ 0	≤ 0
9	to	15	3	≤ 0	≤ 0	≤ 0	≤ 0	≤ 0
16	to	25	5	≤ 0	≤ 0	≤ 0	≤ 0	≤ 1
26	to	50	8	≤ 0	≤ 0	≤ 0	≤ 1	≤ 1
51	to	90	13	≤ 0	≤ 0	≤ 1	≤ 1	≤ 2
91	to	150	20	≤ 0	≤ 1	≤ 1	≤ 2	≤ 3
151	to	280	32	≤ 1	≤ 1	≤ 2	≤ 3	≤ 5
281	to	500	50	≤ 1	≤ 2	≤ 3	≤ 5	≤ 7
501	to	1,200	80	≤ 2	≤ 3	≤ 5	≤ 7	≤ 10
1,201	to	3,200	125	≤ 3	≤ 5	≤ 7	≤ 10	≤ 14
3,201	to	10,000	200	≤ 5	≤ 7	≤ 10	≤ 14	≤ 21
10,001	to	35,000	315	≤ 7	≤ 10	≤ 14	≤ 21	≤ 21
35,001	to	150,000	500	≤ 10	≤ 14	≤ 21	≤ 21	≤ 21
150,001	to	500,000	800	≤ 14	≤ 21	≤ 21	≤ 21	≤ 21
500,001	and over		1250	≤ 21	≤ 21	≤ 21	≤ 21	≤ 21

Example: a delivery results in 100 assets – each asset has been determined to have 10 attributes to be captured (including the physical presence “attribute” for each asset) – thus total units of measure for the Batch size = 1,000 (100 x 10). Based on Table A, a Quality Control using a sample size of 80 units should be assessed for quality. With an expected accuracy of 97%, the allowable

number of errors ≤ 5 .

Exhibit 2: 2019 Pavement and Asset Data Collection Services
Corridor: SH45 SW
Central Texas Regional Mobility Authority



Prepared by:
Data Transfer Solutions, LLC
3680 Avalon Park East Blvd., Suite 200
Orlando, FL 32828
www.dtsgis.com



CONTRACT PRICING WORKSHEET
For Catalog & Price Sheet Type Purchases

Contract No.:

HP10-17

Date Prepared:

5/3/2019

This Worksheet is prepared by Contractor and given to End User. If a PO is issued, both documents MUST be faxed to H-GAC @ 713-993-4548. Therefore please type or print legibly.

Buying Agency:	Central Texas Regional Mobility Authority	Contractor:	Data Transfer Solutions, LLC
Contact Person:	Lisa Pohlmeier	Prepared By:	Bart Williamson
Phone:	(512) 996-9778	Phone:	210-837-5249
Fax:	(512) 996-9784	Fax:	
Email:	lpohlmeier@ctrma.org	Email:	bwilliamson@dtsgis.com

Catalog / Price Sheet Name:	ATTACHMENT A
General Description of Product:	

A. Catalog / Price Sheet Items being purchased - Itemize Below - Attach Additional Sheet If Necessary

Quan	Description	Unit Pr	Total
1	Centerline Identification	1600	1600
1	Field Set-up & GPS Network Creation	5000	5000
1	Senior Pavement Engineer	4950	4950
1	Project Calibration Site Survey	1500	1500
26	Mobile Asset Data Collection (Units = Lane Miles)	60	1560
26	Pavement Condition Evaluation (Per TxDOT PMIS) (Units = Lane Miles)	100	2600
9	Bridge Inventory (Units = Lane Miles)	40	360
9	Barrier Inventory (Units = Lane Miles)	40	360
9	Street Signs Inventory (Units = Lane Miles)	40	360
9	Pavement Markings and Striping Inventory (Units = Lane Miles)	70	630
9	Street Lights Inventory (Units = Lane Miles)	30	270
1	GIS and Metadata Documentation	10200	10200
9	ADA Ramps and Signals (Units = Lane Miles)	30	270
9	Signals (Units = Lane Miles)	30	270
1	Pavement Final Report	5000	5000
40	Integration Services (VUEWorks) (units = hours)	250	10000
Total From Other Sheets, If Any:			
DTS will bill lump sum based on percent complete for each task item.			Subtotal A: 44930

B. Unpublished Options, Accessory or Service items - Itemize Below - Attach Additional Sheet If Necessary

(Note: Unpublished Items are any which were not submitted and priced in contractor's bid.)

Quan	Description	Unit Pr	Total
9	Stand-Alone Attenuator (Units = Lane Miles)	25	225
9	Overhead and Ground Sign Structures (Units = Lane Miles)	80	720
Total From Other Sheets, If Any:			
DTS will bill lump sum based on percent complete for each task item.			Subtotal B: 945
Check: Total cost of Unpublished Options (B) cannot exceed 25% of the total of		For this transaction the percentage is:	2%

C. Other Allowances, Discounts, Trade-Ins, Freight, Make Ready or Miscellaneous Charges

Subtotal C:			0
Delivery Date:	D. Total Purchase Price (A+B+C):		45875

ATTACHMENT B
Central Texas Regional Mobility Authority (CTRMA)
Pavement and Asset Data Collection Services
Contract Scope of Work

Task 1 - Project Setup

1.1 *Project Initiation*

Upon notice to proceed the CONSULTANT will arrange a kick-off meeting to confirm the project requirements and scheduling. The kick-off meeting will include proposed key personnel and the OWNER's project members. During the meeting, CONSULTANT will present the proposed Project Approach, which includes project equipment, software, methodology, schedules and deliverables. The proposed approach will be finalized based on the OWNER requirements and decisions during the meeting. CONSULTANT will request that the OWNER provide any existing database, roadbeds, centerlines, Linear Referencing System (LRS) for project use, Geographic Information System (GIS) layers as currently configured in VUEWorks® and aerial imagery for project use. Project communication protocol, documentation, accounting methodologies, data format and standards will be confirmed during the meeting. It is essential that the OWNER provide prompt and efficient communication in order that workflow continues as planned in the schedule. Changes to data model may contribute to workflow disruptions and result in a change to the project schedule and cost estimate. Deliverables will be transmitted to CTRMA's Project Manager for review. Pavement management and asset extraction will be managed by Kathy Anamisis. VUEWorks implementation will be managed by Ryan Francoforte.

1.2 *GIS Centerline/Data Import and Data Preparation*

OWNER will provide three file geodatabases 1) roadbed centerline, 2) lane lines for pavement testing in 0.5-mile segmentation and 3) lane lines for IRI testing in 0.1-mile segmentation. CONSULTANT will use the geodatabases provided by the OWNER to collect data. Once data has been validated through the QC process, it will be published in VUEWorks. Each lane segment record, in the respective layers, will have a corresponding record in the pavement database.

The project schedule and cost estimate may be impacted if a timely response is not received from the OWNER and/or changes are made to the centerline after data collection and processing has been initiated.

CONSULTANT will utilize the TxDOT Pavement Management Information System (PMIS) methodology for determining the Distress Score which will be combined with the IRI values to determine the Pavement Condition Score (PCS).

CONSULTANT will provide the OWNER with a GPS "breadcrumb" file of data collection routes and image locations containing X, Y, and Z in WGS-84 Coordinates.

1.3 Project Management

CONSULTANT will provide project management for the duration of the project, including coordinating and attending meetings via web meetings or in person with OWNER, data research and collection efforts as required, preparing weekly progress reports and schedule updates. CONSULTANT's Asset Management Services Project Manager will review project progress on a weekly basis and be involved with any changes to the daily schedule to increase efficiency and accuracy in data collection. Project management will also oversee implementation of the data and coordination with the OWNER's GIS support.

Task 1 Deliverables:

- Meeting minutes and project schedule.
- Weekly progress reports and schedule updates.

Task 2 - Pavement Data and Image Capture

The CONSULTANT will collect roadway data and images for the OWNER's 33 lane miles of roadway using a Mobile Asset Collection (MAC) data collection vehicle.

2.1 System Setup, Mobilization and Pilot Project

CONSULTANT will set up the data collection system and pavement management system so that all GIS and database system data are integrated and properly configured.

CONSULTANT will mobilize one or more Mobile Asset Collection (MAC) Laser Road Imaging Systems (LRIS) vehicles to OWNER site.

CONSULTANT will work with the OWNER to set up a pilot project area so initial sample data can be collected and verified. CONSULTANT will collect data on the pilot project area and review the result with the OWNER and acquire approval for full size project implementation. CONSULTANT's QA methodology is outlined in Task 14 at the end of this document.

2.2 Field Data and Image Capture

The DTS team consists of a driver and operator (CONSULTANT) who will systematically drive the MAC LRIS vehicle on the road segment listings provided by the OWNER. The CONSULTANT will collect pavement data by driving our MAC vehicle in each mainline lane of the specified 33-lane mile project area. CONSULTANT proposes to use its MAC LRIS vehicle line scan camera with laser illumination and four right-of-way cameras to capture pavement and ROW images to be used during the pavement rating process. Unpaved roads will not be surveyed.



Mobile Asset Collection (MAC) Vehicle

The CONSULTANT Mobile Asset Collection vehicle is equipped with:

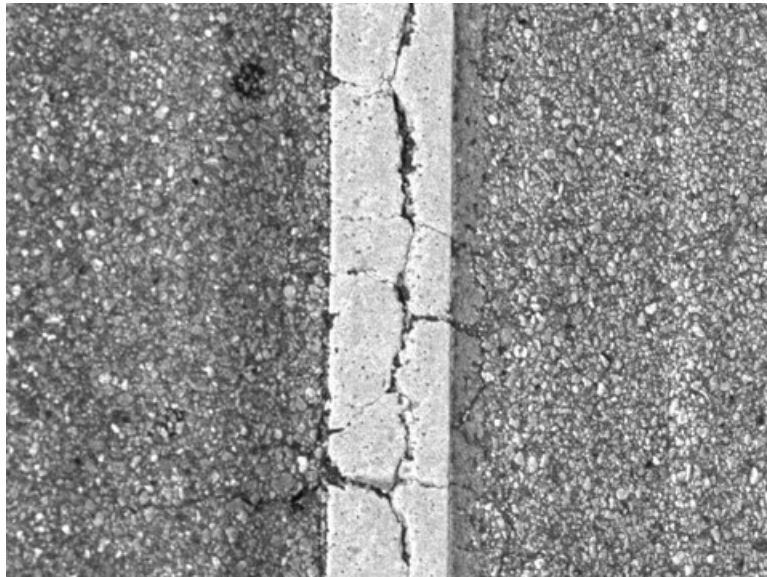
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- ApplanixPOS220V inertial measuring unit (IMU) – centimeter-level positioning of MAC van during collection
- DMI equipment – distance measuring instrument used for system integration
- GPS equipment – used for mapping level positioning of the vehicle, heading information and positional tagging of images. 2 positional units, 1 differential unit
- Servers – on board servers for storing data, processing images and storing profiler, GPS, DMI and IMU data
- Surface (road) profiler – used for precise pavement ride and rut measurement

The MAC system collects all pavement and right-of-way images, IMU, DMI and profiler data concurrently. The CONSULTANT'S MAC LRIS vehicles will collect imagery for roadway assets including: barriers, stand-alone attenuators, pavement striping, pavement markings(graphics), sign panels and structures, sign overhead structure, ADA ramps, traffic signals, and street lights (illumination structures). NOTE: Bridge information shall be collected by the OWNER. Once developed, CONSULTANT shall assign a unique Bride ID in VUEWorks for the OWNER-specified Bridges.

2.3 Pavement Surface Imaging Rating

CONSULTANT MAC LRIS vehicle pavement imaging sensors are oriented from nadir (straight-down) to achieve the best perspective, laser-illuminated to ensure uniform image contrast and GIS-integrated to provide geospatial distress vectors (points, lines and polygons) that can be loaded and verified using GIS.

- CONSULTANT will utilize a downward-facing, progressive line scan camera that provides high-resolution images (1mm pixel, 4,000 pixels wide, and ~12 feet width) of the pavement surface to clearly detect and quantify distresses.
- pavement surface imaging (JPEG format) will span, at a minimum, the data collection lane from left lane stripe to right lane stripe, and will provide 100% continuous pavement coverage
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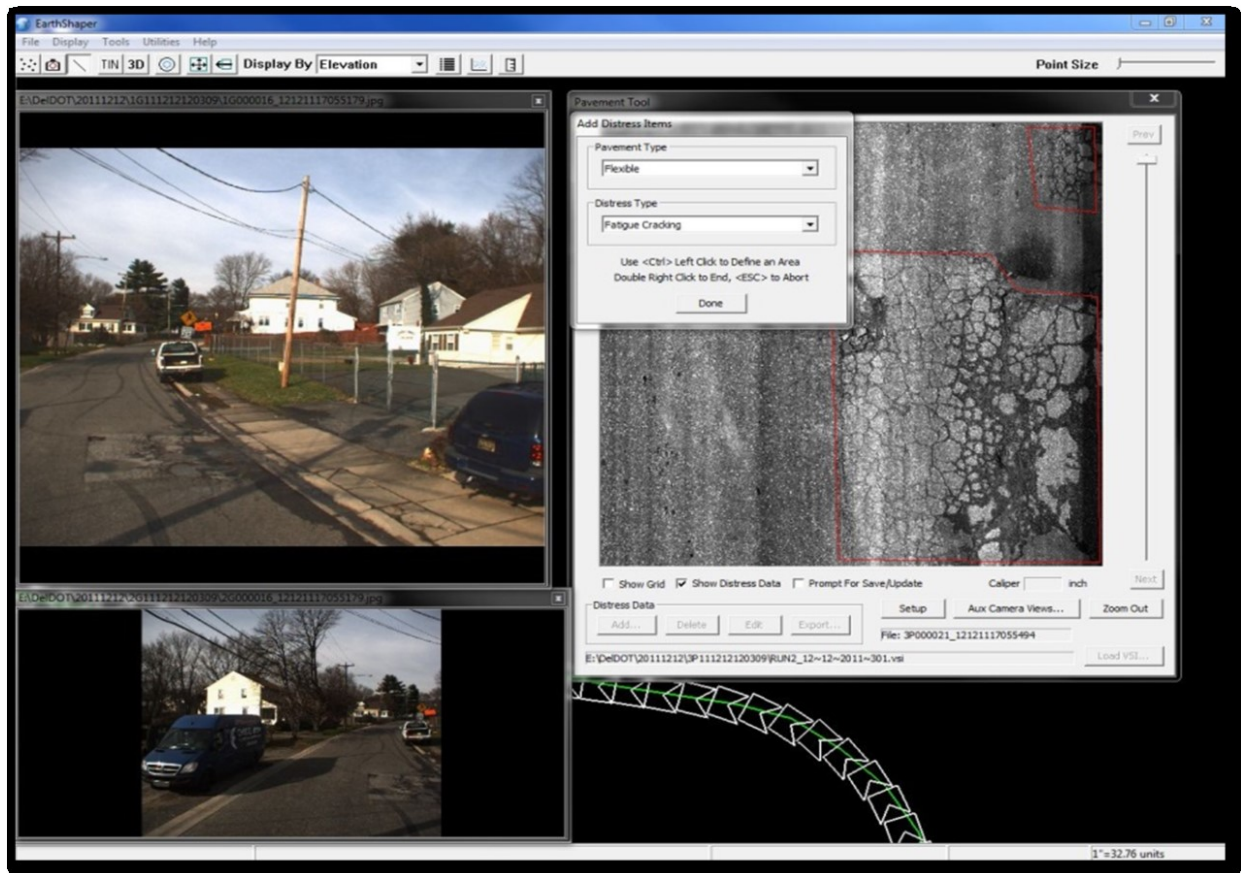
Pavement Image Captured with the 4K Laser Road Imaging System

2.4 Pavement Condition Evaluation

With the pavement image collection started, CONSULTANT will begin processing pavement images. This allows CONSULTANT to begin the pavement distress rating process concurrent with the image collection.

Once pavement images and distress mapping processing is complete for each collection day,

CONSULTANT'S experienced pavement evaluators will review each street segment's images for a complete and thorough evaluation of the existing pavement condition per the TxDOT pavement distress rating process. The EarthShaper™ software allows distress vectors to be viewed and edited through this workflow. The CONSULTANT has designed the EarthShaper asset data extraction software by optimizing the performance of visualization/QC of the roadway condition and inventory data. To improve accuracy to desired 97%, CONSULTANT will perform field validations of select segments to identify anomalies in the data and provide guidance in distress evaluations. A meeting will be conducted with the OWNER to review data. CONSULTANT's QA methodology is outlined in Task 14 at the end of this document.



Pavement Condition Evaluation within EarthShaper™ software

IRI (International Roughness Index) will be collected using profiler equipment that meets TxDOT standards. CONSULTANT utilizes a surface profiling system manufactured by International Cybernetics Corporation (ICC) for evaluating the smoothness of pavement.

Task 2 Deliverables:

- CONSULTANT will provide right-of-way imagery for all segments collected in a JPEG format.
- CONSULTANT will provide downward-facing pavement imagery for all segments collected.

- CONSULTANT shall provide geodatabase of distresses containing the Type, Severity and Extent of distresses along the road segment as defined by the TxDOT PMIS methodology for 100% of the roadway for all lane types.
- CONSULTANT shall provide IRI data in accordance ASTM E950.
- CONSULTANT will format the database of pavement results 0.1 segmentation for IRI data and a 0.5-mile segmentation aligning with developed audible sections, for pavement distress and rutting data.

Task 3 - Pavement Final Report

Once the Pavement Condition Score (PCS) has been calculated, CONSULTANT will provide the following:

Task 3 Deliverables:

- Technical Memorandum compiling the results of the project.
- Final GIS file geodatabase containing collected pavement data and publish in VUEWorks, as applicable. CONSULTANT will use domains included in geodatabase where provided for the extraction attributes defined in the lists below.
- Assistance to OWNER to develop constraints and guidelines for development of budget scenarios and analysis for maintenance plan development to be performed by the OWNER.
- Pavement Condition forms.

Task 4 – Pavement Inventory & Condition

CONSULTANT's Mobile Asset Collection (MAC) vehicles will collect right-of-way asset inventories at the same time that data is collected for the pavement management system. The vehicles will capture images at an interval of approximately 10 to 15 feet for both forward and side-facing directions and geo-referenced to the pavement inventory by segment. CONSULTANT will collect pavement with the following attributes:

Pavement Condition Attributes (Line Feature) Per CTRMA Domain Model

- CORRIDOR_NAME
- TRAVEL_DIRECTION
- LANE_TYPE
- PVMT_TYPE
- LANE_ID
- PVMT_COND_SCORE
- PVMT_VIS_DISTRESS
- PVMT_RD_QUALITY
- DATE_COLLECTED

- SRUT
- DRUT
- PATCH
- PCPATCH
- FAIL
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- LONG_CRACK
- TCRACK
- SPALL
- PUNCH
- ACPATC
- FLJ
- SSLAB
- RAVELING
- FLUSHING
- CONCRETE_PATCHES
- AVG_TR_CRK_SPAC

Pavement IRI Attributes (Line Feature) per CTRMA Domain Model

- CORRIDOR_NAME
- TRAVEL_DIRECTION
- LANE_TYPE
- PVMT_TYPE
- LANE_ID
- IRI_SCORE
- DATE_COLLECTED

Task 4 Deliverables:

- CONSULTANT will deliver a pavement inventory with attributes identified above in a GIS file geodatabase and publish in VUEWorks.

Task 5 – Barrier Inventory Guardrail, Concrete Barrier, Cable Barrier, Attenuators

CONSULTANT’s Mobile Asset Collection (MAC) vehicles will collect right-of-way asset inventories at the same time that data is collected for the pavement management system. The vehicles will capture images at an interval of approximately 10 to 15 feet for both forward and side-facing directions and geo-referenced to the pavement inventory by segment. CONSULTANT will collect a barrier inventory with the following attributes:

Barrier Attributes (Line Feature) Per CTRMA Domain Model

- CORRIDOR_NAME
- CROSS_ST_NAME
- TRAVEL_DIRECTION
- LANE_TYPE
- BARRIER_TYPE
- RMA_ID



Task 5 Deliverables:

- CONSULTANT will deliver a barrier inventory with attributes identified above in a GIS file geodatabase and publish in VUEWorks.

Task 6 – Stand-Alone Attenuator (crash cushion) Inventory (point feature) Per CTRMA Domain Model

CONSULTANT's Mobile Asset Collection (MAC) vehicles will collect right-of-way asset inventories at the same time that data is collected for the pavement management system. The vehicles will capture images at an interval of approximately 10 to 15 feet for both forward and side-facing directions and geo-referenced to the pavement inventory by segment. CONSULTANT will collect a stand-alone attenuator (crash cushion) inventory with the following attributes:

Attenuators Attributes (Point Feature) Per CTRMA Domain Model

- CORRIDOR_NAME
- CROSS_ST_NAME
- TRAVEL_DIRECTION
- LANE_TYPE
- ATTENUATOR_TYPE

- RM
- RMA_ID
- ATTENUATOR_PHOTO



Task 6 Deliverables:

- CONSULTANT will deliver a stand-alone attenuator inventory with attributes identified above in a GIS file geodatabase and publish in VUEWorks.

Task 7-Pavement Striping and Reflective Markers Inventory (line feature) Per CTRMA Domain Model

CONSULTANT's Mobile Asset Collection (MAC) vehicles will collect right-of-way asset inventories at the same time that data is collected for the pavement management system. The vehicles will capture images at an interval of approximately 10 to 15 feet for both forward and side-facing directions and geo-referenced to the pavement inventory by segment. Data will be categorized by color (yellow or white). CONSULTANT will collect pavement striping with the following attributes:

Pavement Striping Attributes (Line Feature) Per CTRMA Domain Model

- CORRIDOR_NAME
- CROSS_ST_NAME
- TRAVEL_DIRECTION
- LANE_TYPE
- STRIPING_TYPE
- STRIPING_COLOR
- STRIPING_WIDTH
- RPM_TYPE
- RMA_ID



Sample image of pavement striping collected with MAC LRIS system

Task 7 Deliverables:

- CONSULTANT will deliver a pavement striping inventory with attributes identified above in a GIS file geodatabase and publish in VUEWorks.

Task 8-Pavement Markings & Graphics

CONSULTANT's Mobile Asset Collection (MAC) vehicles will collect right-of-way asset inventories at the same time that data is collected for the pavement management system. The vehicles will capture images at an interval of approximately 10 to 15 feet for both forward and side-facing directions and geo-referenced to the pavement inventory by segment. CONSULTANT will collect pavement markings with the following attributes:

Pavement Markings & Graphics Attributes (Point Feature) Per CTRMA Domain Model

- CORRIDOR_NAME
- CROSS_ST_NAME
- TRAVEL_DIRECTION
- LANE_TYPE
- GRAPHIC_TYPE

- GRAPHIC_COLOR
- RM
- RMA_ID



Sample image of pavement markings & graphics collected with MAC LRIS system

Task 8 Deliverables:

- CONSULTANT will deliver a pavement marking inventory with attributes identified above in a GIS file geodatabase and publish in VUEWorks.

Task 9 – Traffic Sign and Support Inventory

CONSULTANT's Mobile Asset Collection (MAC) vehicles will collect right-of-way asset inventories at the same time that data is collected for the pavement management system. The vehicles will capture images at an interval of approximately 10 to 15 feet for both forward and side-facing directions and geo-referenced to the pavement inventory by segment. OWNER will provide updated geodatabase for this feature class prior to extraction.

CONSULTANT will collect traffic signs with the following attributes:

Traffic Sign and Support Attributes (Point Feature) Per CTRMA Domain Model

- CORRIDOR_NAME
- CROSS_ST_NAME
- TRAVEL_DIRECTION
- LANE_TYPE
- PANEL_MUTCD_CAT
- PANEL_MUTCD_CODE
- PANEL_SUPPORT_STRUCT
- PANEL_ORIENTATION
- PANEL_TEXT
- PANEL_PHOTO
- RM
- RMA_ID

FeatureClassName – GndSignStructure (Point Feature)

- CORRIDOR_NAME
- CROSS_ST_NAME
- TRAVEL_DIRECTION
- LANE_TYPE
- POST_QTY
- RM
- RMA_ID

Task 9 Deliverables:

- CONSULTANT will deliver a sign and sign support inventory with attributes identified above in a GIS file geodatabase along with corresponding extracted asset image and publish in VUEWorks



Sample MAC LRIS van imagery of signs

Task 10 – Traffic Sign Overhead Sign Structure (OSS) Support Inventory

CONSULTANT’s Mobile Asset Collection (MAC) vehicles will collect right-of-way asset inventories at the same time that data is collected for the pavement management system. The vehicles will capture images at an interval of approximately 10 to 15 feet for both forward and side-facing directions and geo-referenced to the pavement inventory by segment. OWNER will provide updated geodatabase for this feature class prior to extraction.

CONSULTANT will collect traffic signs with the following attributes:

Traffic Sign OSS Support (Line Feature) Per CTRMA Domain Model

- CORRIDOR_NAME
- CROSS_ST_NAME
- TRAVEL_DIRECTION
- LANE_TYPE
- OSS_TYPE
- RMA_ID
- OSS_PHOTO_1

Task 10 Deliverables:

- CONSULTANT will deliver an overhead sign support inventory with attributes identified above in a GIS file geodatabase along with corresponding extracted asset image and publish in VUEWorks.

Task 11-Street Light (illumination structure) Inventory

CONSULTANT's Mobile Asset Collection (MAC) vehicles will collect right-of-way asset inventories at the same time that data is collected for the pavement management system. The vehicles will capture images at an interval of approximately 10 to 15 feet for both forward and side-facing directions and geo-referenced to the pavement inventory by segment. OWNER will provide updated geodatabase for this feature class prior to extraction. NOTE: traffic signals with lighting, are not marked as illumination. It is a signal that happens to have a street light mounted. In these cases the asset will be specified as a 'signal'. CONSULTANT will collect street lighting with the following attributes:

Street Lights Attributes (Point Feature) Per CTRMA Domain Model

- CORRIDOR_NAME
- CROSS_ST_NAME
- TRAVEL_DIRECTION
- LANE_TYPE
- I_POST_TYPE
- RM
- RMA_ID
- I_POST_PHOTO



Sample image of street lighting collected with MAC LRIS system

Task 11 Deliverables:

- CONSULTANT will deliver a street light inventory with attributes identified above in a GIS file geodatabase along with corresponding extracted asset image and publish in VUEWorks.

Task 12 – ADA Ramp Inventory

The CONSULTANT's MAC vehicles will collect right-of-way asset inventories simultaneously with data that are collected for the pavement management system. The vehicles will capture images at an interval of approximately 10 to 15 feet for both forward and side-facing directions and geo-referenced to the pavement inventory by segment. The CONSULTANT will collect ADA ramps (point feature) with the following attributes:

- CORRIDOR_NAME
- CROSS_ST_NAME
- TRAVEL_DIRECTION
- RM
- ADA_PHOTO



Sample image of ramps collected with MAC system

Task 12 Deliverables:

- The CONSULTANT will deliver a ramp inventory with attributes identified above in a GIS file geodatabase along with corresponding extracted asset images and publish in VUEWorks.

Task 13-Traffic Signal Inventory

The CONSULTANT's MAC vehicles will collect right-of-way asset inventories simultaneously with data that are collected for the pavement management system. The vehicles will capture images at an interval of approximately 10 to 15 feet for both forward and side-facing directions and georeferenced to the pavement inventory by segment. The CONSULTANT will collect the traffic signal (point feature) inventory with the following attributes:

- CORRIDOR_NAME
- CROSS_ST_NAME
- TRAVEL_DIRECTION
- LANE_TYPE
- RM
- SIGNAL_PHOTO
- SIGNAL_ILLUMINATION
- RMA_ID

- SIGNAL_ARM



Sample image of signals collected with MAC system

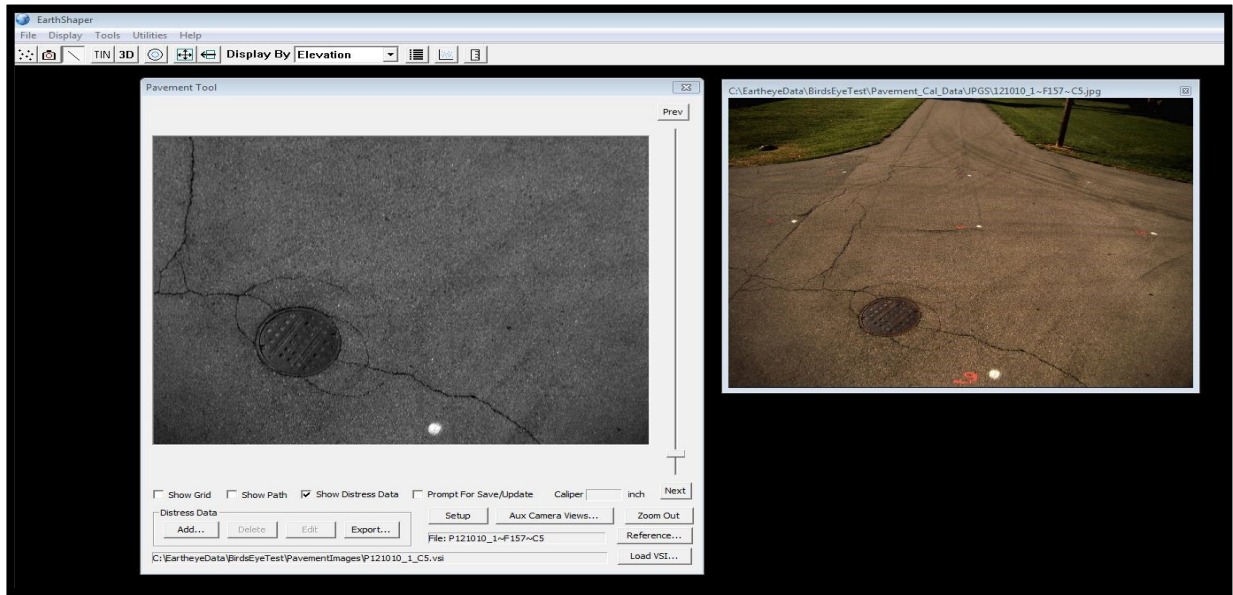
Task 13 Deliverables:

- The CONSULTANT will deliver a traffic signal inventory with attributes identified above in a GIS file geodatabase along with corresponding extracted asset images and publish in VUEWorks.

Task 14-Quality Assurance and Quality Control

The CONSULTANT will perform quality assurance and quality control on all data collected.

CONSULTANT has a proven Quality Assurance (QA)/Quality Control (QC) procedure for all MAC image collection projects. CONSULTANT'S QC procedures begin with MAC vehicle collection process. For the OWNER, a MAC calibration site(s) will be established that consists of up to 10 point locations nailed, painted and surveyed in a location easily accessible to the MAC LRIS vehicle. This calibration site will be recorded in at least two perpendicular directions at the beginning and end of each collection day.



Calibration Site Checked Daily to Ensure the Accuracy of Collection

The MAC technician will check each camera's exposure rate, image quality and GPS and IMU operation to ensure the MAC system is recording the image, GPS, DMI and IMU data and that the GPS location is within the stated project tolerance. Each collection day's calibration collection will be documented in the MAC collection log book. The MAC collection log book also contains information such as date, location, technician, driver, any issue that developed during the collection day and DMI calibration runs. CONSULTANT will maintain a Microsoft Access database of any collection or other project issues. All project team personnel including OWNER personnel will have access to the database to log comments, check the status of issues and have one central repository to track project issues and resolutions.

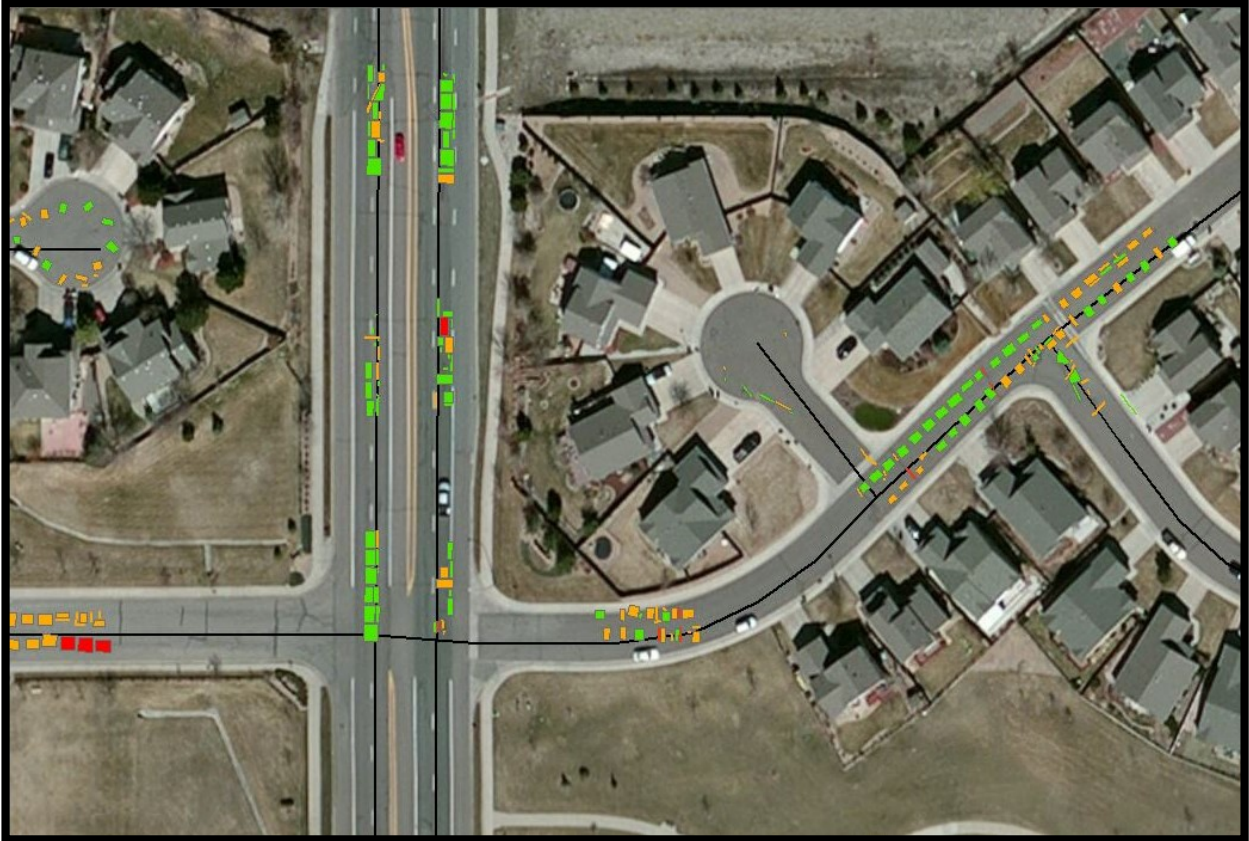
During image collection, the MAC technician reviews the images collected on-screen as they are collected and any issue with image clarity requires the collection run to end and the image quality issue to be resolved. Once resolved, the collection run begins from the beginning for the road segment collected. The MAC technician also monitors GPS reception during collection. If GPS reception is lost (measured using PDOP – positional dilution of precision), the MAC technician stops the collection and resolves the GPS reception issue. Collection begins again once the GPS reception issue is resolved. All issues resulting in the collection run being stopped will be recorded in the MAC collection log book along with the resolution.

With a completed collection drive delivered to CONSULTANT headquarters in Orlando, images are post processed and provided to the image QC Officer who will perform quality control checks on each delivery provided. The QC Officer will visually review the collection routes for image quality. All collection runs that are considered of low quality will be marked for recollection before the MAC vehicle(s) is allowed to leave the CTRMA.

Additionally, CONSULTANT will provide independent quality checks via field verification to

confirm accuracy of automated data collection. CONSULTANT utilizes walk-out maps that display pavement distress data for field confirmation and acceptance. CONSULTANT’s QA methodology is outlined in Task 14 at the end of this document.

CONSULTANT will verify use of domains included in CTRMA geodatabase where provided for the extraction attributes.



CONSULTANT field Maps utilized for field verification of pavement distress data

TASK 14 Deliverables:

- CONSULTANT will perform field verification of pavement condition scores with CTRMA staff to answer questions and resolve discrepancies in data and field observations.

ACCEPTANCE CRITERIA

The results of the data collection shall be quality checked for rating consistency by CONSULTANT to ensure the accuracy and quality of deliverables. Notes from field validations will be implemented into the distress evaluations to make any corrections for deficiencies in distress identification. Additionally, deliverables will be checked for missing and/or duplicate assets and anomalies. A 97% accuracy rate is expected and Quality Control checks will be based on the batch/sample size of the delivery (see Table A below to determine sample size for the appropriate

accuracy rate).

For any measurement that is needed, it must be accurate to the nearest foot. If the data has more errors than allowable the set of data will be corrected. This process will be repeated until each set of data is within the allowable limits.

Method of measurement of acceptable quality level (AQL)

Each attribute captured for an asset counts as one unit of measure. Each physical measurement required for an asset location counts as one attribute or unit of measure. The following location information also counts as an attribute or unit of measure for each asset: Physical presence (when captured as per source = correct, not captured or missed = incorrect) In the event of a duplicate capture of an asset, the total number of attributes or units of measure for the duplicate asset(s) will be deducted from the total units of the sample set, and one error or unit of measure (incorrect physical presence) is charged.

TABLE A

Batch size			Sample Size (Normal)	Acceptance Rate (%)				
				99.0	98.5	97.5	96.0	93.5
2	to	8	2	≤ 0	≤ 0	≤ 0	≤ 0	≤ 0
9	to	15	3	≤ 0	≤ 0	≤ 0	≤ 0	≤ 0
16	to	25	5	≤ 0	≤ 0	≤ 0	≤ 0	≤ 1
26	to	50	8	≤ 0	≤ 0	≤ 0	≤ 1	≤ 1
51	to	90	13	≤ 0	≤ 0	≤ 1	≤ 1	≤ 2
91	to	150	20	≤ 0	≤ 1	≤ 1	≤ 2	≤ 3
151	to	280	32	≤ 1	≤ 1	≤ 2	≤ 3	≤ 5
281	to	500	50	≤ 1	≤ 2	≤ 3	≤ 5	≤ 7
501	to	1,200	80	≤ 2	≤ 3	≤ 5	≤ 7	≤ 10
1,201	to	3,200	125	≤ 3	≤ 5	≤ 7	≤ 10	≤ 14
3,201	to	10,000	200	≤ 5	≤ 7	≤ 10	≤ 14	≤ 21
10,001	to	35,000	315	≤ 7	≤ 10	≤ 14	≤ 21	≤ 21
35,001	to	150,000	500	≤ 10	≤ 14	≤ 21	≤ 21	≤ 21
150,001	to	500,000	800	≤ 14	≤ 21	≤ 21	≤ 21	≤ 21
500,001	and over		1250	≤ 21	≤ 21	≤ 21	≤ 21	≤ 21

Example: a delivery results in 100 assets – each asset has been determined to have 10 attributes to be captured (including the physical presence “attribute” for each asset) – thus total units of measure for the Batch size = 1,000 (100 x 10). Based on Table A, a Quality Control using a sample size of 80 units should be assessed for quality. With an expected accuracy of 97%, the allowable number of errors ≤ 5.