



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

Regular Meeting of the Board of Directors

9:00 a.m.

Wednesday, June 30, 2021

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

*A live video stream of this meeting may be viewed on the internet at
www.mobilityauthority.com*

SPECIAL NOTE TO MEMBERS OF THE PUBLIC: Pursuant to the March 16, 2020 proclamation issued by Governor Abbott, this meeting will be held by videoconference in order to advance the public health goal of limiting face-to-face meetings (also called "social distancing") to slow the spread of COVID-19. Some Board Members may be present in the Lebermann Board Room while others may attend the meeting via videoconferencing. In order to maintain safe social distancing, members of the public will not be permitted to attend in person. Instead, we ask that you view the Board Meeting online via the live stream link on our website. Members of the public that wish to join the videoconference to provide comments during the Board Meeting must register at least 30 minutes prior to the scheduled start time by contacting the Central Texas Regional Mobility Authority at (844) 287-6220.

AGENDA

No action on the following:

1. Welcome and opportunity for public comment – See **Notes** at the end of this agenda.

Consent Agenda

*See **Notes** at the end of this agenda.*

2. Approve the minutes from the May 21, 2021 Board Budget Workshop & the May 26, 2021 Regular Board Meeting.

3. Prohibit the operation of certain vehicles on Mobility Authority toll facilities pursuant to the Habitual Violator Program.

Regular Items

Items to discuss, consider, and take appropriate action.

4. Accept the financial statements through May 2021.
5. Discuss and consider approving a cost of living adjustment for Mobility Authority retirees.
6. Discuss and adopt the FY 2022 Operating Budget.
7. Discuss and consider approving a contract with LJA Engineering, Inc. for construction engineering and inspection services for the 183 North Mobility Project.
8. Discuss and consider approving a contract with ACI Group, LLC for independent environmental compliance management services for the 183 North Mobility Project.
9. Discuss and consider approving a contract with Angel Brothers Holdings Corp. for roadway maintenance on 183A Toll and 290E Toll.

Briefings and Reports

Items for briefing and discussion only. No action will be taken by the Board.

10. Report on the 87th Regular Session of the Texas Legislature.
11. Executive Director Board Report.

Executive Session

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

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

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

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

Reconvene in Open Session.

Regular Items

Items to discuss, consider, and take appropriate action.

15. Adjourn Meeting.

Notes

Opportunity for Public Comment. At the beginning of the meeting, the Board provides a period of up to one hour for public comment on any matter subject to the Mobility Authority's jurisdiction. Each speaker is allowed a maximum of three minutes. A person who wishes to address the Board must register in advance and provide the speaker's name, address, phone number and email, as well as the agenda item number and whether you wish to speak during the public comment period or during the agenda item. If a speaker's topic is not listed on this agenda, the Board may not deliberate the speaker's topic or question the speaker during the open comment period, but may direct staff to investigate the matter or propose that an item be placed on a subsequent agenda for deliberation and possible action by the Board. The Board may not deliberate or act on an item that is not listed on this agenda.

Consent Agenda. The Consent Agenda includes routine or recurring items for Board action with a single vote. The Chairman or any Board Member may defer action on a Consent Agenda item for discussion and consideration by the Board with the other Regular Items.

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

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

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

Español. Si desea recibir asistencia gratuita para traducir esta información, llame al (512) 996-9778.

Participation by Telephone Conference Call. One or more members of the Board of Directors may participate in this meeting through a telephone conference call, as authorized by Sec. 370.262, Texas Transportation Code (*see below*). Under that law, each part of the telephone conference call meeting law must be open to the public, shall be audible to the public at the meeting location, and will be tape-recorded. On conclusion of the meeting, the tape recording of the meeting will be made available to the public.

Sec. 370.262. MEETINGS BY TELEPHONE CONFERENCE CALL.

(a) Chapter 551, Government Code, does not prohibit any open or closed meeting of the board, a committee of the board, or the staff, or any combination of the board or staff, from being held by telephone conference call. The board may hold an open or closed meeting by telephone conference call subject to the requirements of Sections 551.125(c)-(f), Government Code, but is not subject to the requirements of Subsection (b) of that section.

(b) A telephone conference call meeting is subject to the notice requirements applicable to other meetings.

*Mobility Authority Board Meeting Agenda
Wednesday, June 30, 2021*

(c) Notice of a telephone conference call meeting that by law must be open to the public must specify the location of the meeting. The location must be a conference room of the authority or other facility in a county of the authority that is accessible to the public.

(d) Each part of the telephone conference call meeting that by law must be open to the public shall be audible to the public at the location specified in the notice and shall be tape-recorded or documented by written minutes. On conclusion of the meeting, the tape recording or the written minutes of the meeting shall be made available to the public.

Sec. 551.125. OTHER GOVERNMENTAL BODY. (a) Except as otherwise provided by this subchapter, this chapter does not prohibit a governmental body from holding an open or closed meeting by telephone conference call.

~~(b) A meeting held by telephone conference call may be held only if:~~

~~(1) an emergency or public necessity exists within the meaning of Section 551.045 of this chapter; and~~

~~(2) the convening at one location of a quorum of the governmental body is difficult or impossible; or~~

~~(3) the meeting is held by an advisory board.~~

(c) The telephone conference call meeting is subject to the notice requirements applicable to other meetings.

(d) The notice of the telephone conference call meeting must specify as the location of the meeting the location where meetings of the governmental body are usually held.

(e) Each part of the telephone conference call meeting that is required to be open to the public shall be audible to the public at the location specified in the notice of the meeting as the location of the meeting and shall be tape-recorded. The tape recording shall be made available to the public.

(f) The location designated in the notice as the location of the meeting shall provide two-way communication during the entire telephone conference call meeting and the identification of each party to the telephone conference shall be clearly stated prior to speaking.

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CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

June 30, 2021
AGENDA ITEM #1

Welcome and opportunity for public
comment

Welcome and opportunity for public comment.
No Board action required.



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

June 30, 2021
AGENDA ITEM #2

Approve the minutes from the May 21,
2021 Board Budget Workshop & the
May 26, 2021 Regular Board Meeting

Strategic Plan Relevance: Regional Mobility
Department: Legal
Contact: Geoff Petrov, General Counsel
Associated Costs: N/A
Funding Source: N/A
Action Requested: Consider and act on motion to approve minutes

Description/Background: Approve the attached draft minutes for the May 21, 2021 Board Budget Workshop & the May 26, 2021 Regular Board Meeting.

Backup provided: Draft minutes

MINUTES

Budget Workshop of the Board of

Directors of the

CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY

Friday, May 21, 2021

2:00 p.m.

This was a video conference meeting. Notice of the meeting was posted May 17, 2021 online on the website of the Mobility Authority and in the Mobility Authority's office lobby at 3300 N. Interstate 35, #300, Austin, Texas 78705-1849. Chairman Jenkins was present on the video conference meeting as were Vice Chair Meade, Board Members David Armbrust, Mike Doss, Heather Gaddes, John Langmore, and David Singleton.

An archived copy of the live-streamed audio of this meeting is available at:

<https://mobilityauthority.swagit.com/play/05212021-930>

1. Welcome and opportunity for public comment.

After noting that a quorum of the Board was present, Chairman Jenkins called the meeting to order at 2:05 p.m. and had each Board Member who attended via video conference state their name for the record and confirm that they could both hear and be heard by all other attendees that were present in-person or live streaming.

Workshop presentations

2. Draft FY 2022 Operating Budget

Presentation and overview of the draft FY 2022 Operating Budget by Bill Chapman, Interim Executive Director and Chief Financial Officer. Presentation of individual department budgets by Mobility Authority staff. Board Members discussed various budget items and provided feedback to staff. No action was taken.

3. Closing Comments and Feedback

After confirming that no member of the public wished to address the Board, Chairman Jenkins declared the meeting adjourned at 3:49 p.m.

4. Adjourn Meeting

MINUTES

Regular Meeting of the Board of

Directors of the

CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY

Wednesday, May 26, 2021

9:00 a.m.

This was a video conference meeting. Notice of the meeting was posted May 20, 2021 online on the website of the Mobility Authority and in the Mobility Authority's office lobby at 3300 N. Interstate 35, #300, Austin, Texas 78705-1849. Chairman Jenkins was present on the video conference meeting as were Vice Chair Meade, Board Members David Armbrust, Heather Gaddes, John Langmore, and Mike Doss.

An archived copy of the live-streamed audio of this meeting is available at:

<https://mobilityauthority.swagit.com/play/05262021-623>

1. Welcome and opportunity for public comment.

After noting that a quorum of the Board was present, Chairman Jenkins called the meeting to order at 9:02 a.m. and had each Board Member who attended via video conference state their name for the record and confirm that they could both hear and be heard by all other attendees that were present in-person or live streaming.

Consent Agenda

2. Approve the minutes from the April 28, 2021 Regular Board Meeting.
3. Prohibit the operation of certain vehicles on Mobility Authority toll facilities pursuant to the Habitual violator Program.

Chairman Jenkins tabled Item No. 3

MOTION:	Approve Item No. 2 under the Consent Agenda.
RESULT:	Approved (Unanimous); 6-0
MOTION:	Mike Doss
SECONDED BY:	John Langmore
AYE:	Armbrust, Doss, Gaddes, Jenkins, Langmore, Meade

Regular Items

4. Accept the financial statements through April 2021.

Presentation by Bill Chapman, Interim Executive Director and Chief Financial Officer and Mary Temple, Controller.

MOTION: Accept the financial statements through April 2021.

RESULT: Approved (Unanimous); 6-0

MOTION: Mike Doss

SECONDED BY: Heather Gaddes

AYE: Armbrust, Doss, Gaddes, Jenkins, Langmore, Meade

NAY: None.

ADOPTED AS: **RESOLUTION NO. 21-032**

5. Discuss and consider awarding a contract for construction engineering and inspection services for the 183 North Mobility Project.

Presentation by Mike Sexton, P.E., Acting Director of Engineering and TW Lowe, Vice President, LJA Engineering, Inc. addressed the Board.

MOTION: Award a contract for construction engineering and inspection services for the 183 North Mobility Project to LJA Engineering, Inc.

RESULT: Approved (Unanimous); 6-0

MOTION: John Langmore

SECONDED BY: Mike Doss

AYE: Armbrust, Doss, Gaddes, Jenkins, Langmore, Meade

NAY: None.

ADOPTED AS: **RESOLUTION NO. 21-033**

6. Discuss and consider awarding a contract for independent environmental compliance manager services for the 183 North Mobility Project.

Presentation by Mike Sexton, P.E., Acting Director of Engineering and Kevin Ramberg, Project Manager, ACI Group LLC addressed the Board.

MOTION: Award a contract for independent environmental compliance manager services for the 183 North Mobility Project to ACI Group, LLC.

RESULT: Approved (Unanimous); 6-0
MOTION: David Armbrust
SECONDED BY: John Langmore
AYE: Armbrust, Doss, Gaddes, Jenkins, Langmore, Meade
NAY: None.

ADOPTED AS: RESOLUTION NO. 21-034

7. Discuss and consider approving a contract with CP&Y Inc. for design and construction-phase services for the Barton Skyway Ramp Relief Project.

Presentation by Mike Sexton, P.E., Acting Director of Engineering.

MOTION: Approve a contract with CP&Y Inc. for design and construction-phase services for the Barton Skyway Ramp Relief Project.

RESULT: Approved (Unanimous); 6-0
MOTION: Mike Doss
SECONDED BY: Nikelle Meade
AYE: Armbrust, Doss, Gaddes, Jenkins, Langmore, Meade
NAY: None.

ADOPTED AS: RESOLUTION NO. 21-035

Briefings and Reports

8. Executive Director Report.

Presentation by Bill Chapman, Interim Executive Director and Chief Financial Officer.

- A. Park and Ride services procurement

Jeff Dailey, Deputy Executive Director answered questions.

- B. Draft FY 2022 Operating Budget

Executive Session

Chairman Jenkins announced there would be no Executive Session and tabled items 9 thru 11.

9. Discuss legal issues related to claims by or against the Mobility Authority; pending or contemplated litigation and any related settlement offers; or other matters as authorized by §551.071 (Consultation with Attorney).
10. Discuss legal issues relating to procurement and financing of Mobility Authority transportation projects, as authorized by §551.071 (Consultation with Attorney).
11. Discuss personnel matters as authorized by §551.074 (Personnel Matters).

Regular Items

After confirming that no member of the public wished to address the Board, Chairman Jenkins declared the meeting adjourned at 10:08 a.m.

12. Adjourn Meeting.



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

June 30, 2021
AGENDA ITEM #3

Prohibit the operation of certain
vehicles on Mobility Authority toll
facilities pursuant to the Habitual
Violator Program

Strategic Plan Relevance:	Regional Mobility
Department:	Operations
Contact:	Tracie Brown, Director of Operations
Associated Costs:	N/A
Funding Source:	N/A
Action Requested:	Consider and act on draft resolution

Project Description/Background: The Mobility Authority's habitual violator process prescribes two notices before habitual violator remedies go into effect. A pre-determination letter is sent 60 days before any remedies are enforced advising the customer again of their outstanding balance and providing an opportunity for resolution. Assuming no resolution, a *Notice of Determination* is mailed notifying the customer they've been determined to be a habitual violator and advising of the consequences. The customer is also informed of their right to appeal the decision and the process by which to do so.

If the customer does not contact the Authority to appeal the habitual violator determination or resolve their outstanding balance, a block is placed on the related vehicle's registration preventing renewal. The block remains in effect until all tolls and fees have been paid, a payment plan has been arranged with the Mobility Authority or the customer is determined to no longer be a habitual violator.

Previous Actions & Brief History of the Program/Project: : State law states that persons deemed to be habitual violators may also be prohibited from use of the Mobility Authority's toll facilities by order of the Board of Directors. Habitual violator customers operating a vehicle in violation of a ban are subject to a Class C misdemeanor with a fine up to \$500. A second or subsequent occurrence may result in impoundment of the vehicle. Similar to registration blocks, vehicle bans remain in effect until all

outstanding amounts owed to the Authority have been resolved or the customer is no longer deemed a habitual violator.

Financing: Not applicable.

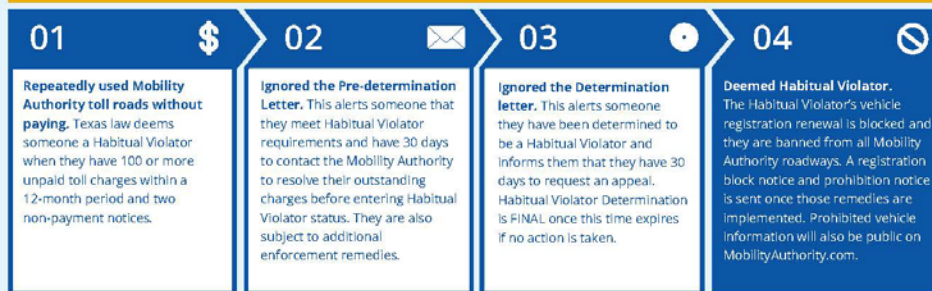
Action requested/Staff Recommendation: Staff affirms that all required steps have been followed and proper notice previously provided to customers determined to be habitual violators. To date, these customers have not appealed this determination or resolved their outstanding balances.

Therefore, staff recommends that the Board of Directors approve the order prohibiting certain vehicles from use of the Authority's toll facilities. Following the Board's approval of this order, a Notice of Prohibition will be mailed by first class mail advising of the ban, consequences if the ban is violated and how the customer may resolve their outstanding balance.

Backup provided: Habitual Violator Vehicle Ban FAQs
Draft Resolution



Habitual Violator Process



Who is a Habitual Violator?

A Habitual Violator is defined in Section 372.106(a) of the Texas Transportation Code as (A) one who was issued at least two written notices of nonpayment that contained in aggregate 100 or more events of nonpayment within a period of one year and, (B) was issued a warning that failure to pay the amounts specified in the notices may result in the toll project entity's exercise of Habitual Violator remedies.

What enforcement remedies is the Mobility Authority implementing for Habitual Violators?

To encourage equitable payment by all customers, legislation allows for enforcement remedies up to and including vehicle registration renewal blocks, prohibiting Habitual Violator's vehicles on Mobility Authority roadways, on-road enforcement of the vehicle ban, as well as posting names to the agency website of those Habitual Violators with banned vehicles. The Mobility Authority will be implementing these remedies beginning November 2019.

How will I know I'm a Habitual Violator subject to enforcement remedies?

Habitual Violators are provided due process protections prior to any enforcement action.

- A registered vehicle owner who the Mobility Authority determines meets the Habitual Violator status is sent a letter advising them that Habitual Violator remedies may be implemented if the customer's outstanding balance is not resolved. This letter is not required by law but is sent as a courtesy to reflect the Mobility Authority's commitment to the customer.
- A registered vehicle owner who the Mobility Authority determines to be a Habitual Violator receives written notice of that determination and an opportunity for a justice of the peace hearing to challenge their Habitual Violator status.
- Habitual Violator Determination is FINAL if no action is taken, prompt in the Mobility Authority to send a Vehicle Registration Block Notice and/or a Vehicle Ban Notice. These notices urge the Habitual Violator yet again to resolve their toll debt with the Mobility Authority.
- Sufficient time is provided to respond to all notifications.

Learn more about the Habitual Violator Enforcement Program at MobilityAuthority.com



How can I resolve my Habitual Violator status and settle my toll bill balance?

You can pay outstanding tolls and administrative fees with cash, money order or credit card (a payment plan may be available) by: calling the Mobility Authority Customer Service Center at 512-410-0562, online at www.paymobilitybill.com, or in person at our walk-up center.

Why is the Mobility Authority pursuing enforcement remedies?

The vehicle registration block and other toll enforcement actions are intended to encourage tollway drivers to pay for services rendered to ensure fairness to the overwhelming majority of drivers who pay for the service, maintenance and safety of the toll roads.

How will a person be notified that he or she is subject to enforcement remedies?

A notification letter announcing that a person has met the criteria of Habitual Violator is sent to the address in the Texas Department of Motor Vehicles (TTC 372.106) database, allowing 30 days to contact to dispute their determination as a Habitual Violator or address the account balance before remedies are applied. If the Habitual Violator does not make arrangements with the Mobility Authority during this period, they will be subject to all enforcement remedies. Additionally, notification of a registration renewal block is mailed.

Can someone dispute a toll bill?

Yes. You may contact the Mobility Authority to review all outstanding tolls and fees, correct any errors and arrange for payment to clear your status as a Habitual Violator and the block on your registration. Habitual Violators are also given an opportunity to request an administrative hearing with a justice of the peace.

How will I know or be notified that I am subject to a vehicle ban?

Habitual violators subject to vehicle ban will receive notification that they have been banned, including when the ban will take effect and instructions for how to remove their status as a Habitual Violator.

Can I dispute my toll bill that subjects me to the vehicle ban?

Yes. You may contact the Mobility Authority to review all outstanding tolls and administrative fees, correct any errors and arrange for payment to clear your status as a Habitual Violator and remove the vehicle ban.

What happens if I am banned, but get caught driving on a Mobility Authority toll road?

A person commits an offense when operating a vehicle in violation of the ban and is subject to a Class C misdemeanor with a fine up to \$500. A second or subsequent occurrence of driving on the tollway in violation of a ban may result in impoundment of the vehicle.

How will the Mobility Authority know if I'm still driving (after being banned)?

Mobility Authority roads are equipped with technology that recognizes vehicle and license plates on our prohibited list. Individuals operating a prohibited vehicle on Mobility Authority roads will be reported to nearby law enforcement patrolling Mobility Authority roads.

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

RESOLUTION NO. 21-0XX

**PROHIBITING THE OPERATION OF CERTAIN MOTOR VEHICLES
ON MOBILITY AUTHORITY TOLL FACILITIES PURSUANT TO
THE HABITUAL VIOLATOR PROGRAM**

WHEREAS, Transportation Code, Chapter 372, Subchapter C, authorizes toll project entities, including the Central Texas Regional Mobility Authority (Mobility Authority), to exercise various remedies against certain motorists with unpaid toll violations; and

WHEREAS, Transportation Code §372.106 provides that a “habitual violator” is a registered owner of a vehicle who a toll project entity determines:

(1) was issued at least two written notices of nonpayment that contained:

(A) in the aggregate, 100 or more events of nonpayment within a period of one year, not including events of nonpayment for which: (i) the registered owner has provided to the toll project entity information establishing that the vehicle was subject to a lease at the time of nonpayment, as provided by applicable toll project entity law; or (ii) a defense of theft at the time of the nonpayment has been established as provided by applicable toll project entity law; and

(B) a warning that the failure to pay the amounts specified in the notices may result in the toll project entity’s exercise of habitual violator remedies; and

(2) has not paid in full the total amount due for tolls and administrative fees under those notices; and

WHEREAS, the Mobility Authority previously determined that the individuals listed in Exhibit A are habitual violators, and these determinations are now considered final in accordance with Transportation Code, Chapter 372, Subchapter C; and

WHEREAS, Transportation Code §372.109 provides that a final determination that a person is a habitual violator remains in effect until (1) the total amount due for the person’s tolls and administrative fees is paid; or (2) the toll project entity, in its sole discretion, determines that the amount has been otherwise addressed; and

WHEREAS, Transportation Code §372.110 provides that a toll project entity, by order of its governing body, may prohibit the operation of a motor vehicle on a toll project of the entity if:

(1) the registered owner of the vehicle has been finally determined to be a habitual violator; and

(2) the toll project entity has provided notice of the prohibition order to the registered owner; and

WHEREAS, the Executive Director recommends that the Board prohibit the operation of the motor vehicles listed in Exhibit A on the Mobility Authority's toll roads, including (1) 183A Toll; (2) 290 Toll; (3) 71 Toll; (4) MoPac Express Lanes; (5) 45 SW Toll; and (6) 183S Toll.

NOW THEREFORE, BE IT RESOLVED that the motor vehicles listed in Exhibit A are prohibited from operation on the Mobility Authority's toll roads, effective June 30, 2021; and

BE IT FURTHER RESOLVED that the Mobility Authority shall provide notice of this resolution to the individuals listed in Exhibit A, as required by Transportation Code §372.110; and

BE IT IS FURTHER RESOLVED that the prohibition shall remain in effect for the motor vehicles listed in Exhibit A until the respective habitual violator determinations are terminated, as provided by Transportation Code §372.110.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 30th day of June 2021.

Submitted and reviewed by:

Approved:

Geoffrey Petrov, General Counsel

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

Exhibit A

LIST OF PROHIBITED VEHICLES

(To be provided at the Board Meeting)



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

June 30, 2021
AGENDA ITEM #4

Accept the financial statements
through May 2021

Strategic Plan Relevance: Regional Mobility
Department: Finance
Contact: Bill Chapman, Chief Financial Officer
Associated Costs: N/A
Funding Source: N/A
Action Requested: Consider and act on draft resolution

Project Description/Background: Presentation and acceptance of the monthly financial statements for May 2021.

Previous Actions & Brief History of the Program/Project: N/A

Financing: N/A

Action requested/Staff Recommendation: Accept the monthly financial statements for May 2021.

Backup provided: Draft Resolution
Draft financial statements for May 2021

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

RESOLUTION NO. 21-0XX

ACCEPT THE FINANCIAL STATEMENTS FOR MAY 2021

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 May 2021, and has caused financial statements to be prepared and attached to this resolution as Exhibit A.

NOW THEREFORE, BE IT RESOLVED, that the Board of Directors accepts the financial statements for May 2021 attached hereto as Exhibit A.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 30th day of June 2021.

Submitted and reviewed by:

Approved:

Geoffrey Petrov, General Counsel

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

Exhibit A

Central Texas Regional Mobility Authority
Income Statement
For the Period Ending May 31, 2021

	Budget Amount FY 2021	Actual Year to Date	Percent of Budget	Actual Prior Year to Date
REVENUE				
Operating Revenue				
Toll Revenue - Tags	87,282,802	73,912,163	84.68%	78,240,619
Video Tolls	23,301,118	21,144,883	90.75%	21,631,045
Fee Revenue	8,342,080	8,862,674	106.24%	9,758,629
Total Operating Revenue	118,926,000	103,919,721	87.38%	109,630,292
Other Revenue				
Interest Income	2,500,000	800,582	32.02%	4,090,945
Grant Revenue	3,000,000	852,471	28.42%	1,895,743
Misc Revenue	3,000	123,384	4112.79%	4,111
Gain/Loss on Sale of Asset	-	-	-	11,117
Total Other Revenue	5,503,000	1,776,437	32.28%	6,001,916
TOTAL REVENUE	\$124,429,000	\$105,696,157	84.94%	115,632,209

EXPENSES				
Salaries and Benefits				
Salary Expense-Regular	4,773,694	3,814,860	79.91%	3,742,648
Salary Reserve	80,000	-	-	-
TCDRS	675,000	542,975	80.44%	518,585
FICA	221,877	178,408	80.41%	170,271
FICA MED	72,321	58,015	80.22%	54,577
Health Insurance Expense	513,812	421,077	81.95%	395,482
Life Insurance Expense	8,138	8,451	103.85%	7,134
Auto Allowance Expense	10,200	5,525	54.17%	8,925
Other Benefits	213,038	176,515	82.86%	115,841
Unemployment Taxes	4,608	5,021	108.97%	4,573
Total Salaries and Benefits	6,572,687	5,210,847	79.28%	5,018,036

Central Texas Regional Mobility Authority
Income Statement
For the Period Ending May 31, 2021

	Budget			
	Amount FY	Actual Year to	Percent of	Actual Prior
	2021	Date	Budget	Year to Date
Administrative				
Administrative and Office Expenses				
Accounting	8,000	8,532	106.65%	7,839
Auditing	115,000	91,475	79.54%	117,661
Human Resources	52,000	9,530	18.33%	28,920
IT Services	242,000	167,751	69.32%	158,989
Internet	450	-	-	215
Software Licenses	347,000	267,836	77.19%	55,458
Cell Phones	24,185	18,609	76.95%	19,369
Local Telephone Service	95,000	81,643	85.94%	89,756
Overnight Delivery Services	350	66	18.81%	53
Local Delivery Services	50	12	24.56%	25
Copy Machine	15,264	13,992	91.67%	13,992
Repair & Maintenance-General	12,000	4,344	36.20%	6,206
Meeting Facilities	5,000	-	-	-
Meeting Expense	14,750	1,676	11.36%	13,542
Toll Tag Expense	3,050	1,400	45.90%	2,050
Parking / Local Ride Share	2,900	49	1.68%	1,507
Mileage Reimbursement	6,800	260	3.82%	2,311
Insurance Expense	450,998	470,757	104.38%	289,603
Rent Expense	570,000	491,374	86.21%	410,236
Building Parking	11,000	251	2.28%	15,446
Legal Services	591,000	240,061	40.62%	364,608
Total Administrative and Office Expenses	2,566,797	1,869,618	72.84%	1,597,787
Office Supplies				
Books & Publications	4,750	4,016	84.54%	1,653
Office Supplies	9,500	3,790	39.90%	5,828
Misc Office Equipment	6,750	6,943	102.86%	3,610
Computer Supplies	36,350	41,120	113.12%	92,189
Copy Supplies	1,500	93	6.18%	1,573
Other Reports-Printing	8,000	-	-	-
Office Supplies-Printed	3,100	139	4.48%	3,181
Postage Expense	1,150	441	38.39%	396
Total Office Supplies	71,100	56,541	79.52%	108,431

Central Texas Regional Mobility Authority
Income Statement
For the Period Ending May 31, 2021

	Budget Amount FY 2021	Actual Year to Date	Percent of Budget	Actual Prior Year to Date
Communications and Public Relations				
Graphic Design Services	20,000	-	-	-
Website Maintenance	50,000	29,377	58.75%	27,062
Research Services	115,000	109,616	95.32%	92,253
Communications and Marketing	125,000	119,930	95.94%	237,765
Advertising Expense	150,000	171,764	114.51%	487,580
Direct Mail	5,000	-	-	-
Video Production	10,000	15,101	151.01%	31,288
Photography	5,000	-	-	777
Radio	-	-	-	3,480
Other Public Relations	55,000	10,576	19.23%	3,918
Promotional Items	-	1,260	-	8,875
Annual Report printing	6,500	553	8.51%	-
Direct Mail Printing	30,000	770	2.57%	-
Other Communication Expenses	33,000	3,062	9.28%	34,948
Total Communications and Public Relations	604,500	462,008	76.43%	927,947
Employee Development				
Subscriptions	2,873	1,767	61.49%	1,460
Agency Memberships	60,980	41,106	67.41%	51,868
Continuing Education	9,200	695	7.55%	1,409
Professional Development	7,000	-	-	9,165
Other Licenses	1,250	758	60.66%	731
Seminars and Conferences	38,500	(6,731)	-17.48%	24,361
Travel	-	-	-	83,832
Total Employee Development	119,803	37,595	31.38%	172,826
Financing and Banking Fees				
Trustee Fees	48,000	58,263	121.38%	53,763
Bank Fee Expense	2,000	1,157	57.86%	1,477
Continuing Disclosure	4,000	3,500	87.50%	3,634
Arbitrage Rebate Calculation	10,000	9,975	99.75%	10,225
Rating Agency Expense	24,000	7,500	31.25%	104,000
Total Financing and Banking Fees	88,000	80,395	91.36%	173,099
Total Administrative	3,450,200	2,506,158	72.64%	2,980,090

Central Texas Regional Mobility Authority
Income Statement
For the Period Ending May 31, 2021

	Budget Amount FY 2021	Actual Year to Date	Percent of Budget	Actual Prior Year to Date
Operations and Maintenance				
Operations and Maintenance Consulting				
GEC-Trust Indenture Support	350,129	394,051	112.54%	305,583
GEC-Financial Planning Support	209,410	109,708	52.39%	201,612
GEC-Toll Ops Support	800,000	202,947	25.37%	737,642
GEC-Roadway Ops Support	682,969	629,391	92.16%	882,390
GEC-Technology Support	741,461	542,077	73.11%	690,371
GEC-Public Information Support	100,000	73,698	73.70%	266,692
GEC-General Support	1,158,085	594,463	51.33%	1,528,949
General System Consultant	1,082,515	454,534	41.99%	906,046
Traffic Modeling	50,000	34,165	68.33%	-
Traffic and Revenue Consultant	150,000	249,511	166.34%	222,116
Total Operations and Maintenance Consulting	5,324,569	3,284,544	61.69%	5,741,400
Roadway Operations and Maintenance				
Roadway Maintenance	3,963,810	2,710,485	68.38%	3,164,009
Landscape Maintenance	2,665,410	1,989,650	74.65%	-
Signal & Illumination Maint	50,000	-	-	51,641
Maintenance Supplies-Roadway	250,000	82,930	33.17%	16,735
Tools & Equipment Expense	1,500	2,383	158.86%	852
Gasoline	30,500	10,261	33.64%	11,373
Repair & Maintenance - Vehicles	11,000	5,243	47.66%	7,101
Natural Gas	-	2,297	-	-
Electricity - Roadways	250,000	163,766	65.51%	168,115
Total Roadway Operations and Maintenance	7,222,220	4,967,015	68.77%	3,419,826
Toll Processing and Collection Expense				
Image Processing	1,200,000	1,784,506	148.71%	1,489,496
Tag Collection Fees	5,000,000	5,429,820	108.60%	5,108,957
Court Enforcement Costs	90,000	-	-	-
DMV Lookup Fees	1,000	-	-	221
Total Processing and Collection Expense	6,291,000	7,214,327	114.68%	6,598,674

Central Texas Regional Mobility Authority
Income Statement
For the Period Ending May 31, 2021

	Budget Amount FY 2021	Actual Year to Date	Percent of Budget	Actual Prior Year to Date
Toll Operations Expense				
Generator Fuel	3,000	1,409	46.96%	2,736
Fire and Burglar Alarm	500	370	74.02%	370
Refuse	2,400	1,610	67.10%	1,583
Water - Irrigation	7,500	3,423	45.64%	3,909
Electricity	500	636	127.17%	400
ETC spare parts expense	50,000	161,341	322.68%	8,272
Repair & Maintenance Toll Equip	-	-	-	48,308
Law Enforcement	300,000	182,668	60.89%	23,955
ETC Maintenance Contract	4,191,000	2,944,797	70.26%	2,315,404
ETC Toll Management Center System Operation	534,000	389,616	72.96%	-
ETC Development	1,250,000	861,517	68.92%	443,556
ETC Testing	200,000	1,687	0.84%	111,076
Total Toll Operations Expense	6,538,900	4,549,073	69.57%	2,959,568
Total Operations and Maintenance	25,376,689	20,014,959	78.87%	18,719,469
Other Expenses				
Special Projects and Contingencies				
HERO	148,000	135,510	91.56%	135,510
Special Projects	-	28,662	-	142,358
71 Express Net Revenue Payment	2,300,000	2,538,012	110.35%	3,364,737
Technology Initiatives	125,000	152,576	122.06%	350,162
Other Contractual Svcs	220,000	241,907	109.96%	154,000
Contingency	750,000	20,000	2.67%	10,000
Total Special Projects and Contingencies	3,543,000	3,116,667	87.97%	4,156,766
Non Cash Expenses				
Amortization Expense	1,000,000	829,583	82.96%	884,178
Amort Expense - Refund Savings	1,050,000	2,027,045	193.05%	962,470
Dep Exp - Furniture & Fixtures	2,620	2,396	91.45%	2,396
Dep Expense - Equipment	59,000	2,292	3.88%	44,690
Dep Expense - Autos & Trucks	30,000	31,975	106.58%	30,621
Dep Expense - Buildng & Toll Fac	176,800	162,019	91.64%	162,019
Dep Expense - Highways & Bridges	40,000,000	31,885,642	79.71%	30,329,565
Dep Expense - Toll Equipment	4,000,000	3,353,012	83.83%	3,315,634
Dep Expense - Signs	800,000	931,857	116.48%	760,036
Dep Expense - Land Improvements	985,000	811,190	82.35%	884,934
Depreciation Expense - Computers	75,000	175,607	234.14%	87,025
Undevelopable Projects	-	973,161	-	-
Total Non Cash Expenses	48,178,420	41,185,778	85.49%	37,463,568
Total Other Expenses	51,721,420	44,302,445	85.66%	41,620,334

Central Texas Regional Mobility Authority
Income Statement
For the Period Ending May 31, 2021

	Budget			
	Amount FY	Actual Year to	Percent of	Actual Prior
	2021	Date	Budget	Year to Date
Non Operating Expenses				
Bond Issuance Expense	2,000,000	575,185	28.76%	1,382,281
Loan Fee Expense	50,000	28,000	56.00%	27,000
Interest Expense	42,091,626	45,414,974	107.90%	35,096,142
CAMPO RIF Payment	-	-	-	3,000,000
Community Initiatives	65,000	62,050	95.46%	144,366
Total Non Operating Expenses	44,206,626	46,080,209	104.24%	39,649,789
TOTAL EXPENSES	\$131,327,621	\$118,114,618	89.94%	\$107,987,718
Net Income	(\$6,898,621)	(\$12,418,460)		7,644,491

Central Texas Regional Mobility Authority
Balance Sheet
as of May 31, 2021

	as of 05/31/2021	as of 05/31/2020
ASSETS		
Current Assets		
Cash		
Regions Operating Account	\$ 735,853	\$ 509,346
Cash in TexStar	440,198	239,940
Regions Payroll Account	277,367	162,653
Restricted Cash		
Goldman Sachs FSGF 465	867,197,599	148,550,887
Restricted Cash - TexSTAR	167,848,150	308,533,977
Overpayments account	719,382	719,480
Total Cash and Cash Equivalents	1,037,218,549	458,716,283
Accounts Receivable		
Accounts Receivable	2,770,089	2,770,089
Due From Other Agencies	76,330	50,698
Due From TTA	5,658,592	755,419
Due From NTTA	1,091,869	634,509
Due From HCTRA	1,595,614	790,436
Due From TxDOT	1,414,432	2,985,763
Interest Receivable	844,423	184,596
Total Receivables	13,451,347	8,171,510
Short Term Investments		
Treasuries	269,755,102	9,855,135
Agencies	-	10,144,865
Total Short Term Investments	269,755,102	20,000,000
Total Current Assets	1,320,424,998	486,887,794
Total Construction in Progress	697,750,932	606,764,151
Fixed Assets (Net of Depreciation and Amortization)		
Computers	303,345	495,301
Computer Software	2,585,565	3,454,137
Furniture and Fixtures	5,010	7,623
Equipment	2,332	4,832
Autos and Trucks	41,444	77,016
Buildings and Toll Facilities	4,608,495	4,785,243
Highways and Bridges	1,161,772,671	1,196,385,159
Toll Equipment	19,520,236	23,178,067
Signs	13,725,068	13,114,554
Land Improvements	7,157,947	8,042,881
Right of way	88,149,606	88,149,606
Leasehold Improvements	94,700	140,842
Total Fixed Assets	1,297,966,419	1,337,835,263
Other Assets		
Intangible Assets-Net	135,646,458	101,279,570
2005 Bond Insurance Costs	3,665,225	3,878,733
Prepaid Insurance	182,070	292,108
Deferred Outflows (pension related)	198,767	866,997
Pension Asset	896,834	177,226
Total Other Assets	140,589,355	106,494,634
Total Assets	\$ 3,456,731,704	\$ 2,537,981,842

Central Texas Regional Mobility Authority
Balance Sheet
as of May 31, 2021

	as of 05/31/2021	as of 05/31/2020
LIABILITIES		
Current Liabilities		
Accounts Payable	\$ 21,667,688	\$ 13,197,896
Construction Payable	14,610,250	23,185,111
Overpayments	722,663	722,663
Interest Payable	34,221,866	23,740,037
TCDRS Payable	58,848	69,941
Due to other Agencies	9,511	2,727
Due to TTA	547,500	336,289
Due to NTTA	60,464	42,175
Due to HCTRA	118,870	56,857
Due to Other Entities	1,193,580	812,276
71E TxDOT Obligation - ST	471,091	643,193
Total Current Liabilities	73,682,331	62,809,166
Long Term Liabilities		
Compensated Absences	372,715	543,329
Deferred Inflows (pension related)	164,402	206,675
Long Term Payables	537,118	750,004
Bonds Payable		
Senior Lien Revenue Bonds:		
Senior Lien Revenue Bonds 2010	80,810,345	75,003,133
Senior Lien Revenue Bonds 2011	18,471,749	17,363,465
Senior Refunding Bonds 2013	7,080,000	133,195,000
Senior Lien Revenue Bonds 2015	298,790,000	298,790,000
Senior Lien Put Bnd 2015	-	68,785,000
Senior Lien Refunding Revenue Bonds 2016	348,295,000	356,785,000
Senior Lien Revenue Bonds 2018	44,345,000	44,345,000
Senior Lien Revenue Bonds 2020A	50,265,000	50,265,000
Senior Lien Refunding Bonds 2020B	56,205,000	-
Senior Lien Refunding Bonds 2020C	138,435,000	-
Senior Lien Revenue Bonds 2020E	167,160,000	-
Senior Lien Revenue Bonds 2021B	255,075,000	-
Sn Lien Rev Bnd Prem/Disc 2013	2,832,769	4,625,802
Sn Lien Revenue Bnd Prem 2015	17,287,543	18,484,048
Sn Lien Put Bnd Prem 2015	-	154,825
Senior lien premium 2016 revenue bonds	39,291,386	43,436,776
Sn Lien Revenue Bond Premium 2018	3,438,578	3,705,152
Senior Lien Revenue Bond Premium 2020A	11,495,500	11,672,814
Senior Lien Refunding Bond Premium 2020B	12,351,321	-
Senior Lien Revenue Bonds Premium 2020E	27,690,205	-
Senior Lien Revenue Binds Premium 2021B	53,760,480	-
Total Senior Lien Revenue Bonds	1,633,079,876	1,126,611,015

Central Texas Regional Mobility Authority
Balance Sheet
as of May 31, 2021

	as of 05/31/2021	as of 05/31/2020
Sub Lien Revenue Bonds:		
Sub Lien Refunding Bonds 2013	5,320,000	95,945,000
Sub Lien Refunding Bonds 2016	73,055,000	73,490,000
Subordinated Lien BANs 2018	46,020,000	46,020,000
Sub Lien Refunding Bonds 2020D	99,705,000	-
Subordinated Lien BANs 2020F	110,875,000	-
Subordinate Lien Refunding Bonds 2020G	61,570,000	-
Subordinated Lien BANs 2021C	244,185,000	-
Sub Refunding 2013 Prem/Disc	604,434	994,603
Sub Refunding 2016 Prem/Disc	6,684,557	7,522,987
Sub Lien BANS 2018 Premium	308,661	837,794
Subordinated Lien BANs 2020F Premium	14,343,598	-
Subordinated Lien Refunding Bonds Premium 2020G	7,605,856	-
Sub Lien BANS 2021C Premium	42,498,532	-
Total Sub Lien Revenue Bonds	712,775,638	224,810,385
Other Obligations		
TIFIA Note 2015	-	296,275,227
TIFIA Note 2019	-	51,164
TIFIA Note 2021	304,116,563	-
SIB Loan 2015	-	34,256,908
State Highway Fund Loan 2015	-	34,276,938
71E TxDOT Obligation - LT	60,728,211	60,728,211
Regions 2017 MoPAC Note	24,990,900	24,990,900
Total Other Obligations	389,835,674	450,579,347
Total Long Term Liabilities	2,736,228,306	1,802,750,750
Total Liabilities	2,809,910,638	1,865,559,916
NET ASSETS		
Contributed Capital	121,462,104	121,462,104
Net Assets Beginning	546,490,426	543,314,721
Current Year Operations	(21,131,463)	7,645,101
Total Net Assets	646,821,067	672,421,926
Total Liabilities and Net Assets	\$ 3,456,731,704	\$ 2,537,981,842

Central Texas Regional Mobility Authority
Statement of Cash Flow
as of May 2021

Cash flows from operating activities:

Receipts from toll revenues	\$ 103,399,889
Receipts from interest income	801,192
Payments to vendors	(35,341,449)
Payments to employees	(5,521,675)
Net cash flows provided by (used in) operating activities	63,337,957

Cash flows from capital and related financing activities:

Proceeds from notes payable	913,010,564
Payments on bonds	(16,122,871)
Interest payments	(57,625,388)
Acquisitions of construction in progress	(55,030,318)
Net cash flows provided by (used in) capital and related financing activities	784,231,987

Cash flows from investing activities:

Purchase of investments	(378,614,440)
Proceeds from sale or maturity of investments	253,648,703
Net cash flows provided by (used in) investing activities	(125,582,229)
Net increase (decrease) in cash and cash equivalents	721,987,714
Cash and cash equivalents at beginning of period	146,942,487
Cash and cash equivalents at end of period	\$ 868,930,200

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

Operating income	\$ 32,685,893
Adjustments to reconcile change in net assets to net cash provided by operating activities:	
Depreciation and amortization	40,287,219
Changes in assets and liabilities:	
(Increase) decrease in accounts receivable	(519,832)
(Increase) decrease in prepaid expenses and other assets	122,167
(Decrease) increase in accounts payable	(3,078,394)
Increase (decrease) in accrued expenses	(6,065,446)
(Decrease) increase in Pension Asset	(719,608)
(Increase) in deferred outflows of resources	668,230
(Increase) in deferred inflows of resources	(42,273)
Total adjustments	30,652,063
Net cash flows provided by (used in) operating activities	\$ 63,337,957

Reconciliation of cash and cash equivalents:

Unrestricted cash and cash equivalents	\$ 1,732,601
Restricted cash and cash equivalents	867,197,599
Total	\$ 868,930,200

INVESTMENTS by FUND

		Balance May 31, 2021		
Renewal & Replacement Fund				
TexSTAR	1,794.27		TexSTAR	168,288,348.14
Goldman Sachs	89,922.67		Goldman Sachs	851,148,190.05
Agencies/ Treasuries		91,716.94	Agencies & Treasury Notes	269,755,102.50
Grant Fund				\$ 1,289,191,640.69
TexSTAR	4,454,454.26			
Goldman Sachs	5,626,841.01			
Agencies/ Treasuries	-	10,081,295.27		
Senior Debt Service Reserve Fund				
TexSTAR	17,727,625.20			
Goldman Sachs	15,790,090.30			
Agencies/ Treasuries	74,220,477.02	107,738,192.52		
2010 Senior Lien Debt Service Account				
Goldman Sachs	60,639.93	60,639.93		
2011 Sr Debt Service Accountt				
Goldman Sachs	829,203.43	829,203.43		
2013 Sr Debt Service Accountt				
Goldman Sachs	1,725,977.36	1,725,977.36		
2013 Sub Debt Service Account				
Goldman Sachs	1,256,596.56	1,256,596.56		
2013 Sub Debt Service Reserve Fund				
Goldman Sachs	59.70	780,774.06		
TexSTAR	780,714.36			
2015 Sr Debt Service Account				
Goldman Sachs	3,845,144.35	3,845,144.35		
2015 Sr Capitalized Interest				
Goldman Sachs	-	2,856,735.72		
TexSTAR	2,856,735.72			
2016 Sr Lien Rev Refunding Debt Service Account				
Goldman Sachs	11,567,946.79	11,567,946.79		
2016 Sub Lien Rev Refunding Debt Service Account				
Goldman Sachs	1,566,260.44	1,566,260.44		
2016 Sub Lien Rev Refunding DSR				
Goldman Sachs	3,523,385.72			
Agencies/ Treasuries	3,463,169.09	6,986,554.81		
Operating Fund				
TexSTAR	440,197.66			
TexSTAR-Trustee	5,002,497.25			
Goldman Sachs	815,238.28	6,257,933.19		
Revenue Fund				
Goldman Sachs	7,822,629.26	7,822,629.26		
General Fund				
TexSTAR	29,879,088.97			
Goldman Sachs	16,285,234.79			
Agencies/ Treasuries	49,480,148.88	95,644,472.64		
71E Revenue Fund				
Goldman Sachs	15,112,712.28	15,112,712.28		
MoPac Revenue Fund				
Goldman Sachs	53,737.17	53,737.17		
MoPac General Fund				
Goldman Sachs	9,667,310.88	9,667,310.88		
MoPac Operating Fund				
Goldman Sachs	2,436,725.96	2,436,725.96		
MoPac Loan Repayment Fund				
Goldman Sachs	34,126.18	34,126.18		
2015B Project Account				
Goldman Sachs	15,975,605.76			
TexSTAR	26,349,019.35	42,324,625.11		
2015 TIFIA Project Account				
Goldman Sachs	645.86			
TexSTAR	57,521,758.28			
Agencies/ Treasuries	-	57,522,404.14		
2011 Sr Financial Assistance Fund				
Goldman Sachs	-	10,343,091.85		
TexSTAR	10,343,091.85			
2018 Sr Lien Project Cap I				
Goldman Sachs	3,523,212.47	3,523,212.47		
2018 Sr Lien Project Account				
Goldman Sachs	1,937,482.26			
TexSTAR	12,931,370.97	14,868,853.23		
2018 Sub Debt Service Account				
Goldman Sachs	3,821,238.08	3,821,238.08		
2019 TIFIA Sub Lien Project Account				
Goldman Sachs	0.20	0.20		
2020A Senior Lien Debt Service Account				
Goldman Sachs	1,047,253.68	1,047,253.68		
2020 SH 45SW Project Account				
Goldman Sachs	885,048.13	885,048.13		
2020B Senior Lien Debt Service Account				
Goldman Sachs	1,386,351.82	1,386,351.82		
2020C Senior Lien Debt Service Account				
Goldman Sachs	1,574,717.81	1,574,717.81		
2020D Senior Lien Debt Service Account				
Goldman Sachs	1,801,957.65	1,801,957.65		
2020D Sub Debt Service Reserve Fund				
Goldman Sachs	4,151,826.30			
Agencies/ Treasuries	3,958,269.88	8,110,096.18		
2020E Senior Lien Project Account				
Goldman Sachs	71,164,806.83			
Agencies/ Treasuries	80,145,453.58	151,310,260.41		
2020E Senior Lien Project Cap Interest				
Goldman Sachs	32,852,718.25	32,852,718.25		
2020F Sub Lien Project Account				
Goldman Sachs	41,398,447.30			
Agencies/ Treasuries	58,487,584.05	99,886,031.35		
2020F Sub Lien Deb Service Account				
Goldman Sachs	2,310,002.24	2,310,002.24		
2020G Sub Lien Debt Service Account				
Goldman Sachs	1,078,923.07	1,078,923.07		
2020G Sub Lien Debt Service Reserve Account				
Goldman Sachs	1,209,677.63	1,209,677.63		
2021A Sub Lien Debt Service Reserve Account				
Goldman Sachs	5,308,115.28	5,308,115.28	22,395,217.96	
2021B Senior Lien Cap I Project Fund				
Goldman Sachs	60,201,908.43	60,201,908.43		
2021B Senior Lien Project Account				
Goldman Sachs	231,142,185.65	231,142,185.65		
2021C Sub Lien Cap I Project Fund				
Goldman Sachs	8,716,192.07	8,716,192.07		
2021C Sub Lien Project Account				
Goldman Sachs	261,550,090.22	261,550,090.22		
		\$ 1,289,191,640.69		

CTRMA INVESTMENT REPORT

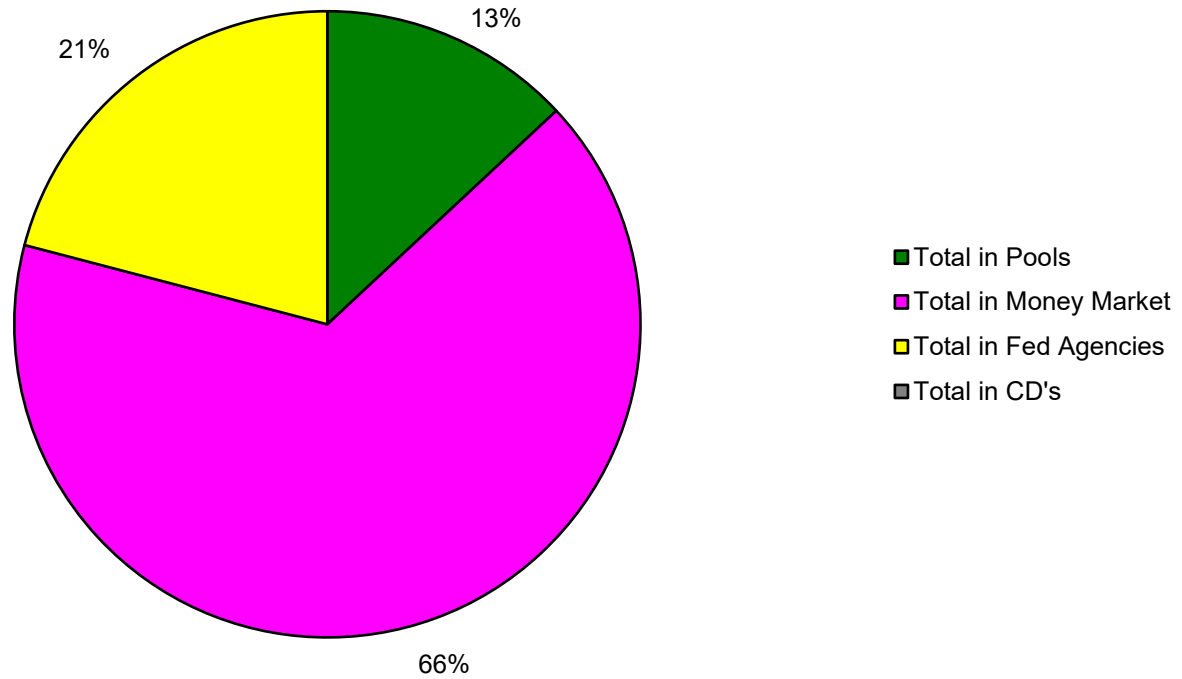
	Month Ending 5/31/2021					Rate May	
	Balance 5/1/2021	Additions	Discount Amortization	Accrued Interest	Withdrawals		Balance 5/31/2021
Amount in Trustee TexStar							
2011 Sr Lien Financial Assist Fund	10,343,004.06			87.79		10,343,091.85	0.0100%
2013 Sub Lien Debt Service Reserve General Fund	780,707.79			6.57		780,714.36	0.0100%
Trustee Operating Fund	29,878,835.13	1,500,000.00		253.84		29,879,088.97	0.0100%
Renewal and Replacement	4,502,457.81			39.44	1,000,000.00	5,002,497.25	0.0100%
Grant Fund	389,792.44			1.83	388,000.00	1,794.27	0.0100%
Senior Lien Debt Service Reserve Fund	4,454,416.44			37.82		4,454,454.26	0.0100%
2015A Sr Ln Project Cap Interest	17,727,474.59			150.61		17,727,625.20	0.0100%
2015B Sr Ln Project	2,856,711.49			24.23		2,856,735.72	0.0100%
2015C TIFIA Project	26,348,795.53			223.82		26,349,019.35	0.0100%
2018 Sr Lien Project Account	58,339,565.93			492.35	818,300.00	57,521,758.28	0.0100%
	12,931,261.18			109.79		12,931,370.97	0.0100%
	168,553,022.39	1,500,000.00		1,428.09	2,206,300.00	167,848,150.48	
Amount in TexStar Operating Fund	440,193.12	1,000,000.00		4.54	1,000,000.00	440,197.66	0.0100%
Goldman Sachs							
Operating Fund	815,218.51	1,500,000.00		19.77	1,500,000.00	815,238.28	0.0300%
2020 SH 45SW Project Account	1,017,814.44			28.68	132,794.99	885,048.13	0.0300%
2020A Senior Lien Debt Service Account	837,811.94	209,421.04		20.70		1,047,253.68	0.0300%
2020B Senior Lien Debt Service Account	1,109,085.83	277,238.59		27.40		1,386,351.82	0.0300%
2020C Senior Lien Debt Service Account	1,259,763.47	314,923.22		31.12		1,574,717.81	0.0300%
2020D Sub Lien Debt Service Account	1,549,822.32	252,095.39		39.94		1,801,957.65	0.0300%
2020D Sub Debt Service Reserve Fund	4,151,711.07			115.23		4,151,826.30	0.0300%
2020E Sr Lien Project Account	71,162,831.79			1,975.04		71,164,806.83	0.0300%
2020E Sr Ln Project Cap Interest	32,851,806.48			911.77		32,852,718.25	0.0300%
2020F Sub Lien Project Account	41,713,759.18			1,173.56	316,485.44	41,398,447.30	0.0300%
2020F Sub Lien Debt Service Account	1,847,978.73	461,977.86		45.65		2,310,002.24	0.0300%
2020G Sub Lien Debt Service Account	881,469.61	197,431.41		22.05		1,078,923.07	0.0300%
2020G Sub Debt Service Reserve Fund	1,113,784.36	95,863.53		29.74		1,209,677.63	0.0300%
2021A Sub Debt Service Reserve Fund	5,117,757.78	190,217.78		139.72		5,308,115.28	0.0300%
2021B Senior Lien Cost of Issuance Fund	0.00			0.00		0.00	0.0300%
2021B Senior Lien Clearance Account	0.00			0.00		0.00	0.0300%
2021B Senior Lien Cap I Project Fund	60,200,912.77			995.66		60,201,908.43	0.0300%
2021B Senior Lien Project Account	231,138,362.85			3,822.80		231,142,185.65	0.0300%
2021C Sub Lien Cost of Issuance Fund	0.00			0.00		0.00	0.0300%
2021C Sub Lien Cap I Project Fund	8,716,047.92			144.15		8,716,192.07	0.0300%
2021C Sub Lien Clearance Account	0.00			0.00		0.00	0.0300%
2021C Sub Lien Project Account	261,659,813.58			4,526.05	114,249.41	261,550,090.22	0.0300%
2011 Sr Financial Assistance Fund	0.00			0.00		0.00	0.0300%
2010 Senior DSF	60,638.25			1.68		60,639.93	0.0300%
2011 Senior Lien Debt Service Account	821,197.86	7,982.88		22.69		829,203.43	0.0300%
2013 Senior Lien Debt Service Account	1,472,303.97	253,635.62		37.77		1,725,977.36	0.0300%
2013 Sub Debt Service Reserve Fund	59.70			0.00		59.70	0.0300%
2013 Subordinate Debt Service Account	1,082,580.35	173,988.29		27.92		1,256,596.56	0.0300%
2015A Sr Lien Debt Service Account	3,076,074.01	768,994.35		75.99		3,845,144.35	0.0300%
2015A Sr Ln Project Cap Interest	0.00			0.00		0.00	0.0300%
2015B Project Account	15,975,162.39			443.37		15,975,605.76	0.0300%
2015C TIFIA Project Account	29,263.28	818,300.00		0.95	846,918.37	645.86	0.0300%
2016 Sr Lien Rev Refunding Debt Service Account	9,353,433.08	2,214,281.14		232.57		11,567,946.79	0.0300%
2016 Sub Lien Rev Refunding Debt Service Account	1,253,033.84	313,195.65		30.95		1,566,260.44	0.0300%
2016 Sub Lien Rev Refunding DSR	3,523,287.93			97.79		3,523,385.72	0.0300%
2018 Sr Lien Project Cap I	3,523,114.69			97.78		3,523,212.47	0.0300%
2018 Sr Lien Project Account	3,489,420.46			95.44	1,552,033.64	1,937,482.26	0.0300%
2018 Sub Debt Service Account	3,056,970.14	764,192.42		75.52		3,821,238.08	0.0300%
2019 TIFIA Sub Lien Project Account	0.00			0.20		0.20	0.0300%
Grant Fund	5,626,684.85			156.16		5,626,841.01	0.0300%
Renewal and Replacement	55,043.07	42,558.73		0.50	7,679.63	89,922.67	0.0300%
Revenue Fund	6,665,978.28	15,032,354.81		123.30	13,875,827.13	7,822,629.26	0.0300%
General Fund	14,749,092.21	3,741,336.80		107.14	2,205,301.36	16,285,234.79	0.0300%
Senior Lien Debt Service Reserve Fund	15,789,821.97			268.33		15,790,090.30	0.0300%
71E Revenue Fund	14,478,153.04	800,158.07		388.97	165,987.80	15,112,712.28	0.0300%
MoPac Revenue Fund	34,286.84	568,227.66		3.71	548,781.04	53,737.17	0.0300%
MoPac General Fund	9,381,729.76	348,781.04		253.98	63,453.90	9,667,310.88	0.0300%
MoPac Operating Fund	2,456,323.26	200,000.00		63.63	219,660.93	2,436,725.96	0.0300%
MoPac Loan Repayment Fund	0.00	34,126.05		0.13		34,126.18	0.0300%
	843,099,405.86	29,581,282.33		16,675.50	21,549,173.64	851,148,190.05	
Amount in Fed Agencies and Treasuries							
Amortized Principal	270,129,256.52		(374,154.02)	0.00		269,755,102.50	
	270,129,256.52	0.00	(374,154.02)	0.00		269,755,102.50	
Certificates of Deposit							
Total in Pools	168,993,215.51	2,500,000.00		1,432.63	3,206,300.00	168,288,348.14	
Total in GS FSGF	843,099,405.86	29,581,282.33		16,675.50	21,549,173.64	851,148,190.05	
Total in Fed Agencies and Treasuries	270,129,256.52	0.00	(374,154.02)	0.00		269,755,102.50	
Total Invested	1,282,221,877.89	32,081,282.33		18,108.13	24,755,473.64	1,289,191,640.69	

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

Mary Temple, Controller

5/31/2021

Allocation of Funds



Amount of Investments As of May 31, 2021

Agency	CUSIP #	COST	Book Value	Market Value	Yield to Maturity	Purchased	Matures	FUND
Treasury	912828J76B	3,969,623.85	3,958,269.88	3,955,755.43	0.9787%	3/9/2021	3/31/2022	2020D Sub DSR
Treasury	912828J76	3,473,102.91	3,463,169.09	3,460,969.16	0.9787%	3/9/2021	3/31/2022	2016 Sub DSR
Treasury	912828J76E	80,375,344.30	80,145,453.58	80,094,542.07	0.9787%	3/9/2021	3/31/2022	2020E Sr Project
Treasury	912828J76D	74,433,372.42	74,220,477.02	74,173,329.28	0.9787%	3/9/2021	3/31/2022	Sr Lien DSR
Treasury	912828J76A	29,773,450.70	29,688,292.25	29,669,433.10	0.9787%	3/9/2021	3/31/2022	2020F Sub Project
Treasury	912828T34	28,856,437.70	28,799,291.80	28,783,604.69	0.0530%	3/9/2021	9/30/2021	2020F Sub Project
Treasury	912828J76C	49,622,078.65	49,480,148.88	49,448,717.20	0.9787%	3/9/2021	3/31/2022	General Fund
		<u>270,503,410.53</u>	<u>269,755,102.50</u>	<u>269,586,350.93</u>				

Agency	CUSIP #	COST	Cummulative Amortization	5/31/2021		Interest Income		
				Book Value	Maturity Value	Accrued Interest	Amortization	Interest Earned
Treasury	912828J76B	3,969,623.85	(11,353.98)	3,958,269.87	3,413,500.00	5,689.69	(5,676.99)	12.70
Treasury	912828J76	3,473,102.91	(9,933.82)	3,463,169.09	3,413,500.00	4,978.02	(4,966.91)	11.11
Treasury	912828J76E	80,375,344.30	(229,890.72)	80,145,453.58	3,413,500.00	115,202.50	(114,945.36)	257.14
Treasury	912828J76D	74,433,372.42	(212,895.40)	74,220,477.02	3,413,500.00	106,685.83	(106,447.70)	238.13
Treasury	912828J76A	29,773,450.70	(85,158.43)	29,688,292.27	3,413,500.00	42,674.48	(42,579.22)	95.26
Treasury	912828T34	28,856,437.70	(57,145.90)	28,799,291.80	3,413,500.00	26,892.19	(28,572.95)	(1,680.76)
Treasury	912828J76C	49,622,078.65	(141,929.78)	49,480,148.87	3,413,500.00	71,123.65	(70,964.89)	158.76
		<u>270,503,410.53</u>	<u>(748,308.03)</u>	<u>269,755,102.50</u>	<u>23,894,500.00</u>	<u>373,246.36</u>	<u>(374,154.02)</u>	<u>(907.66)</u>

ESCROW FUNDS

Travis County Escrow Fund - Elroy Road

	Balance		Accrued		Balance
	5/1/2021	Additions	Interest	Withdrawals	5/31/2021
Goldman Sachs	13,076,368.26		377.67		13,076,745.93

Travis County Escrow Fund - Ross Road

	Balance		Accrued		Balance
	5/1/2021	Additions	Interest	Withdrawals	5/31/2021
Goldman Sachs	179,896.18	89,148.00	4.99		269,049.17

Travis County Escrow Fund - Old San Antonio Road

	Balance		Accrued		Balance
	5/1/2021	Additions	Interest	Withdrawals	5/31/2021
Goldman Sachs	515,787.70		14.48		515,802.18

Travis County Escrow Fund - Old Lockhart Road

	Balance		Accrued		Balance
	5/1/2021	Additions	Interest	Withdrawals	5/31/2021
Goldman Sachs	554,047.93		20.47		554,068.40

Travis County Escrow Fund - County Line Road

	Balance		Accrued		Balance
	5/1/2021	Additions	Interest	Withdrawals	5/31/2021
Goldman Sachs	693,736.89		18.53		693,755.42

Travis County Escrow Fund - South Pleasant Valley Road

	Balance		Accrued		Balance
	5/1/2021	Additions	Interest	Withdrawals	5/31/2021
Goldman Sachs	389,333.23		10.81		389,344.04

Travis County Escrow Fund - Thaxton Road

	Balance		Accrued		Balance
	5/1/2021	Additions	Interest	Withdrawals	5/31/2021
Goldman Sachs	171,151.82		4.75		171,156.57

Travis County Escrow Fund - Pearce Lane Road

	Balance		Accrued		Balance
	5/1/2021	Additions	Interest	Withdrawals	5/31/2021
Goldman Sachs	379,476.66		10.53		379,487.19



183 South Design-Build Project
Contingency Status
 May 31, 2021



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
	CO#10	City of Austin Utility (\$1,010,000 - no cost to RMA)	\$0
	CO#17	Boggy Creek Turnaround	\$2,365,876
	CO#21	Wall 125 Differing Site Condition - Part A	\$1,263,577
	CO#26	Roadway Paving Additions	\$1,302,696
	CO#28	Cable Barrier System	\$316,501
	CO#21b	Wall 125 Differing Site Condition - Part B	\$1,292,264
	CO-31	City of Austin Waterline 133 (Bolm Rd)	\$632,557
		Others Less than \$300,000 (26)	\$3,355,548
Executed Change Orders		\$12,819,563	
Change Orders Under Negotiation		\$570,000	
Potential Contractual Obligations		\$11,880,000	

(-) Total Obligations	\$25,269,563
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Remaining Project Contingency	\$22,590,437
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290E Ph. III
Contingency Status
 May 31, 2021



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

Total Mobility Authority Contingency	\$10,633,758
Total TxDOT Project Contingency	\$15,292,524

Obligations	Others Less than \$300,000 (9)	\$317,044
	Executed Change Orders	\$317,044
	Change Orders Under Negotiation	\$273,803
	Potential Contractual Obligations	\$1,860,000

(-) Total Obligations	\$2,450,847
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Remaining Mobility Authority Contingency	\$8,402,569
Remaining TxDOT Contingency	\$15,072,866



183A Phase III Project
Contingency Status
 May 31, 2021



Original Construction Contract Value: \$175,695,656

Total Project Contingency	\$9,640,442
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Obligations		
	Executed Change Orders	\$0
	Change Orders Under Negotiation	\$190,000
	Potential Contractual Obligations	\$0

(-) Total Obligations	\$190,000
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Remaining Project Contingency	\$9,450,442
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PERFORMANCE

As of May 31, 2021

Current Invested Balance	\$9,216,832,522.03
Weighted Average Maturity (1)	42 Days
Weighted Average Maturity(2)	75 Days
Net Asset Value	1.000116
Total Number of Participants	938
Management Fee on Invested Balance	0.06%*
Interest Distributed	\$398,404.37
Management Fee Collected	\$321,933.58
% of Portfolio Invested Beyond 1 Year	3.57%
Standard & Poor's Current Rating	AAAm

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

May Averages

Average Invested Balance	\$9,003,811,541.22
Average Monthly Yield, on a simple basis	0.0100%
Average Weighted Maturity (1)	46 Days
Average Weighted Life (2)	82 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 instruction 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 May:

* Fort Bend County Municipal Utility District No. 184 * Louetta Road Utility District

HOLIDAY REMINDER

In observance of **Independence Day, TexSTAR will be closed on Monday, July 5, 2021.** All ACH transactions initiated on Friday, July 2nd will settle on Tuesday July 6th. 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.

PROGRAM UPDATES

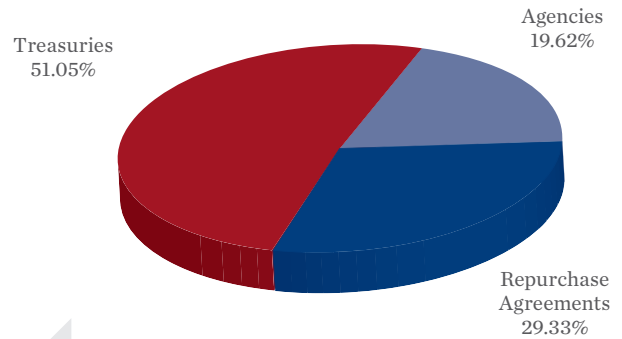
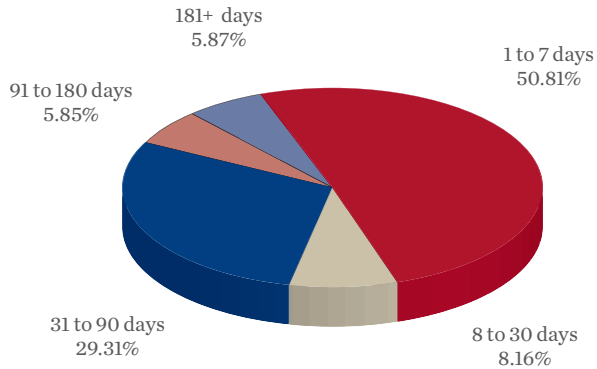
TexSTAR Participant Services will be moving to our new headquarters in HilltopSecurities Tower on May 24, 2021. After this date, **please use our new address listed below when sending any correspondence to TexSTAR.** In addition, please provide this new address to your auditors for any audit confirmations they may send to TexSTAR regarding your account. There will be no changes to our phone numbers, fax number or website address.

TexSTAR Participant Services
717 N. Harwood Street, Suite 3400
Dallas, TX 75201

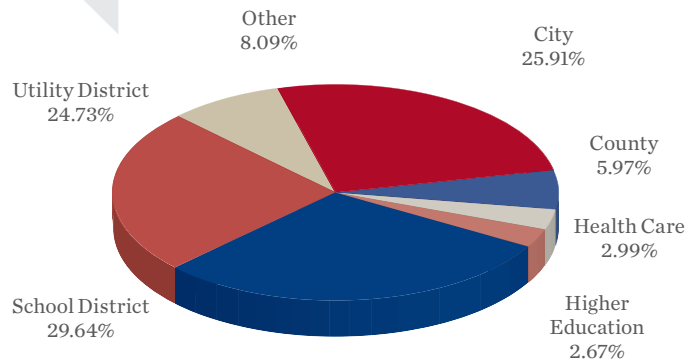
If you have any questions, please contact TexSTAR Participant Services at 800.839.7827.

INFORMATION AT A GLANCE

PORTFOLIO BY TYPE OF INVESTMENT AS OF MAY 31, 2021



DISTRIBUTION OF PARTICIPANTS BY TYPE AS OF MAY 31, 2021



HISTORICAL PROGRAM INFORMATION

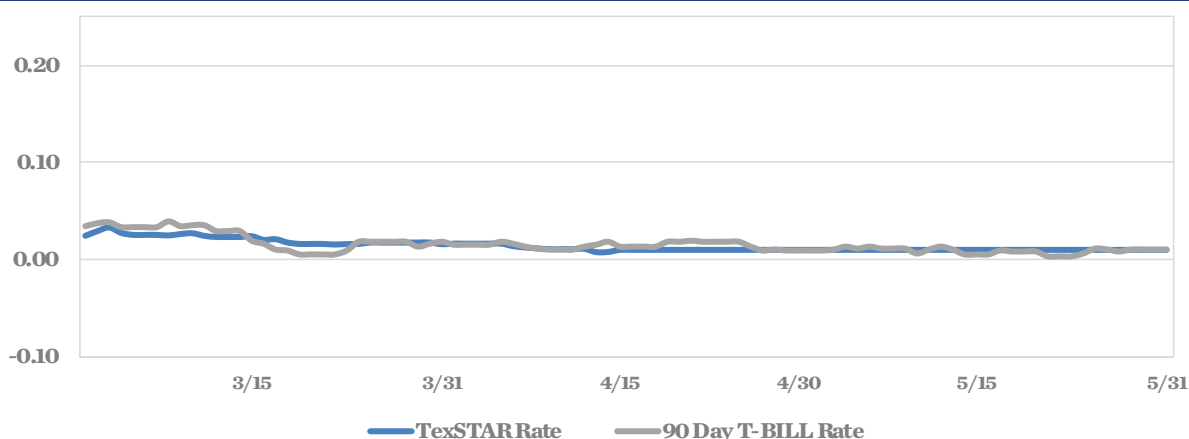
MONTH	AVERAGE RATE	BOOK VALUE	MARKET VALUE	NET ASSET VALUE	WAM (1)	WAM (2)	NUMBER OF PARTICIPANTS
May 21	0.0100%	\$9,216,832,522.03	\$9,217,901,991.74	1.000116	46	82	938
Apr 21	0.0113%	8,986,711,365.42	8,987,836,525.94	1.000131	40	78	936
Mar 21	0.0216%	9,103,231,627.43	9,104,638,524.44	1.000154	47	86	935
Feb 21	0.0334%	9,576,230,496.50	9,577,678,764.35	1.000151	46	87	934
Jan 21	0.0583%	9,443,485,770.86	9,445,046,065.21	1.000165	38	84	934
Dec 20	0.0676%	8,682,050,804.34	8,683,648,113.09	1.000183	42	96	933
Nov 20	0.0944%	8,910,228,194.78	8,911,909,859.79	1.000188	46	104	933
Oct 20	0.1150%	9,083,922,054.96	9,085,783,748.92	1.000203	42	100	933
Sep 20	0.1339%	9,297,135,540.13	9,299,528,645.66	1.000257	39	101	932
Aug 20	0.1645%	9,465,008,033.71	9,466,814,693.25	1.000190	29	95	931
Jul 20	0.2003%	10,009,983,894.25	10,012,082,381.15	1.000209	27	101	930
Jun 20	0.1974%	9,671,601,669.74	9,674,049,521.47	1.000253	33	108	927

PORTFOLIO ASSET SUMMARY AS OF MAY 31, 2021

	BOOK VALUE	MARKET VALUE
Uninvested Balance	\$ 202,188,278.38	\$ 202,188,278.38
Accrual of Interest Income	4,023,659.15	4,023,659.15
Interest and Management Fees Payable	(474,732.10)	(474,732.10)
Payable for Investment Purchased	0.00	0.00
Repurchase Agreement	2,643,271,999.77	2,643,271,999.77
Government Securities	6,367,823,316.83	6,368,892,786.54
TOTAL	\$ 9,216,832,522.03	\$ 9,217,901,991.74

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 of \$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 consists 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 MAY 2021

DATE	MNY MKT FUND EQUIV. [SEC Std.]	DAILY ALLOCATION FACTOR	INVESTED BALANCE	MARKET VALUE PER SHARE	WAM DAYS (1)*	WAL DAYS (2)*
5/1/2021	0.0100%	0.000000274	\$8,986,711,365.42	1.000131	48	85
5/2/2021	0.0100%	0.000000274	\$8,986,711,365.42	1.000131	48	85
5/3/2021	0.0100%	0.000000274	\$8,989,394,548.38	1.000133	48	85
5/4/2021	0.0100%	0.000000274	\$8,977,022,814.56	1.000129	48	86
5/5/2021	0.0100%	0.000000274	\$8,958,987,782.58	1.000129	49	86
5/6/2021	0.0100%	0.000000274	\$8,932,702,894.80	1.000131	49	87
5/7/2021	0.0100%	0.000000274	\$8,822,559,357.85	1.000130	48	85
5/8/2021	0.0100%	0.000000274	\$8,822,559,357.85	1.000130	48	85
5/9/2021	0.0100%	0.000000274	\$8,822,559,357.85	1.000130	48	85
5/10/2021	0.0100%	0.000000274	\$8,812,322,556.41	1.000132	47	85
5/11/2021	0.0100%	0.000000274	\$8,816,932,860.64	1.000128	47	85
5/12/2021	0.0100%	0.000000274	\$8,846,436,214.61	1.000128	46	84
5/13/2021	0.0100%	0.000000274	\$8,743,971,742.02	1.000133	48	85
5/14/2021	0.0100%	0.000000274	\$8,894,439,781.20	1.000128	45	82
5/15/2021	0.0100%	0.000000274	\$8,894,439,781.20	1.000128	45	82
5/16/2021	0.0100%	0.000000274	\$8,894,439,781.20	1.000128	45	82
5/17/2021	0.0100%	0.000000274	\$8,824,892,950.02	1.000132	45	82
5/18/2021	0.0100%	0.000000274	\$8,846,951,571.06	1.000132	46	82
5/19/2021	0.0100%	0.000000274	\$8,878,834,732.76	1.000133	50	87
5/20/2021	0.0100%	0.000000274	\$9,116,769,575.41	1.000130	48	84
5/21/2021	0.0100%	0.000000274	\$9,145,679,509.00	1.000128	47	82
5/22/2021	0.0100%	0.000000274	\$9,145,679,509.00	1.000128	47	82
5/23/2021	0.0100%	0.000000274	\$9,145,679,509.00	1.000128	47	82
5/24/2021	0.0100%	0.000000274	\$9,129,625,404.09	1.000133	46	81
5/25/2021	0.0100%	0.000000274	\$9,347,635,181.82	1.000124	45	78
5/26/2021	0.0100%	0.000000274	\$9,259,740,519.76	1.000125	44	78
5/27/2021	0.0100%	0.000000274	\$9,207,147,665.91	1.000121	44	78
5/28/2021	0.0100%	0.000000274	\$9,216,832,522.03	1.000116	42	75
5/29/2021	0.0100%	0.000000274	\$9,216,832,522.03	1.000116	42	75
5/30/2021	0.0100%	0.000000274	\$9,216,832,522.03	1.000116	42	75
5/31/2021	0.0100%	0.000000274	\$9,216,832,522.03	1.000116	42	75
21						
Average	0.0100%	0.000000274	\$9,003,811,541.22		46	82

Market Review

Economic growth continued to accelerate in May given ongoing accommodative monetary policy, fiscal spending, pent-up consumer demand and the pace of vaccinations. Nevertheless, markets were unsettled due to fears of rising inflation as supply shortages hampered strong demand due to post-pandemic bottlenecks. The consumer-led recovery gained momentum as vaccination rates increased and relaxed social distancing measures paved the way for some pre-Covid normalcy. Personal consumption, the largest driver of the economy, surged an annualized 11.3% in the first quarter of 2021 after upward revisions, the second-fastest pace since the 1960s. Economic output is now only 0.9% below peak 4Q19 real GDP. An inventory rebound could set the stage for a double-digit surge in real GDP in the second quarter. The U.S. Purchasing Managers' Indices (PMIs) for manufacturing and services both beat expectations in May. The Markit flash composite PMI rose to a record high of 68.1, from 63.5 in April, with the flash services PMI rising to a record 70.1 from 64.7 in April, as businesses continue to see very strong market demand.

The 1Q21 earnings season has been equally impressive, with 482 companies having reported (97.4% of market cap). Thus far, 85% of companies have surpassed EPS estimates, and 73% have exceeded revenue estimates. Many companies have now recovered to the revenue/EPS levels of 2019 and are setting fresh highs. Oil prices and the U.S. dollar have provided additional tailwinds to earnings. Given the strong economic growth and recovery backdrop reflected in earnings, inflation remained top of mind for investors especially as it has now surpassed the Federal Reserve's (Fed's) 2% target. The headline PCE price index rose +0.6% month over month (m/m) and +3.6% year over year (y/y) in April. The core PCE deflator also accelerated to +0.7% m/m and +3.1% y/y, beating market expectations. The April U.S. CPI report showed consumer prices rising at their fastest pace in more than a decade, as a rapidly reopening economy ran into supply disruptions, labor shortages and rising consumer demand, which intensified cost pressures and put upward pressure on inflation. Strengthening demand, however, allowed some businesses, particularly manufacturers, builders, and transportation companies, to pass through much of the cost increases to their customers. Headline CPI for April was stronger than expected, rising +0.8% m/m and +4.2% y/y, while consumer prices excluding food and energy rose +0.9% m/m and +3.0% y/y. While the Fed appears to be welcoming this period of modest inflation overshoot as temporary, markets remain wary.

The May employment report will be in focus on June 4th after April's data print disappointed, falling sharply below consensus expectations, and highlighted the challenge of forecasting given the unusual imbalance between labor demand and supply. It is likely that ongoing virus concerns combined with considerable unemployment benefits are providing a disincentive for many job seekers in lower wage jobs to return to work. Consensus forecasts points to a 650,000 increase in nonfarm payrolls in May, after a 266,000 increase in April and the unemployment rate to decline from 6.1% to 5.9%. JOLTS data show that U.S. jobs openings surged to a record high in March, further evidence that a shortage of workers is hampering job growth.

With the employment picture looking more mixed for now, the case for continued accommodation is entrenched. The Federal Open Market Committee (FOMC) maintained the federal funds target rate in a range of 0.00%-0.25% and left the pace of asset purchases unchanged. In addition, the median federal funds rate projection—as measured by the “dot plot”—continues to imply no rate adjustments through 2023. Chairman Powell pushed back on tapering chatter and reiterated the view that higher inflation over the next few months will be transitory and thus not meet the threshold for tighter policy. Powell acknowledged the improved growth backdrop but said that they will need to see it persists to give the Fed comfort about achieving “substantial progress.” Nevertheless, the April FOMC minutes revealed that Committee members are beginning to discuss adjusting the pace of asset purchases if the economy continues to make rapid economic progress. The FOMC may begin telegraphing tapering plans this summer, and initiate tapering in 2022. Despite the passage of an additional \$1.9 trillion stimulus package in March, Treasury bill issuance/supply has been low and is not expected to pick up this year because the U.S. Treasury's general account (TGA) balances have not run down as quickly as initially anticipated. As such, the three-month Treasury bill yield was unchanged at approximately 0.01% while the 12-month Treasury bill yield decreased by approximately 1.5 bp on the month to end at 0.04%.



ECONOMIC COMMENTARY (cont.)

Outlook

A one-off disappointment in the jobs data does not change our outlook for strong above trend economic growth. But the weakness is likely to embolden the Fed in its accommodative stance, keeping front end rates well anchored. Yet, the recovery has picked up steam and has driven yield curves steeper, with higher long-term yields and the prospect of higher inflation in the near term. The broad picture of the recovery is one of revival, with strong gains in consumer and investment spending. We believe the economy is still on track to post over 10% annualized real GDP growth in the current quarter, recovering its remaining pandemic losses. This is expected to be followed by roughly 7% annualized growth in the second half of the year, boosting real GDP growth to close to a 7.5% y/y gain by the fourth quarter of 2021. This would also, remarkably, represent a roughly 5% increase over the fourth quarter of 2019, more than exceeding the trend growth that could have unfolded if the pandemic had never occurred. Growth should then decelerate in 2022 as the economy essentially returns to full employment.

Given the recent rise in inflation, a large concern for markets has been in understanding how central banks will react to potential further upside surprises on economic growth. Investors are concerned that if inflation does prove to be persistent rather than temporary, then central banks might have to raise interest rates quickly to slow down an economy that is running too hot. The Fed has suggested that any increase in inflation would be transitory and that it would not act too soon in tightening. It is clear that their messaging is tight and designed to suppress increases in long-term interest rates. However, futures markets are now pricing in a first Fed rate hike by the end of 2022 in contrast to the Fed's March FOMC projections showing no rate hike before 2024. It would seem likely that the next batch of Fed forecasts, due out after their June 15th/16th meeting, will include at least one rate hike in 2023. That meeting will also likely lead to heightened speculation about tapering bond purchases late this year or early next and all of this, combined with strengthening growth and inflation data, should put upward pressure on long-term interest rates.

This information is an excerpt from an economic report dated May 2021 provided to TexSTAR by JP Morgan Asset Management, Inc., the investment manager of the TexSTAR pool.

TEXSTAR BOARD MEMBERS

Monte Mercer	North Central TX Council of Government	Governing Board President
David Pate	Richardson ISD	Governing Board Vice President
Anita Cothran	City of Frisco	Governing Board Treasurer
David Medanich	Hilltop Securities	Governing Board Secretary
Jennifer Novak	J.P. Morgan Asset Management	Governing Board Asst. Sec./Treas
Brett Starr	City of Irving	Advisory Board
James Mauldin	DFW Airport/Non-Participant	Advisory Board
Sandra Newby	Tarrant Regional Water Dist/Non-Participant	Advisory Board
Eric Cannon	Qualified Non-Participant	Advisory Board
Ron Whitehead	Qualified Non-Participant	Advisory Board

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CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

June 30, 2021
AGENDA ITEM #5

Discuss and consider approving a cost
of living adjustment for Mobility
Authority Retirees

Strategic Plan Relevance:	Transparency/Accountability
Department:	Finance
Contact:	William Chapman, Chief Financial Officer
Associated Costs:	Funded via the Mobility Authority's incremental contribution rate
Funding Source:	FY 2022 Operating Budget
Action Requested:	Consider and act on draft resolution

Project Description/Background: The Mobility Authority provides employees a retirement benefit managed through the Texas County & District Retirement System (TCDRS). This benefit can provide a cost of living adjustment (COLA) granted annually by the Board to retirees drawing their pension. A COLA increases a retiree's benefit to make up for the loss of buying power due to inflation.

Currently, five former Mobility Authority employees, or their beneficiaries, are collecting retirement benefits through TCERS. In order to receive a COLA, the retiree or beneficiary must have drawn their pension for at least 13 months.

The TCERS system allows for two types of retiree COLAs:

Flat-rate: Increases the benefit amounts of all retirees by the same percentage. The TCERS Board reviews this annually and most recently adopted a maximum 1% flat-rate increase.

CPI-based: With this type of adjustment, the Board may choose to increase retirees' benefit payments by a percentage based on the increase in the Consumer Price Index for all Urban Consumers (CPI-U), an index the federal government uses to measure inflation. The TCERS plan allows a range between 10% and 100% of the CPI-U.

The type of COLA (Flat-rate vs CPI-based) can be changed from year to year at the time of the annual Board adoption.

Previous Actions & Brief History of the Program/Project: The Board approved a one year, flat-rate increase of 2% on May 27, 2020 that took effect on January 1, 2021.

For the prior year, the Board approved a CPI-based retiree COLA at 100% of the CPI-U on September 11, 2019 that took effect on January 1, 2020. This was the first time a retiree COLA was considered and approved by the Board.

Action requested/Staff Recommendation: Staff recommends adopting the 100% CPI-U COLA to be effective January 1, 2022.

Backup provided: Draft Resolution
Plan Comparison

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

RESOLUTION NO. 21-0XX

**APPROVING A COST-OF-LIVING ADJUSTMENT
FOR MOBILITY AUTHORITY RETIREES**

WHEREAS, in Resolution No. 04-19, dated May 5, 2004, the Board of Directors approved participation by the Central Texas Regional Mobility Authority (“Mobility Authority”) in the Texas County & District Retirement System (“TCDRS”) to provide benefits to Mobility Authority employees under the Central Texas Regional Mobility Authority TCDRS Plan (the “Plan”); and

WHEREAS, the Plan requires certain authorizations from time to time by the Board of Directors regarding ongoing provisions of and/or changes to the Plan; and

WHEREAS, former Mobility Authority employees and/or their beneficiaries, are collecting retirement benefits through TCDRS; and

WHEREAS, the Plan provides an annual opportunity for a retiree cost-of-living adjustment (“COLA”); and

WHEREAS, the Chief Financial Officer of the Mobility Authority recommends adopting a one-year retiree COLA to be effective January 1, 2022 at 100% of the CPI-based COLA established by TCDRS; and

NOW THEREFORE, BE IT RESOLVED, that the Board of Directors hereby approves and adopts a one-year retiree COLA to be effective January 1, 2022 at 100% of CPI-based COLA established by TCDRS; and

BE IT FURTHER RESOLVED that the Chief Financial Officer is hereby authorized to execute such documents and take all other actions necessary to implement the one-year retiree cost-of-living adjustment approved herein.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 30th day of June 2021.

Submitted and reviewed by:

Approved:

Geoffrey Petrov, General Counsel

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



PLAN CUSTOMIZER SUMMARY FOR PLAN YEAR 2022

Central Texas Regional Mobility Authority

CURRENT PLAN AND PROPOSED PLAN(S)

	Current Plan	1% Flat COLA	100CPI COLA
Basic Plan Options			
Employee Deposit Rate	7.00%	7.00%	7.00%
Employer Matching	250%	250%	250%
Application of Matching	Past & Future	Past & Future	Past & Future
Prior Service Credit	175%	175%	175%
Retirement Eligibility			
Age 60 (Vesting)	5 yrs of service	5 yrs of service	5 yrs of service
Rule Of	75 yrs total age + service	75 yrs total age + service	75 yrs total age + service
At Any Age	30 yrs of service	30 yrs of service	30 yrs of service
Optional Benefits			
Partial Lump-Sum Payment at Retirement	No	No	No
Group Term Life	ACTIVE-PLUS-RETIREEES	ACTIVE-PLUS-RETIREEES	ACTIVE-PLUS-RETIREEES
COLA	N/A	1% FLAT	100% CPI
Retirement Plan Funding			
Normal Cost Rate	14.30%	14.30%	14.30%
UAAL/(OAAL) Rate	0.24%	0.01%	0.03%
Required Rate	14.54%	14.31%	14.33%
Elected Rate	14.00%	18.00%	18.00%
Additional Employer Contribution	\$0.00	\$117,878.76	\$117,878.76
Total Contribution Rate			
Retirement Plan Rate	14.54%	18.00%	18.00%
Group Term Life Rate	0.36%	0.36%	0.36%
Total Contribution Rate	14.90%	18.36%	18.36%
Valuation Results			
Actuarial Accrued Liability	\$11,958,952	\$11,967,875	\$11,973,633
Actuarial Value of Assets	\$11,864,486	\$11,974,141	\$11,974,141
Unfunded/(Overfunded) Actuarial Liability	\$94,466	(\$6,266)	(\$508)
Funded Ratio	99.2%	100.1%	100.0%



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

June 30, 2021
AGENDA ITEM #6

Discuss and adopt the FY 2022
Operating Budget

Strategic Plan Relevance: Regional Mobility
Department: Finance
Contact: Bill Chapman, Chief Financial Officer
Mary Temple, Controller
Associated Costs: N/A
Funding Source: N/A
Action Requested: Consider and act on draft resolution

Project Description/Background: Staff submitted a Preliminary FY 2022 Operating Budget to the Board on April 28, 2021. Staff refined several line item expenses which were discussed during the Budget Workshop held on May 21, 2021 and submitted to the Board on May 26, 2021. Further adjustments have been finalized and submitted to the Board in preparation for this meeting.

Action Requested/Staff Recommendation – Staff recommends approval of the FY 2022 Operating Budget

Backup Provided: Draft Resolution
FY 2022 Proposed Operating Budget
to be provided at Board Meeting

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

RESOLUTION NO. 21-0XX

APPROVING THE BUDGET FOR FISCAL YEAR 2022

WHEREAS, the Central Texas Regional Mobility Authority (CTRMA) was created pursuant to the request of Travis and Williamson Counties and in accordance with provisions of the Transportation Code and the petition and approval process established in 43 Tex. Admin. Code § 26.01, *et. seq.* (the “RMA Rules”); and

WHEREAS, prudent management and fiscal oversight are overriding objectives of the CTRMA Board of Directors; and

WHEREAS, during the course of the year, CTRMA intends to issue one or more series of revenue bonds for the development of additional projects and to issue refunding bonds as market opportunities arise; and

WHEREAS, it is necessary and desirable to develop and adopt a budget for CTRMA operations for each fiscal year; and

WHEREAS, the Executive Director and staff have developed and recommend that the Board of Directors approve the budget for fiscal year 2021-2022 (FY 2022) attached as Exhibit A.

NOW THEREFORE, BE IT RESOLVED that the Board of Directors approves the FY 2022 Budget attached as Exhibit A; and

BE IT FURTHER RESOLVED that the FY 2022 Budget may be amended from time-to-time by approval of the Board of Directors; and

BE IT FURTHER RESOLVED that the Executive Director, or his designee, is hereby authorized to commit funds for non-project related services up to the amounts set forth in the FY 2022 Budget; and

BE IT FURTHER RESOLVED that the Executive Director is directed to provide a copy of this resolution with the attached FY 2022 Budget to Commissioners Courts for Williamson and Travis Counties; and

BE IT FURTHER RESOLVED that, by copy of this resolution, CTRMA hereby provides notice to the Commissioners Courts of Travis County, Texas and Williamson County, Texas of contemplated revenue bond issuances as required by Section 370.261, Texas Transportation Code.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 30th day of June 2021.

Submitted and reviewed by:

Approved:

Geoffrey Petrov, General Counsel

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

Exhibit A

To be provided at the Board Meeting



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

June 30, 2021
AGENDA ITEM #7

Discuss and consider approving a contract with LJA Engineering, Inc. for construction engineering & inspection services for the 183 North Mobility Project

Strategic Plan Relevance:	Regional Mobility
Department:	Engineering
Contact:	Mike Sexton, P.E., Acting Director of Engineering
Associated Costs:	\$33,948,146
Funding Source:	Toll revenue bonds and Transportation Infrastructure Finance and Innovation Act (TIFIA) funds
Action Requested:	Consider and act on draft resolution

Project Description - The 183 North Mobility Project will expand capacity along a nine mile stretch of US 183 between SH 45 and MoPac by adding two tolled express lanes in each direction in the median of US 183, expanding the existing US 183 to four non-tolled general-purpose lanes in each direction, and constructing a shared use path, and sidewalks between SH 45/RM 620 and Loop 1. The project also includes the addition of a direct connector between the existing express lanes on MoPac and the proposed express lanes on US 183, and additional operational improvements along MoPac including an option to add a collector-distributor road.

The Mobility Authority requires construction engineering and inspection (CE&I) services for the construction of components of the 183 North Mobility Project such as earthwork, roadway, structures, and traffic control activities. In addition to the base scope of services, materials testing, and survey quality assurance will be included.

Previous Actions/Brief History of the Project/Program - On May 26, 2021 the Board awarded a construction engineering and inspection services contract to LJA Engineering, Inc.

Action requested/Staff Recommendation - Staff recommends the Board approve the contract for Construction Engineering and Inspection (CE&I) services with LJA Engineering, Inc. for the Project and authorizes the Executive Director to execute the

contract in substantially the same form as attached with the scope as described, a not to exceed budget of \$33,948,146, and a term through Final Acceptance of the Project.

Financing - Toll revenue bonds and Transportation Infrastructure Finance and Innovation Act (TIFIA) funds

Backup Provided: Draft Resolution
 Draft Master Contract

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

RESOLUTION NO. 21-0XX

**APPROVING A CONTRACT WITH LJA ENGINEERING, INC. FOR
CONSTRUCTION ENGINEERING AND INSPECTION SERVICES FOR THE
183 NORTH MOBILITY PROJECT**

WHEREAS, the Central Texas Regional Mobility Authority (Mobility Authority) requires construction engineering and inspection services for the 183 North Mobility Project; and

WHEREAS, following a procurement conducted by Mobility Authority staff, by Resolution No. 21-033 dated May 26, 2021, the Board of Directors (Board) authorized the Executive Director to negotiate a contract with LJA Engineering Inc. to provide construction engineering and inspection services for the 183 North Mobility Project; and

WHEREAS, the Executive Director has completed those negotiations and now recommends that the Board approve the proposed contract with LJA Engineering, Inc. for construction engineering and inspection services for the 183 North Mobility Project in an amount not to exceed \$33,948,146 which is which is attached hereto as Exhibit A.

NOW THEREFORE, BE IT RESOLVED, that the Board approves the contract with LJA Engineering, Inc. for construction engineering and inspection services for the 183 North Mobility Project in an amount not to exceed \$33,948,146 and hereby authorizes the Executive Director to finalize and execute the contract on behalf of the Mobility Authority in the form or in substantially the same form attached hereto as Exhibit A.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 30th day of June 2021.

Submitted and reviewed by:

Approved:

Geoffrey Petrov, General Counsel

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

Exhibit A

MASTER CONTRACT
CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY
CONTRACT FOR
PROFESSIONAL SERVICES

THIS CONTRACT FOR PROFESSIONAL SERVICES (the “Contract”) is made by and between the Central Texas Regional Mobility Authority, 3300 N. I-35, Suite 300, Austin, Texas 78705, (the “Mobility Authority”) and LJA Engineering, Inc. having its principal business address at 2700 La Frontera Boulevard, Suite 150, Round Rock, Texas 78681 (the “Engineer”).

WITNESSETH

WHEREAS, the Mobility Authority desires to contract for services generally described as professional services, and more specifically described in Article 1 (the “Services”); and,

WHEREAS, pursuant to a qualifications-based selection conducted in accordance with the Professional Services Procurement Act (Tex. Gov’t Code Sec. 2254.001, et. seq.), and the Mobility Authority’s Policy Code regarding the procurement of professional services, the Mobility Authority has selected the Engineer to provide the needed Services; and

WHEREAS, the Engineer has agreed to provide the Services subject to the terms and conditions hereinafter set forth.

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

AGREEMENT

ARTICLE 1
SCOPE OF SERVICES

The Engineer will perform the Services and provide the items necessary for fulfillment of the Contract as identified in Attachment A, Services to be Provided by the Engineer. All Services provided by the Engineer shall comply with the terms and conditions of this Contract and any Work Authorizations issued pursuant hereto. All Services provided by the Engineer will conform to standard engineering practices and applicable rules and regulations of the Texas Engineering Practices Act and the rules of the Texas Board of Professional Engineers.

This Contract does not obligate the Mobility Authority or the Executive Director or his designee to proceed with the Services or authorize the performance of work through a Work Authorization.

ARTICLE 2
CONTRACT PERIOD

This Contract becomes effective when fully executed by all parties hereto and it shall terminate on December 31, 2027 (the “Final Acceptance Date”).

ARTICLE 3
COMPENSATION

Compensation for the performance of the Services shall be provided as follows:

A. Maximum Amount Payable. The total amount payable under the Contract without modification is an amount not to exceed **\$33,948,146.00**.

B. Methods for Compensation. The method for compensating Engineer for Services performed shall be specified in the Work Authorization issued pursuant to Article 5 and shall be one of the following types:

(1) Cost-Plus

Subject to the terms of a Work Authorization issued pursuant to Article 5 below (including any maximum amount to be paid as stated therein), the Mobility Authority will agree to pay, and the Engineer will agree to accept as full and sufficient compensation and reimbursement for the performance of all Services as set forth in this Contract and the Work Authorization, hourly rates for the staff working on the assignment computed as follows:

$$\text{Direct Labor Cost} \times (1.0 + \text{Overhead Rate}) \times (1.0 + \text{Profit } \%, \text{ in decimal form})$$

where Direct Labor Cost equals employee's actual annual salary divided by 2080 hours per year (subject to any applicable cap); Overhead Rate equals the Engineer's most recent auditable overhead rate under 48 C.F.R. Part 31, Federal Acquisition Regulations (FAR) or otherwise approved overhead rate pursuant to this subarticle; and Profit % reflects a ten percent (10%) profit. No increase shall be made to the specified profit percentage.

The Direct Labor Cost caps for the classifications of employees working for the Mobility Authority as of the Contract execution of this Contract are reflected in Attachment B. Revisions to Direct Labor Cost caps for employee classifications and the auditable overhead rate may be proposed no more frequently than once per calendar year, and no sooner than 12 months after Contract execution, and are subject to the written approval of the Executive Director or his designee.

The actual annual salaries for all Key Team Members and employees anticipated to work a minimum of 40 hours/month will be set as of the Contract execution. Revisions to actual annual salaries billed to the Mobility Authority may be proposed no more frequently than once per calendar year, and no sooner than 12 months after Contract execution, are limited to no more than a 3% increase per year and are subject to the written approval of the Executive Director or his designee. Actual annual salaries billed to the Mobility Authority in excess of the 3% annual increase threshold will be considered only on a case by case basis and shall be approved by the Executive Director or his designee in writing.

The Mobility Authority shall have the right to review and/or audit the Engineer's Direct Labor Costs, auditable overhead rates, and annual salaries of Key Team Members upon written request. Once approved, the range of Direct Labor Costs and auditable overhead rate will be used going forward until the next annual adjustment is requested and approved. Changes to the auditable overhead rate will not be applied retroactively to Direct Labor Costs incurred in the previous year. If the Engineer or a subconsultant of the Engineer does not have a FAR Part 31 overhead rate, they may submit, for approval by the Executive Director or his designee, alternate documentation supporting an appropriate auditable overhead rate. If an auditable overhead rate is not submitted or available, fixed hourly rates must be submitted per subarticle 3.B.4. During the term of this Contract, the Engineer shall provide to the Executive Director or his designee, prior

to requesting any adjustment to its auditable overhead rate, a copy of the report establishing a new FAR Part 31 rate for the Engineer.

The payment of the hourly rates and allowed costs shall constitute full payment for all Services, liaisons, products, materials, and equipment required to deliver the Services.

(2) Unit Cost

Subject to the terms of a Work Authorization issued pursuant to Article 5 below (including any maximum amount to be paid as stated therein), the Mobility Authority will agree to pay the Engineer, and the Engineer will agree to accept as full and sufficient compensation and reimbursement for the performance of all Services as set forth in this Contract and the Work Authorization, an agreed upon unit price multiplied by the number of units completed for each billing. This method of payment is generally reserved for work which has a definable work product but the quantity is uncertain and the Engineer assumes the risks for all costs. Each invoice submitted shall identify the specific Contract task(s) and completed work product/deliverable for the agreed upon price outlined in the Work Authorization.

(3) Lump Sum

Subject to the terms of a Work Authorization issued pursuant to Article 5 below (including any maximum amount to be paid as stated therein), the Mobility Authority will agree to pay Engineer, and the Engineer will agree to accept as full and sufficient compensation and reimbursement for the performance of all Services as set forth in this Contract and the Work Authorization, a Lump Sum amount for the specified category of services.

The Lump Sum will include compensation for Engineer's services and services of subconsultants, if any. Appropriate amounts will be incorporated in the Lump Sum to account for labor, overhead, profit, and Reimbursable Expenses.

The portion of the Lump Sum amount billed for Engineer's Services will be based upon Engineer's estimate, as approved by the Mobility Authority's Director of Engineering, of the proportion of the total Services completed during the billing period to the Lump Sum amount.

(4) Specified Rate

Subject to the terms of a Work Authorization issued pursuant to Article 5 below (including any maximum amount to be paid as stated therein), and for the specified category of services, the Mobility Authority will agree to pay the Engineer, and the Engineer will agree to accept as full and sufficient compensation and reimbursement for the performance of all Services as set forth in this Contract and the Work Authorization, an amount equal to the cumulative hours charged to the specific project by each class of Engineer's employees multiplied by the Standard Hourly Rates for each applicable billing class for all Services performed on the specific project, plus Reimbursable Expenses and sub consultant's charges, if any.

Standard Hourly Rates include salaries and wages paid to personnel in each billing class plus the cost of customary and statutory benefits, general and administrative overhead, non-project operating costs, and operating margin or profit.

Engineer's Reimbursable Expenses Schedule and Standard Hourly Rates are included in Attachment B.

The total estimated compensation for the specified category of services shall be stated in the Work Authorization. This total estimated compensation will incorporate all labor at Standard Hourly Rates, Reimbursable Expenses, and sub consultants' charges, if any.

The amounts billed will be based on the cumulative hours charged to the specified category of services during the billing period by each class of Engineer's employees multiplied by the Standard Hourly Rates for each applicable billing class, plus Reimbursable Expenses and Engineer's sub consultant's charges, if any.

Revisions to the Standard Hourly Rates may be proposed no more frequently than once per calendar year, and no sooner than 12 months after contract execution, and are subject to written approval of the Executive Director or his designee.

C. Limitations on Rates Utilized. The Engineer represents that at all times, subject to the limitations on timing and approval in Article 2, throughout the term of this Contract that it shall not use an auditable overhead rate that exceeds the rate determined in accordance with FAR Part 31 (or successor regulations); and shall be based on actual salary amounts for the individuals performing the Services; that the Direct Labor Costs shall not exceed the caps reflected in Attachment B and shall be based on actual salary amounts for the individuals performing the Services.

D. Reimbursable Expenses. Notwithstanding the foregoing, and subject to the limitations herein, the Engineer shall be entitled to reimbursement for reasonable out-of-pocket expenses actually incurred by the Engineer that are necessary for the performance of its duties under this Contract and which are not included in the approved overhead rate, said expenses being limited to travel costs at the Current State Rate, printing costs for specified reports and deliverables, automobile expenses being reimbursed at the federal mileage rates for travel originating from the office of the Engineer employee or subconsultant, and other expenses directly approved, in advance, by the Executive Director or his designee (collectively, "Reimbursable Expenses"). Except as otherwise authorized in an executed Work Authorization, and only then to the extent reimbursable by the Texas Department of Transportation ("TxDOT") under the terms of any form of financial assistance agreement, the Mobility Authority shall not reimburse the Engineer for travel, lodging, and similar expenses incurred by the Engineer to bring additional staff to its local office or to otherwise reassign personnel to provide basic engineering support of the Engineer's performance of the Services, provided, however, that the Mobility Authority shall reimburse, but only in accordance with the terms of this subsection, such costs incurred by the Engineer to bring to its local office or the Mobility Authority's facilities, with advance approval by the Executive Director or his designee, staff with specialized skills or expertise required for the Services and not customarily available from a staff member providing services of the type described in this Contract. Roadway tolls incurred by Engineer or any of its subconsultants in connection with the performance of the Services will not be a reimbursable expense under this Contract.

Engineer acknowledges that all expenses and costs paid or reimbursed by the Mobility Authority using federal or state funds shall be paid or reimbursed in accordance with, and subject to, applicable policies of the Mobility

Authority and other applicable state and federal laws, including the applicable requirements of OMB Circular A-87, which may reduce the amount of expenses and costs reimbursed to less than what was incurred.

The Engineer shall acquire all goods and services subject to the reimbursement by the Mobility Authority under this Contract on a tax-free basis pursuant to the Mobility Authority's tax-exempt status described in subarticle 3.H. This provision applies to the extent the Mobility Authority's tax-exempt status can reasonably be extended to purchases made directly by the Engineer.

E. Subconsultants. For the purposes of this Contract, a "subconsultant" is an individual or entity contracted by the Engineer to provide services related to or part of those which the Engineer owes to the Mobility Authority under this Contract. The Engineer may engage a subconsultant to provide services, and the Mobility Authority will reimburse the Engineer for the Engineer's cost of engaging the subconsultant for those services, if the Engineer provides a written description of the proposed services and the proposed price (using rates approved in Attachment B), to the Mobility Authority's Director of Engineering before the Services are provided, and the Mobility Authority's Director of Engineering has provided to the Engineer a written approval for the Services and the proposed price. If an approved subconsultant bills on an hourly rate, each invoice from the subconsultant submitted to the Mobility Authority for reimbursement must report the tasks performed by each billing person and the amount of time spent performing the task. The Engineer may not charge a mark-up or commission on a subconsultant's invoice, and the Mobility Authority will not reimburse the Engineer in an amount that exceeds the price proposal from the subconsultant that was approved by the Mobility Authority's Director of Engineering.

F. Non-compensable Time. Time spent by the Engineer's personnel or subconsultants in an administrative or supervisory capacity not related to the performance of the Services is not compensable and shall not be billed to the Mobility Authority. Time spent on work in excess of what would reasonably be considered appropriate under industry standards for the performance of such Services is not compensable, unless that additional time spent resulted from the Mobility Authority's delay in providing information, materials, feedback, or other necessary cooperation to the Engineer. The Mobility Authority will not pay any hourly compensation to the Engineer for Services or deliverables required due to an error, omission, or fault of the Engineer.

G. Consistency of Classification/Duties and Hourly Rates. Time spent by the Engineer's employees or subconsultants to perform services or functions capable of being carried out by other, subordinate personnel with a lower hourly rate shall be billed at a rate equivalent to that of the applicable qualified subordinate personnel.

H. Taxes. All payments to be made by the Mobility Authority to the Engineer pursuant to this Contract are inclusive of federal, state, or other taxes, if any, however designated, levied, or based. The Mobility Authority acknowledges and represents that it is a tax-exempt entity under Sections 151.309, et seq., of the Texas Tax Code. A "Texas Sales and Use Tax Exemption Certificate" is available from the Mobility Authority for use toward project-related expenses upon request. Title to any consumable items purchased by the Engineer in performing this Contract shall be deemed to have passed to the Mobility Authority at the time the Engineer takes possession or earlier, and such consumable items shall immediately be marked, labeled, or physically identified as the property of the Mobility Authority, to the extent practicable.

ARTICLE 4
INVOICE REQUIREMENTS

The Engineer shall submit its monthly invoices certifying the fees charged and any Reimbursable Expenses for Services provided during the previous month and shall also present a reconciliation of monthly invoices (and related estimates) to which the work relates. Each invoice shall be in such detail as is required by the Mobility Authority and, if the work is eligible for payment through an agreement with TxDOT, in such detail as TxDOT may require, including a breakdown of Services provided on a project-by-project basis, together with other Services requested by the Mobility Authority. Upon request of the Mobility Authority, the Engineer shall also submit certified time and expense records directly related to Services provided to the Mobility Authority, and copies of invoices that support invoiced fees and Reimbursable Expenses. All invoices must be consistent with the rates established by this Contract and the compensation method specified in the Work Authorization. Unless waived in writing by the Executive Director, or his designee, no invoice may contain, and the Mobility Authority will not be required to pay, any charge for billable hours which is more than (90) days old at the time of invoicing.

A. Form of Invoices. The invoice shall show: (1) the Work Authorization number for each Work Authorization included in the billing; (2) the total amount earned thru the billing period; and (3) the amount due and payable as of the date of the current billing statement for each Work Authorization. The invoice shall indicate if the work has been completed or if the invoice is for partial completion of the work. The invoice shall be in the format provided by the Mobility Authority.

B. Disadvantaged Business Enterprise (DBE)/Historically Underutilized Business (HUB) Forms. The Engineer will be responsible for completing and including with each invoice all required DBE/HUB reporting forms included in the Work Authorization(s).

C. Time and Place of Payment. Upon receipt of an invoice that complies with all invoice requirements set forth in this Contract, the Mobility Authority shall make a good faith effort to pay the amount, which is due and payable within thirty (30) days, provided that if all or a portion of the Services reflected in the invoice are to be reimbursed by TxDOT through an agreement between TxDOT and the Mobility Authority, the Mobility Authority shall make a good faith effort to pay such amounts within thirty (30) days of receipt of such payments from TxDOT. **If the Mobility Authority disputes a request for payment by the Engineer, the Mobility Authority agrees to pay any undisputed portion of the invoice when due. The basis for any such dispute must be stated in writing within thirty (30) days after the Mobility Authority's receipt of the monthly invoice.**

D. Withholding Payments. The Mobility Authority reserves the right to withhold payment of all or portion of the Engineer's invoice in the event of any of the following: (1) a dispute over all or part of the work performed or costs thereof is not resolved within a thirty (30) day period following receipt of the invoice; (2) verification of satisfactory work performed has not been completed; or (3) if required reports (including third-party verifications, if any) are not received.

E. Invoice and Progress Report Submittal Process. The protocol for invoice and progress report submittal, review, and approval will be as follows:

- (1) The invoice submittal shall include:
 - Progress report
 - Forecast for completion of the scope
 - Invoice (in the required format provided by the Mobility Authority)
 - Supporting documents as requested

- (2) A progress report shall be submitted to the Mobility Authority at least once each calendar month;
- (3) An update to the project schedule (using critical path method analysis) indicating the project's overall status versus the baseline schedule (originally submitted with the Project Management Plan) shall be submitted to the Mobility Authority at least once each calendar month;
- (4) In the event that invoices are not submitted on a monthly basis, a monthly submittal of the progress report and project schedule information will be required nevertheless;
- (5) The invoice submittal shall not be later than the 10th day of the month following service unless otherwise directed; if submitted after the 10th day, it will be processed the following month;
- (6) As it relates to the Mobility Authority's end of fiscal year closeout efforts, the Engineer shall submit the invoice including their services through June 30th for a given year no later than July 7th of that same year;
- (7) The Mobility Authority's Director of Engineering and/or the Mobility Authority's General Engineering Consultant (the "GEC" as defined in Article 19) will review the invoices to confirm that supporting documentation is included, and for compliance with the Contract and consistency with the submitted progress report; and
- (8) The invoice will either be recommended for approval by the Mobility Authority's Director of Engineering and/or GEC, or the Mobility Authority's Director of Engineering and/or GEC will return it to the Engineer for required correction.

F. Effect of Payments. No payment by the Mobility Authority shall relieve the Engineer of its obligation to perform on a timely basis the Services required under this Contract. If, prior to acceptance of any Service, product or other deliverable, the Executive Director or his designee determines that said Service, product or deliverable does not satisfy the requirements of this Contract, the Executive Director or his designee may reject same and require the Engineer to correct or cure same within a reasonable period of time and at no additional cost to the Mobility Authority.

G. Audit. The Mobility Authority shall have the right to examine the books and records of the Engineer. The Engineer shall maintain all books, documents, papers, accounting records and other evidence pertaining to cost incurred and shall make such materials available at its office during the Contract period and for four (4) years from the date of final payment under this Contract or until any pending litigation has been completely and fully resolved, and the Executive Director or his designee approves of the destruction of records, whichever occurs last. The Mobility Authority or any of its duly authorized representatives, TxDOT, the Federal Highway Administration ("FHWA"), the United States Department of Transportation Office of Inspector General and the Comptroller General shall have access to any and all books, documents, papers and records of the Engineer which are directly pertinent to this Contract for the purpose of making audits, examinations, excerpts and transcriptions.

ARTICLE 5 WORK AUTHORIZATIONS

A. Use. The Engineer shall not begin any work until the Executive Director and the Engineer have signed a Work Authorization and received a Notice to Proceed as defined in the Work Authorization. Costs

incurred by the Engineer before a Work Authorization is fully executed or after the completion date specified in the Work Authorization are not eligible for reimbursement. Services performed shall be in strict accordance with the scope, schedule, and budget set forth in each Work Authorization issued pursuant to this Contract, and no Services shall be performed which are not the subject of a validly issued Work Authorization. The Executive Director or his designee will issue Work Authorizations to authorize all work under this Contract. No work shall begin on the activity until the Work Authorization is approved and fully executed. All work must be completed on or before the completion date specified in the Work Authorization.

B. Contents. Each Work Authorization shall include: (1) scope of Services including types of Services to be performed and a full description of the work required to perform those Services (2) a full description of general administration tasks exclusive to that Work Authorization (3) a work schedule (including beginning and ending dates) with milestones; (4) the basis of payment whether cost-plus, unit cost, lump sum, or specified rate; (5) a Work Authorization budget as described in subarticle 5.C.; and (6) DBE/HUB Requirements. The Engineer shall not include additional contract terms and conditions in the Work Authorization.

C. Work Authorization Budget. A Work Authorization budget shall be prepared by the Engineer and shall set forth in detail the following: (1) the computation of the estimated cost of the work as described in the scope of Services to be provided by the Engineer; (2) the estimated time (hours/days) required to complete the work using the fees set forth in Attachment B; (3) a work plan that includes a list of the work to be performed; and (4) a maximum cost (not-to-exceed) amount or unit or lump sum cost and the total cost or price of the work as defined in the scope of Services.

D. No Guaranteed Work. Work Authorizations will be issued at the sole discretion of the Executive Director or his designee. While it is the Executive Director's or his designee's intent to issue Work Authorizations hereunder, the Engineer shall have no cause of action conditioned upon the lack of, failure to issue, or number of Work Authorizations issued.

E. Incorporation into Contract. Each Work Authorization shall be signed by both parties and become a part of the Contract. No Work Authorization will waive the Mobility Authority's or the Engineer's responsibilities and obligations established in this Contract. The Engineer shall promptly notify the Executive Director or his designee of any event that will affect completion of the Work Authorization in accordance with the terms thereof.

F. Supplemental Work Authorizations. Before additional work may be performed or additional costs incurred beyond those authorized in a Work Authorization, a change in a Work Authorization shall be enacted by a written Supplemental Work Authorization to be approved by the Executive Director or his designee. Supplemental Work Authorizations, if required, must be executed by both parties. The Mobility Authority shall not be responsible for actions by the Engineer or any costs incurred by the Engineer relating to additional work not directly associated with the performance or prior to the execution of the Supplemental Work Authorization. The Executive Director or his designee shall take such time as it deems necessary, in his sole discretion, to review the Supplemental Work Authorization.

(1) Notice. If the Engineer is of the opinion that any assigned work is beyond the scope of this Contract and constitutes additional work beyond the Services to be provided under this Contract or a Work Authorization, it shall promptly notify the Executive Director or his designee and submit written justification presenting the facts of the work and demonstrating how the work constitutes supplementary work.

(2) More Time Needed. If the Engineer determines or reasonably anticipates that the work authorized in a Work Authorization cannot be completed before the specified completion date,

the Engineer shall promptly notify the Executive Director or his designee. The Executive Director or his designee, at his sole discretion, may extend the Work Authorization period by execution of a Supplemental Work Authorization.

(3) Changes in Scope. Changes that would modify the scope of the work authorized in a Work Authorization must be enacted by a written Supplemental Work Authorization. If the change in scope affects the amount payable under the Work Authorization, the Engineer shall prepare a revised Work Authorization budget for the Executive Director's or his designee's approval. The Executive Director or his designee shall analyze the proposed justification, work hour estimate and cost. Upon approval of the need, the Executive Director or his designee shall negotiate the Supplemental Work Authorization scope with the Engineer, and then process the final Supplemental Work Authorization, subject to final written approval by the Executive Director or his designee.

(4) Limitation of Liability. The Mobility Authority shall not be responsible for actions by the Engineer or any costs incurred by the Engineer relating to additional work not directly associated with (or incurred prior to) the execution of a Supplemental Work Authorization.

G. Deliverables. Upon satisfactory completion of the Work Authorization, the Engineer shall submit the deliverables as specified in the executed Work Authorization and updated project schedule to the Executive Director or his designee for review and acceptance.

ARTICLE 6 PROGRESS

A. Progress meetings. As required and detailed in the Work Authorizations or as otherwise directed by the Executive Director or his designee, the Engineer shall from time to time during the progress of the work confer with the Executive Director or his designee. The Engineer shall prepare and present such information as may be pertinent and necessary or as may be requested by the Executive Director or his designee in order to evaluate features of the work.

B. Conferences. At the request of the Executive Director or his designee and as required and detailed in the Work Authorizations, conferences shall be held at the Engineer's office, the office of the Mobility Authority, or at other locations designated by the Executive Director or his designee. These conferences may also include evaluation of the Engineer's Services and work when requested by the Executive Director or his designee.

C. Reports. The Engineer shall promptly advise the Executive Director or his designee in writing of events that have a significant impact upon the progress of a Work Authorization, including:

(1) problems, delays, adverse conditions that will materially affect the ability to meet the time schedules and goals, or preclude the attainment of project work units by established time periods; this disclosure will be accompanied by a statement of the action taken or contemplated, and any Mobility Authority or state/federal assistance needed to resolve the situation; and

(2) favorable developments or events that enable meeting the work schedule goals sooner than anticipated.

D. Corrective Action. Should the Executive Director or his designee determine that the progress of work does not satisfy the milestone schedule (or other deadlines) set forth in a Work Authorization, the Executive Director or his designee shall review the work schedule with the Engineer to determine the nature of

corrective action needed. The Executive Director or his designee's participation in reviewing the work schedule and determining corrective actions needed will not, in any way, excuse the Engineer from any responsibility or costs of failure to timely perform the Services.

E. More Time Needed. If the Engineer determines or reasonably anticipates that the work authorized in a Work Authorization cannot be completed within the work schedule contained therein, the Engineer shall promptly notify the Executive Director or his designee and shall follow the procedure set forth in the Work Authorization. The Executive Director or his designee may, at his sole discretion, modify the work schedule to incorporate an extension of time with the execution of a Supplemental Work Authorization.

ARTICLE 7

SUSPENSION OF WORK AUTHORIZATION

A. Notice. Should the Executive Director or his designee desire to suspend a Work Authorization (or a portion of the work authorized thereunder) but not terminate the Contract, the Executive Director or his designee may provide written notification to the Engineer, giving ten (10) business days prior notice. Both parties may waive the ten (10) business day notice requirement in writing.

B. Reinstatement. A Work Authorization may be reinstated and resumed in full force and effect within thirty (30) days of receipt of written notice from the Executive Director or his designee to resume the work. Both parties may waive the thirty (30) day notice in writing.

C. Limitation of Liability. The Mobility Authority shall have no liability for work performed or costs incurred prior to the date authorized by the Executive Director or his designee to begin work, during periods when work is suspended, or after the completion of the Contract or Work Authorization.

ARTICLE 8

CHANGES IN WORK

A. Work Previously Submitted as Satisfactory. If the Engineer has submitted work in accordance with the terms of this Contract and Work Authorization(s) but the Executive Director or his designee requests changes to the completed work or parts thereof which involve changes to the original scope of Services or character of work under the Contract and Work Authorization(s), the Engineer shall make such revisions as requested and as directed by the Executive Director or his designee, provided the work is reflected in a Supplemental Work Authorization.

B. Work Does Not Comply with Contract. If the Engineer submits work that does not comply with the terms of this Contract or Work Authorization(s), the Executive Director or his designee shall instruct the Engineer to make such revision as is necessary to bring the work into compliance with the Contract or Work Authorization(s). No additional compensation shall be paid for this work.

ARTICLE 9

OWNERSHIP OF DATA

A. Work for Hire. All services provided under this Contract are considered work for hire and, as such, all data, basic sketches, charts, calculations, plans, specifications, electronic files, and other documents created or collected under the terms of this Contract are the property of the Mobility Authority.

B. Ownership of Plans. Notwithstanding any provision in this Contract or in common law or statute to the contrary all of the plans, tracings, estimates, specifications, computer records, discs, tapes, proposals,

sketches, diagrams, charts, calculations, correspondence, memoranda, survey notes, and other data and materials, and any part thereof, created, compiled or to be compiled by or on behalf of the Engineer, including all information prepared for or posted on the Mobility Authority's website and together with all materials and data furnished to it by the Mobility Authority, are and at all times shall be and remain the property of the Mobility Authority and shall not be subject to any restriction or limitation on their further use by or on behalf of the Mobility Authority. Engineer hereby assigns any and all rights and interests it may have in the foregoing to the Mobility Authority, and Engineer hereby agrees to provide reasonable cooperation as may be requested by the Mobility Authority in connection with the Mobility Authority's efforts to perfect or protect rights and interests in the foregoing; and if at any time demand be made by the Mobility Authority for any of the above materials, records, and documents, whether after termination of this Contract or otherwise, such shall be turned over to the Mobility Authority without delay. The Mobility Authority hereby grants the Engineer a revocable license to retain and utilize the foregoing materials for the limited purpose of fulfilling Engineer's obligations under this Contract, said license to terminate and expire upon the earlier to occur of (a) the completion of Services described in this Contract or (b) the termination of this Contract, at which time the Engineer shall deliver to the Mobility Authority all such materials and documents. If the Engineer or a subconsultant desires later to use any of the data generated or obtained by it in connection with the Projects or any other portion of the work product resulting from the Services, it shall secure the prior written approval of the Executive Director or his designee. The Engineer shall retain its copyright and ownership rights in its own back-office databases and computer software that are not developed for the Mobility Authority or for purposes of this Contract. Intellectual property developed, utilized, or modified in the performance of Services for which the Engineer is compensated under the terms of this Contract shall remain the property of the Mobility Authority, Engineer hereby agrees to provide reasonable cooperation as may be requested by the Mobility Authority in connection with the Mobility Authority's efforts to perfect or protect such intellectual property. The Mobility Authority retains an unrestricted license for software packages developed in whole or in part with Mobility Authority funds.

C. Separate Assignment. If for any reason the agreement of the Mobility Authority and the Engineer set forth in subarticle 9.B. regarding the ownership of work product and other materials is determined to be unenforceable, either in whole or in part, the Engineer hereby assigns and agrees to assign to the Mobility Authority all right, title, and interest that Engineer may have or at any time acquire in said work product and other materials, without royalty, fee or other consideration of any sort, and without regard to whether this Contract has terminated or remains in force. The Mobility Authority hereby acknowledges, however, that all documents and other work product provided by the Engineer to the Mobility Authority and resulting from the Services performed under this Contract are intended by the Engineer solely for the use for which they were originally prepared. Notwithstanding anything contained herein to the contrary, the Engineer shall have no liability for the use by the Mobility Authority of any work product generated by the Engineer under this Contract on any project other than for the specific purpose and project for which the work product was prepared.

D. Disposition of Documents. All documents and electronic files prepared by the Engineer and all documents furnished to the Engineer by the Mobility Authority shall be delivered to the Mobility Authority upon request. The Engineer, at its own expense, may retain copies of such documents or any other data which it has furnished the Mobility Authority under this Contract, but further use of the data is subject to express written permission by the Executive Director or his designee.

E. Release of Design Plan. The Engineer: (1) will not release any design plan created or collected under this Contract except to its subconsultants as necessary to complete the Contract; (2) shall include a provision in all subcontracts which acknowledges the Mobility Authority's ownership of the design plan and prohibits its use for any use other than the project identified in this Contract; and (3) is responsible for any

improper use of the design plan by its employees, officers, or subconsultants, including costs, damages, or other liability resulting from improper use. Neither the Engineer nor any subconsultants may charge a fee for any portion of the design plan created by the Mobility Authority.

ARTICLE 10 PUBLIC INFORMATION AND CONFIDENTIALITY

A. Public Information. The Mobility Authority will comply with Government Code, Chapter 552, the Texas Public Information Act in the release of information produced under this Contract.

B. Confidentiality. The Engineer shall not disclose information obtained from the Mobility Authority under this Contract without the express written consent of the Executive Director or his designee. All employees of the Engineer and its subconsultants working on the Project may be required to sign a non-disclosure and confidentiality agreement.

C. Access to Information. The Engineer is required to make any information created or exchanged with the Mobility Authority pursuant to this Contract, and not otherwise excepted from disclosure under the Texas Public Information Act as determined by the Mobility Authority, available in a format that is accessible by the public at no additional charge to the Mobility Authority.

ARTICLE 11 PERSONNEL, EQUIPMENT AND MATERIAL

A. Engineer Resources. The Engineer shall furnish and maintain an office for the performance of all Services, in addition to providing adequate and sufficient personnel and equipment to perform the Services required under the Contract. The Engineer certifies that it presently has adequate qualified personnel in its employment for performance of the Services required under this Contract, or it will be able to obtain such personnel from sources other than the Mobility Authority.

B. Removal of Employee. All employees of the Engineer assigned to this Contract shall have such knowledge and experience as will enable them to perform the duties assigned to them. The Executive Director or his designee may instruct the Engineer to remove any employee from association with work authorized in this Contract if, in the sole opinion of the Executive Director or his designee, the work of that employee does not comply with the terms of this Contract; the conduct of that employee becomes detrimental to the work; or for any other reason identified by the Executive Director or his designee.

C. Authority Approval of Replacement Personnel. The Engineer may not replace any Key Team Member, as designated in the applicable Work Authorization, without prior written approval of the Director of Engineering. If any Key Team Member cease to work on this Contract, the Engineer must notify the Director of Engineering in writing as soon as possible, but in any event within (3) three business days. The notification must give the reason for removal. The Engineer must receive written approval from the Director of Engineering of proposed replacement Key Team Member. The Director of Engineering's approval will be based upon the proposed replacement Key Team Member qualifications to provide the required Services. Approval will not be unreasonably withheld.

D. Liquidated Damages. The selection of Engineer to provide the Services under this Contract was based, in part, on the Key Team Member identified in Engineer's **proposal**. Because of the importance and unique nature of the Services to be provided by Key Team Member identified in Attachment C it is impractical to calculate the actual losses that would be suffered by the Mobility Authority by the loss of Key Team Member from the Contract. Therefore, the Engineer agrees to compensate the Mobility Authority for its losses by paying

liquidated damages in the amount of \$2,500 per day per Key Team Member position in Attachment C if any Key Team Member are removed by the Engineer by reassignment without prior written approval from the Director of Engineering. Liquidated damages will accrue from the date the Engineer removes the Key Team Member in Attachment C from the Contract if the parties do not agree on a replacement within (14) calendar days after the Key Team Member are removed from the Contract. If a replacement is agreed upon within that fourteen (14) calendar day period the Liquidated damages will be waived. Liquidated damages shall cease when the parties agree on a substitute or when the Contract is terminated.

E. Ownership of Acquired Property. Except to the extent that a specific provision of this Contract states to the contrary, and as provided in subarticle 9.B., the Mobility Authority shall own all intellectual and other property acquired or developed under this Contract and all equipment purchased by the Engineer or its subconsultants under this Contract. All intellectual property and equipment owned by the Mobility Authority shall be delivered to the Director of Engineering when the Contract or applicable Work Authorization terminates, or when it is no longer needed for work performed under this Contract, whichever occurs first. In the event that a capital item is purchased for the sole use of the Mobility Authority, title shall pass or transfer to the Mobility Authority prior to any use of the item by the Engineer.

ARTICLE 12 SUBCONTRACTING

A. Prior Approval. The Engineer shall not assign, subcontract, or transfer any portion of professional services related to the work under this Contract unless specified in an executed Work Authorization or otherwise without first obtaining the prior written approval from the Executive Director or his designee. Request for approval should include a written description of the proposed services, and, using rates established in Attachment B, a proposed price.

B. DBE/HUB Compliance. The Engineer's subcontracting program shall comply with the requirements of the Work Authorization(s).

C. Required Provisions. All subcontracts for professional services shall include the provisions included in this Contract and any provisions required by law. The Engineer is authorized to pay subconsultants in accordance with the terms of the subcontract.

D. Engineer Responsibilities. No subcontract shall relieve the Engineer of any of its responsibilities under this Contract and of any liability for work performed under this Contract, even if performed by a subconsultant or other third party performing work for or on behalf of the Engineer.

E. Invoice Approval and Processing. All subconsultants shall prepare and submit their invoices on the same billing cycle and format as the Engineer (so as to be included in invoices submitted by the Engineer).

ARTICLE 13 INSPECTION OF WORK

A. Review Rights. Under this Contract, the Mobility Authority, TxDOT, and the U.S. Department of Transportation, and any authorized representative of the Mobility Authority, TxDOT, or the U.S. Department of Transportation, shall have the right at all reasonable times to review or otherwise evaluate the work performed hereunder and the premises in which it is being performed.

B. Reasonable Access. If any review or evaluation is made on the premises of the Engineer or a subconsultant under this Article, the Engineer shall provide and require its subconsultants to provide all

reasonable facilities and assistance for the safety and convenience of the persons performing the review in the performance of their duties.

ARTICLE 14 SUBMISSION OF REPORTS

All applicable study reports shall be submitted in preliminary form for approval by the Director of Engineering before a final report is issued. The Director of Engineering's comments on the Engineer's preliminary report must be addressed in the final report. Draft reports shall be considered confidential unless otherwise indicated by the Director of Engineering.

ARTICLE 15 VIOLATION OF CONTRACT TERMS

A. Increased Costs. Violation of Contract terms, breach of contract, or default by the Engineer shall be grounds for termination of the Contract pursuant to Article 16, and any increased or additional cost incurred by the Mobility Authority arising from the Engineer's default, breach of contract or violation of contract terms shall be paid by the Engineer.

B. Remedies. This Contract shall not be considered as specifying the exclusive remedy for any default, but all remedies existing at law and in equity may be availed of by either party and shall be cumulative.

C. Excusable Delays. Except with respect to defaults of subconsultants, the Engineer shall not be in default by reason of any failure in performance of this Contract in accordance with its terms (including any failure to progress in the performance of the work) if such failure arises out of causes beyond the control and without the default or negligence of the Engineer. Such causes may include, but are not restricted to, acts of God or the public enemy, acts of the Government in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather.

ARTICLE 16 TERMINATION

A. Termination. The Contract may be terminated before the stated completion date by any of the following conditions:

- (1) by mutual agreement and consent, in writing from both parties;
- (2) by the Executive Director or his designee by notice in writing to the Engineer as a consequence of failure by the Engineer to perform the Services set forth herein in a satisfactory manner or if the Engineer violates the provisions of Article 23, Gratuities, or DBE/HUB Requirements;
- (3) by either party, upon the failure of the other party to fulfill its obligations as set forth herein, following thirty (30) days written notice and opportunity to cure;
- (4) by the Executive Director or his designee for his convenience and in its sole discretion, not subject to the consent of the Engineer, by giving thirty (30) days written notice of termination to the Engineer; or
- (5) by satisfactory completion of all Services and obligations described herein.

B. Measurement. Should the Executive Director or his designee terminate this Contract as herein provided, no fees other than fees due and payable at the time of termination shall thereafter be paid to the

Engineer. In determining the value of the work performed by the Engineer prior to termination, the Executive Director or his designee shall be the sole judge. Compensation for work at termination will be based on a percentage of the work completed at that time. Should the Executive Director or his designee terminate this Contract under subarticles 16.A.3 & 4, the Engineer shall not incur costs during the thirty-day notice period in excess of the amount incurred during the preceding thirty (30) days.

C. Value of Completed Work. If the Engineer defaults in the performance of this Contract or if the Executive Director or his designee terminates this Contract for fault on the part of the Engineer, the Executive Director or his designee will give consideration to the following when calculating the value of the completed work: (1) the actual costs incurred (not to exceed the rates set forth in the applicable Work Authorization) by the Engineer in performing the work to the date of default; (2) the amount of work required which was satisfactorily completed to date of default; (3) the value of the work which is usable to the Mobility Authority; (4) the cost to the Mobility Authority of employing another firm to complete the required work; (5) the time required to employ another firm to complete the work; (6) delays in opening a revenue generating project and costs (including lost revenues) resulting therefrom; and (7) other factors which affect the value to the Mobility Authority of the work performed.

D. Calculation of Payments. The Executive Director or his designee shall use the fee structure established by the applicable Work Authorization in determining the value of the work performed up to the time of termination. Nothing herein shall preclude the Executive Director or his designee from offsetting against amounts earned for work completed prior to termination costs resulting from the termination or the circumstances leading to the termination.

E. Surviving Requirements. The termination of this Contract and payment of an amount in settlement as prescribed above shall extinguish the rights, duties, and obligations of the Mobility Authority and the Engineer under this Contract, except for those provisions that establish responsibilities that extend beyond the Contract period, including without limitation the provisions of Article 18.

F. Payment of Additional Costs. If termination of this Contract is due to the failure of the Engineer to fulfill its Contract obligations, the Mobility Authority may take over the project and prosecute the work to completion, and the Engineer shall be liable to the Mobility Authority for any additional cost to the Mobility Authority.

ARTICLE 17 COMPLIANCE WITH LAWS

The Engineer shall comply with all applicable federal, state and local laws, statutes, codes, ordinances, rules and regulations, and the orders and decrees of any court, or administrative bodies or tribunals in any manner affecting the performance of this Contract, including, without limitation, worker's compensation laws, minimum and maximum salary and wage statutes and regulations, nondiscrimination, licensing laws and regulations, the Mobility Authority's enabling legislation (Chapter 370 of the Texas Transportation Code), and all amendments and modifications to any of the foregoing, if any. When required, the Engineer shall furnish the Mobility Authority with satisfactory proof of its compliance therewith.

ARTICLE 18 INDEMNIFICATION

THE ENGINEER SHALL INDEMNIFY AND HOLD HARMLESS THE MOBILITY AUTHORITY AND ITS OFFICERS, DIRECTORS, EMPLOYEES, ENGINEERS, AND AGENTS WHICH, FOR THE PURPOSES OF THIS CONTRACT, SHALL

INCLUDE THE MOBILITY AUTHORITY'S GEC, GENERAL COUNSEL, BOND COUNSEL, FINANCIAL ADVISORS, TRAFFIC AND REVENUE ENGINEERS, TOLL OPERATIONS/COLLECTIONS FIRMS, AND UNDERWRITERS (COLLECTIVELY THE "INDEMNIFIED PARTIES") FROM ANY CLAIMS, COSTS, OR LIABILITIES OF ANY TYPE OR NATURE AND BY OR TO ANY PERSONS WHOMSOEVER, TO THE EXTENT CAUSED BY THE NEGLIGENT ACTS, ERRORS, OR OMISSIONS OF THE ENGINEER OR ITS OFFICERS, DIRECTORS, EMPLOYEES, SUBCONSULTANTS AND AGENTS WITH RESPECT TO THE ENGINEER'S PERFORMANCE OF THE WORK TO BE ACCOMPLISHED UNDER THIS CONTRACT OR ACTIONS RESULTING IN CLAIMS AGAINST THE INDEMNIFIED PARTIES. IN SUCH EVENT, THE ENGINEER SHALL ALSO INDEMNIFY AND HOLD HARMLESS THE MOBILITY AUTHORITY AND THE INDEMNIFIED PARTIES FROM ANY AND ALL REASONABLE AND NECESSARY EXPENSES, INCLUDING REASONABLE ATTORNEYS' FEES, INCURRED BY THE MOBILITY AUTHORITY IN LITIGATING OR OTHERWISE RESISTING SAID CLAIMS, COSTS OR LIABILITIES. IN THE EVENT THE MOBILITY AUTHORITY AND/OR ANY OF THE INDEMNIFIED PARTIES, IS/ARE FOUND TO BE PARTIALLY AT FAULT, THE ENGINEER SHALL, NEVERTHELESS, INDEMNIFY THE MOBILITY AUTHORITY FROM AND AGAINST THE PERCENTAGE OF FAULT ATTRIBUTABLE TO THE ENGINEER OR ITS OFFICERS, DIRECTORS, EMPLOYEES, SUBCONSULTANTS AND AGENTS OR TO THEIR CONDUCT.

ARTICLE 19
ROLE OF GENERAL ENGINEERING CONSULTANT (GEC)

The Mobility Authority will utilize a GEC to assist in its management of this Contract. The GEC is an independent contractor and is authorized by the Mobility Authority to provide the management and technical direction for this Contract on behalf of the Mobility Authority, provided that the GEC is not an agent of the Mobility Authority. All the technical and administrative provisions of the Contract shall be managed by the GEC, and the Engineer shall comply with all of the GEC's directives that are within the purview of the Contract. Decisions concerning Contract amendments and adjustments, such as time extensions and Supplemental Work Authorizations, shall be made by the Executive Director or his designee, unless otherwise specified; however, requests for such amendments or adjustments shall be made through the GEC, who shall forward such requests to the Executive Director or his designee with its comments and recommendations.

Should any dispute arise between the GEC and the Engineer, concerning the conduct of this Contract, either party may request a resolution of said dispute by the Executive Director or his designee, whose decision shall be final.

ARTICLE 20
ENGINEER'S RESPONSIBILITY

A. Accuracy. The Engineer shall have total responsibility for the accuracy and completeness of all work prepared and completed under this Contract and shall check all such material accordingly. The Engineer shall promptly make necessary revisions or corrections resulting from its errors, omissions, or negligent acts without additional compensation.

B. Errors and Omissions. The Mobility Authority and Engineer will address errors and omissions as follows:

The Engineer's responsibility for all questions and/or clarification of any ambiguities arising from errors and omissions will be determined by the Executive Director or his designee.

(1) The phrase error and omission is used throughout to mean an error, an omission, or a combination of error and omission.

(2) When an apparent error and omission is identified in work provided by the Engineer, the Executive Director or his designee will notify the Engineer of the problem and involve the Engineer in efforts to resolve it and determine the most effective solution, provided that the Executive Director or his designee shall ultimately determine the solution that is chosen.

(3) During and after construction, errors and omissions caused by the Engineer can potentially result in significant additional costs to the Mobility Authority. The resulting additional costs are considered damages that the Mobility Authority will collect from the Engineer, including through offset to amounts owed to the Engineer.

(4) After a project is constructed and is in use, there is a possibility of a contractor claim that may involve a previous error and omission by the Engineer identified during construction; it is also possible the Engineer could be responsible for some or all of the cost of the contractor claim. If there is a possibility of Engineer responsibility, upon notice of the contractor claim, the Executive Director or his designee must notify the Engineer of the situation and provide the Engineer the opportunity to contribute any information to the Executive Director or his designee that may be useful in addressing the contractor claim. The Engineer will not be involved in any discussions or negotiations with the contractor during the claims process. Upon settlement of all previous claims with the contractor, if additional costs are identified, the Executive Director or his designee should consider the same factors as during construction in determining the Engineer's level of responsibility.

(5) The additional costs which are considered damages to the Mobility Authority and are to be recovered should represent actual cost to the Mobility Authority.

(6) The Executive Director or his designee will not accept in-kind services from the Engineer as payment for additional costs owed.

(7) The Engineer is responsible for promptly correcting errors and omissions without compensation. In the situation of a dispute concerning whether or not the work is compensable, the Engineer shall not delay the work.

(8) A letter will be transmitted by the Executive Director or his designee formally notifying the Engineer of payment required for the error and omission and will indicate the Engineer's apparent liability for the identified additional costs. The letter will include an outline of the errors and omissions, along with the additional costs, and references to any previous points of coordination and preliminary agreements. Within 30 calendar days of the date of the letter, a response is required from the Engineer with: (a) payment, (b) a request for a meeting, or (c) a request for the Executive Director or his designee to consider whether the Executive Director or his designee should pursue reimbursement for the identified error and omission. If a response or payment is not received from the Engineer, the Mobility Authority may consider legal action.

(9) It is the Executive Director or his designee's responsibility to identify errors and omissions and fairly evaluate the responsibility for additional cost when applicable. It is the responsibility of the Mobility Authority staff to ensure that the Mobility Authority's business practices are professional, fair, equitable, and reasonable.

C. Professionalism. The Engineer shall perform the services it provides under the Contract: (1) with the professional skill and care ordinarily provided by competent engineers practicing under the same or similar circumstances and professional license and (2) as expeditiously as is prudent considering the ordinary professional skill and care of a competent engineer.

D. Seal. The responsible Engineer shall sign, seal and date all appropriate engineering submissions to the Mobility Authority in accordance with the Texas Engineering Practice Act and the rules of the Texas Board of Professional Engineers.

E. Resealing of Documents. Once the work has been sealed and accepted by the Director of Engineering, the Mobility Authority, as the owner, will notify the Engineer, in writing, of the possibility that a Mobility Authority engineer, as a second engineer, may find it necessary to alter, complete, correct, revise or add to the work. If necessary, the second engineer will affix his seal to any work altered, completed, corrected, revised or added. The second engineer will then become responsible for any alterations, additions or deletions to the original design including any effect or impacts of those changes on the original engineer's design.

ARTICLE 21 NONCOLLUSION

A. Warranty. The Engineer warrants that it has not employed or retained any company or person, other than a bona fide employee working solely for the Engineer, to solicit or secure this Contract and that it has not paid or agreed to pay any company or Engineer any fee, commission, percentage, brokerage fee, gifts, or any other consideration, contingent upon or resulting from the award or making of this Contract.

B. Liability. For breach or violation of this warranty, the Mobility Authority shall have the right to annul this Contract without liability or, in its discretion, to deduct from the Contract compensation, or otherwise recover, the full amount of such fee, commission, percentage, brokerage fee, gift or contingent fee.

ARTICLE 22 INSURANCE

The Engineer and all subconsultants shall furnish the Mobility Authority a properly completed Certificate of Insurance approved by the Executive Director or his designee prior to beginning work under the Contract and shall maintain such insurance through the Contract period. The Engineer shall provide proof of insurance (and the Professional Liability Insurance discussed herein) in a form reasonably acceptable by the Executive Director or his designee. The Engineer certifies that it has and will maintain insurance coverages as follows:

A. Workers Compensation Insurance. In accordance with the laws of the State of Texas and employer's liability coverage with a limit of not less than \$1,000,000. This policy shall be endorsed to include a waiver of subrogation in favor of the Mobility Authority.

B. Comprehensive General Liability Insurance. With limits not less than \$1,000,000 for bodily injury, including those resulting in death, and \$1,000,000 for property damage on account of any one occurrence, with an aggregate limit of \$1,000,000.

C. Comprehensive Automobile Liability Insurance. Applying to owned, non-owned, and hired automobiles in an amount not less than \$1,000,000 for bodily injury, including death, to any one person, and \$1,000,000 on account on any one occurrence, and \$1,000,000 for property damage on account of any one occurrence. This policy shall not contain any limitation with respect to a radius of operation for any vehicle covered and shall not exclude from the coverage of the policy any vehicle to be used in connection with the performance of the Engineer's obligations under this Contract.

D. Excess Liability Insurance. In an amount of \$5,000,000 per occurrence and aggregate.

E. Valuable Papers Insurance. In an amount sufficient to assure the full restoration of any plans, drawings, field notes, logs, test reports, diaries, or other similar data or materials relating to the Services

provided under this Contract in the event of their loss or destruction, until such time as the work has been delivered to the Mobility Authority.

F. Architects and/or Engineers Professional Liability insurance. Engineer shall provide and maintain professional liability coverage, with limits not less than \$5,000,000 per claim and \$5,000,000 aggregate. The professional liability coverage shall protect against any negligent act, error or omission arising out of design or engineering activities, including environmental related activities, with respect to the project, including coverage for negligent acts, errors or omissions by any member of the Engineer and its subconsultants (including, but not limited to design subconsultants and subconsultants) of any tier. The policy must provide that coverage extends a minimum of three (3) years beyond the Engineer's completion of the Services. This policy shall be endorsed to include a waiver of subrogation in favor of the Mobility Authority.

G. General for All Insurance. The Engineer shall promptly, upon execution of this Contract, furnish certificates of insurance to the Executive Director or his designee indicating compliance with the above requirements. Certificates shall indicate the name of the insured, the name of the insurance company, the name of the agency/agent, the policy number, the term of coverage, and the limits of coverage.

All policies are to be written through companies (a) authorized to transact that class of insurance in the State of Texas; (b) rated (i), with respect to the companies providing the insurance under subarticles 22.A. through D., above, by A. M. Best Company as "A-X" or better (or the equivalent rating by another nationally recognized rating service) and (ii) with respect to the company providing the insurance under subarticle 22.E., a rating by A. M. Best Company or similar rating service satisfactory to the Mobility Authority and/or its insurance consultant; and (c) otherwise acceptable to the Executive Director or his designee.

All policies are to be written through companies authorized to transact that class of insurance in the State of Texas. Such insurance shall be maintained in full force and effect during the life of this Contract or for a longer term as may be otherwise provided for hereunder. Insurance furnished under subarticles 22.B., C., and D., above, shall name the Mobility Authority as additional insured and shall protect the Mobility Authority, its officers, employees, and directors, agents, and representatives from claims for damages for bodily injury and death and for damages to property arising in any manner from the negligent or willful acts or failures to act by the Engineer, its officers, employees, directors, agents, and representatives in the performance of the Services rendered under this Contract. Certificates shall also indicate that the contractual liability assumed in Article 18, above, is included.

The insurance carrier shall include in each of the insurance policies required under subarticles 22.A. through F., the following statement: "This policy will not be canceled or materially changed during the period of coverage without at least thirty (30) days prior written notice addressed to the Central Texas Regional Mobility Authority, 3300 N. IH-35, Suite 300, Austin, Texas 78705, Attn: Executive Director".

H. Subconsultant. In the event a subconsultant selected by the Engineer to perform work associated with this Contract is unable to secure insurance coverage in the amounts set forth in subarticles 22.B., D., and F. above, Engineer may provide to the Executive Director or his designee an explanation of coverages that a subconsultant does possess, why those coverages are adequate to cover the potential exposure for the work to be performed by the subconsultant, and an acknowledgement that the Engineer remains liable for the work performed under the Contract, including that performed by the subconsultant. The Executive Director or his designee may decide, in its sole discretion, whether to accept the coverages available to the subconsultant, and may condition its acceptance, if granted, on satisfactory evidence that Engineer will remain liable for work

performed by the subconsultant and that Engineer's insurance will cover the work, actions, errors and omissions of the subconsultant.

ARTICLE 23 GRATUITIES

A. Employees Not to Benefit. Authority policy mandates that the director, employee or agent of the Mobility Authority shall not accept any gift, favor, or service that might reasonably tend to influence the director, employee or agent in making of procurement decisions. The only exceptions allowed are ordinary business lunches and items that have received the advance written approval of the Executive Director of the Mobility Authority.

B. Liability. Any person doing business with or who reasonably speaking may do business with the Mobility Authority under this Contract may not make any offer of benefits, gifts or favors to Authority employees, except as mentioned above. Failure on the part of the Engineer to adhere to this policy may result in the termination of this Contract.

ARTICLE 24 DISADVANTAGED BUSINESS ENTERPRISE/HISTORICALLY UNDERUTILIZED BUSINESS REQUIREMENTS

The Engineer agrees to comply with the DBE/HUB requirements and reporting guidelines set forth in the Work Authorization(s). The DBE/HUB Goal established for this project is as set forth in the Work Authorization. The Engineer also agrees to comply with the DBE/HUB subcontracting plan that was included in the response that the Engineer submitted to the Mobility Authority's Request for Qualifications.

ARTICLE 25 CERTIFICATE OF INTERESTED PARTIES (FORM 1295)

The Engineer must comply with the Certificate of Interested Parties (Form 1295) adopted by the Texas Legislature as House Bill 1295, which added section 2252.908 of the Government Code, available for review at the Texas Ethics Commission website:

<https://www.ethics.state.tx.us/tec/1295-Info.htm>

The Engineer, after award, is required to complete and submit Form 1295 if the Engineer has either of the following contracts with a governmental entity or state agency starting as of January 1, 2016:

- (1) Requires an action or vote by the governing body of the entity or agency before the contract may be signed; or
- (2) Has a value of at least \$1 million.

ARTICLE 26 MAINTENANCE, RETENTION AND AUDIT OF RECORDS

A. Retention Period. The Engineer shall maintain all books, documents, papers, accounting records and other evidence pertaining to costs incurred and Services provided (hereinafter called the Records). The Engineer shall make the Records available at its office during the Contract period and for four (4) years from the

date of final payment under this Contract, until completion of all audits, or until pending litigation has been completely and fully resolved, whichever occurs last.

B. Availability. The Mobility Authority shall have the exclusive right to examine the books and records of the Engineer for the purpose of checking the amount of work performed by the Engineer. The Engineer shall maintain all books, documents, papers, accounting records and other evidence pertaining to cost incurred and shall make such materials available at its office during the contract period and for four (4) years from the date of final payment under this Contract or until pending litigation has been completely and fully resolved, whichever occurs last. The Mobility Authority or any of its duly authorized representatives, TxDOT, FHWA, the United States Department of Transportation Office of Inspector General, and the Comptroller General shall have access to any and all books, documents, papers and records of the Engineer which are directly pertinent to this Contract for the purpose of making audits, examinations, excerpts and transcriptions.

ARTICLE 27 CIVIL RIGHTS COMPLIANCE

A. Compliance with Regulations. The Engineer shall comply with the Acts and Regulations relative to Nondiscrimination in Federally-assisted programs of the U.S. Department of Transportation (USDOT), FHWA, as they may be amended from time to time, which are herein incorporated by reference and made part of this Contract.

B. Nondiscrimination. The Engineer, with regard to the work performed by it during the Contract, shall not discriminate on the grounds of race, color, sex, or national origin in the selection and retention of subconsultants, including procurement of materials and leases of equipment. The Engineer shall not participate directly or indirectly in the discrimination prohibited by the Acts and Regulations, including employment practices when the Contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.

C. Solicitations for Subcontracts, Including Procurement of Materials and Equipment. In all solicitations either by competitive bidding or negotiation made by the Engineer for work to be performed under a subcontract, including procurement of materials or leases of equipment, each potential subconsultant or supplier shall be notified by the Engineer of the Engineer's obligations under this Contract and the Acts and Regulations relative to Nondiscrimination on the grounds of race, color, sex, or national origin.

D. Information and Reports. The Engineer shall provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and facilities as may be determined by the Mobility Authority or the FHWA to be pertinent to ascertain compliance with such Acts, Regulations or directives. Where any information required of the Engineer is in the exclusive possession of another who fails or refuses to furnish this information, the Engineer shall so certify to the Mobility Authority or the FHWA, as appropriate, and shall set forth what efforts it has made to obtain the information.

E. Sanctions for Noncompliance. In the event of the Engineer's noncompliance with the Nondiscrimination provisions of this Contract, the Mobility Authority shall impose such Contract sanctions as it or the FHWA may determine to be appropriate, including, but not limited to:

- (1) withholding of payments to the Engineer under the Contract until the Engineer complies and/or
- (2) cancelling, terminating, or suspending of the Contract, in whole or in part.

ARTICLE 28
PATENT RIGHTS

The Mobility Authority and the U. S. Department of Transportation shall have the royalty free, nonexclusive and irrevocable right to use and to authorize others to use any patents developed by the Engineer under this Contract.

ARTICLE 29
DISPUTES

A. Disputes Not Related to Contract Services. The Engineer shall be responsible for the settlement of all contractual and administrative issues arising out of any procurement made by the Engineer in support of the Services authorized herein.

B. Disputes Concerning Work or Cost. The Executive Director of the Mobility Authority shall decide all questions, difficulties and dispute of any nature whatsoever that may arise under or by reason of this Contract, and his decision upon all claims, questions and disputes shall be final. The Engineer shall comply with the provisions of Article 29 in proceeding with such disputes.

ARTICLE 30
SUCCESSORS AND ASSIGNS

The Engineer and the Mobility Authority do each hereby bind themselves, their successors, executors, administrators and assigns to each other party of this Contract and to the successors, executors, administrators and assigns of such other party in respect to all covenants of this Contract. The Engineer shall not assign, subcontract, or transfer its interest in this Contract without the prior written consent of the Executive Director or his designee.

ARTICLE 31
SEVERABILITY

In the event any one or more of the provisions contained in this Contract shall for any reason be held to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision thereof and this Contract shall be construed as if such invalid, illegal, or unenforceable provision had never been contained herein.

ARTICLE 32
PRIOR CONTRACTS SUPERSEDED

This Contract, including all attachments, constitutes the sole agreement of the parties hereto for the Services authorized herein and supersedes any prior understandings or written or oral contracts between the parties respecting the subject matter defined herein.

ARTICLE 33
CONFLICT OF INTEREST

A. Representation by Engineer. The undersigned Engineer represents that it has no conflict of interest that would in any way interfere with its or its employees' performance of Services for the Mobility Authority or which in any way conflicts with the interests of the Mobility Authority and certifies that it is in full

compliance with the Mobility Authority's Policy Code related to Conflicts of Interest. The Engineer shall prevent any actions or conditions that could result in a conflict with the Mobility Authority's interests.

B. Certification Status. The Engineer certifies that it is not:

- (1) a person required to register as a lobbyist under Chapter 305, Government Code
- (2) a public relations firm
- (3) a government consultant

C. Environmental Disclosure. If the Engineer will prepare an environmental impact statement or an environmental assessment under this Contract, the Engineer certifies by executing this Contract that it has no financial or other interest in the outcome of the project on which the environmental impact statement or environmental assessment is prepared.

D. Engineering Services for the Construction Contractor. Specific to the Project for which the Services are being provided under this Contract, the Engineer shall not provide services directly to the contractor responsible for constructing the Project unless approved by the Executive Director or his designee.

ARTICLE 34 ENTIRETY OF AGREEMENT

This writing, including attachments and addenda, if any, embodies the entire agreement and understanding between the parties hereto, and there are no agreements and understandings, oral or written, with reference to the subject matter hereof that are not merged herein and superseded hereby. No alteration, change or modification of the terms of the Contract shall be valid unless made in writing signed by both parties hereto.

ARTICLE 35 SIGNATORY WARRANTY

The undersigned signatory for the Engineer hereby represents and warrants that he or she is an officer of the organization for which he or she has executed this Contract and that he or she has full and complete authority to enter into this Contract on behalf of the firm. These representations and warranties are made for the purpose of inducing the Mobility Authority to enter into this Contract.

ARTICLE 36 NOTICES

A notice, demand, request, report, and other communication required or permitted under this Contract, or which any party may desire to give, shall be in writing and shall be deemed to have been given on the sooner to occur of (i) receipt by the party to whom the notice is hand-delivered, with a written receipt of notice provided by the receiving party, or (ii) two days after deposit with a nationally recognized overnight courier delivery service addressed to such party at their address set forth below, or to such other address as a party may from time to time designate under this article, or (iii) receipt of an electronic mail transmission (attaching scanned documents in a format such as .pdf or .tif) for which confirmation of receipt by the other party has been obtained by the sending party:

In the case of the Engineer:

TW Lowe, P.E.
LJA Engineering, Inc.
2700 La Frontera Boulevard, Suite 150
Round Rock, TX 78681
TLowe@lja.com

In the case of the Mobility Authority:

James Bass, Executive Director
Central Texas Regional Mobility Authority
3300 North IH 35, Suite 300
Austin, TX 78705
Email: jrbass@ctrma.org

A party may change the information provided in this article for notification purposes by providing notice to the other party of the new information and the effective date of the change.

ARTICLE 37
BUSINESS DAYS AND DAYS

For purposes of this Contract, “business days” shall mean any day the Mobility Authority is open for business and “days” shall mean calendar days.

ARTICLE 38
INCORPORATION OF PROVISIONS

Attachments A through C are attached hereto and incorporated into this Contract as if fully set forth herein.

ARTICLE 39
PRIORITY OF DOCUMENTS/ORDER OF PRECEDENCE

This Contract, and each of the Attachments (together, the “Contract Documents”), are an essential part of the agreement between the Mobility Authority and the Engineer, and a requirement occurring in one is as binding as though occurring in all. The Contract Documents are intended to be complementary and to describe and provide for a complete Contract. In the event of any conflict among the Contract Documents or between the Contract Documents and other documents, the order of precedence shall be as set forth below:

- A. Supplemental Work Authorizations;
- B. Work Authorizations;
- C. Contract Amendments;
- D. This Contract;
- E. The Request for Qualifications;
- F. The Engineer’s Response to the Request for Qualifications.

Additional details and more stringent requirements contained in a lower priority document will control unless the requirements of the lower priority document present an actual conflict with the requirements of the higher-level document. Notwithstanding the order of precedence among Contract Documents set forth in this Article 39, in the event of a conflict within a Contract Document or set of Contract Documents with the same order of priority (including within documents referenced therein), the Executive Director or his designee shall have the right to determine, in his sole discretion, which provision applies.

IN WITNESS WHEREOF, the Mobility Authority and the **Engineer** have executed this Contract in duplicate.

THE ENGINEER

THE MOBILITY AUTHORITY

(Signature)

(Signature)

(Printed Name)

James Bass

(Printed Name)

(Title)

Executive Director

(Title)

(Date)

(Date)

Attachments to Contract for Professional Services

Attachments	Title
A	Services to be Provided by the Engineer
B	Rate Schedule
C	Key Team Members

ATTACHMENT A
SERVICES TO BE PROVIDED BY THE ENGINEER

The Services to be provided by the Engineer include providing and maintaining construction engineering, inspection, survey, and materials testing staff at the field office supplied by the Mobility Authority's design-build contractor (the "DB Contractor"). The Engineer will oversee, inspect, test, survey, review, and document construction activities performed by the Contractor.

Scheduling of activities will conform to the Project milestones established by the Mobility Authority.

The Engineer will serve as a member of the project oversight team (the "Oversight Team") comprised of the Mobility Authority and GEC. The Engineer will coordinate with the both the Mobility Authority and their GEC. It is understood that all references herein to responsibilities of or actions by the Mobility Authority will be led or supported by the GEC. The Engineer shall work cooperatively and collaboratively throughout all aspects and phases of construction operations and in its dealings with the Mobility Authority, Contractor, GEC, TxDOT, toll system integrators, suppliers, subcontractors, engineers, legal counsel, accountants, consultants, government entities, utilities, property owners, and the general public.

The Engineer shall coordinate with the Mobility Authority's public involvement team, as required, in the Mobility Authority's dealings with the general public, adjacent property owners, and interested advocacy groups.

The Engineer shall keep the Oversight Team informed of the Contractor's operations in the field, especially issues related to safety, quality, schedule, potential change orders, and potential construction claims. The Engineer will have the authority to stop construction activity in response to emerging life safety issues.

The Engineer will not control or direct the construction under the construction contract. Field inspections will not relieve the Contractor of sole responsibility for the means and methods of construction, or for health or safety precautions in connection with the work under the construction contract.

The Engineer shall ensure the construction of the project is conducted in accordance with the construction plans, specifications, special specifications, special provisions and in compliance with the construction contract.

The Engineer shall assist and advise the Mobility Authority in matters of policy and procedure, and generally accepted industry practices. The Engineer shall identify deficiencies in the work of the contractor, its subcontractors, vendors, and consultants in the specific construction operations and inform the Mobility Authority of these deficiencies.

The Engineer should be aware that the time frames noted herein are tentative and subject to change. The Engineer will remain available for the duration that the services are required by the Mobility Authority, unless the Contract is terminated. The Engineer shall be on-site performing inspection, survey, and testing duties at any time the work is being performed including nighttime hours and weekends as required by the planned construction work.

The schedule of the project will be based on the contractor's construction schedule, days added by change order or other modifications and a closeout period. The Engineer shall closeout the project and ensure that documentation and project related issues have been resolved and submitted to the Mobility Authority by the Engineer as close to project final acceptance as practical.

The Engineer shall attend any meetings required by the Mobility Authority to discuss specifications and action plans with regards to the pertinent work items, e.g., Pre-Con meetings, Safety meetings, Pre-Activity meetings, weekly and monthly coordination meetings with the Mobility Authority, etc. The Engineer shall provide required documentation for these meetings.

The Engineer shall assist in the development of "work around" concepts to be discussed with the Mobility Authority to keep project moving when there is a third-party conflict.

The Engineer shall assist the Mobility Authority throughout all aspects and phases of construction operations and shall, when requested by the Mobility Authority, fully support the Mobility Authority in its dealings with the contractor, suppliers, subcontractors, other engineers, legal counsel, accountants, other consultants, government entities, utilities, property owners, and the general public.

The Engineer shall provide qualified technical and professional personnel that adhere to professional standards consistent with those typically met by nationally known and highly regarded construction management firms. Unless otherwise instructed by the Mobility Authority, the Engineer shall minimize the need for the Mobility Authority to apply its own resources to assignments.

The work elements to be provided by the Engineer for the Project may include:

1. Project Controls

The Team shall provide Project correspondence, Record keeper duties, Document control, project scheduling, Contractor draw requests, changes/assessment, Project reporting, and external auditing interface.

2. Construction Engineering

The Team will provide quality control and assurance for the construction of the project

through construction engineering and management in accordance with the plans, specifications, and approved Construction Quality Management Plan to be developed by the Team in collaboration with the Mobility Authority.

3. Construction Inspections

The Team’s inspection team shall perform and report construction inspections of all operations related to structures, roadway, drainage, traffic (i.e. signs, striping, signals, illumination), stormwater pollution prevention plan and maintenance of traffic to validate that the Contractor’s work, including sequencing of work, is conducted in accordance with the approved contract documents.

4. Survey Oversight

Survey oversight is primarily intended as survey quality assurance of the efforts of the Contractor and the Contractor’s surveyor.

5. Materials Engineering and Acceptance

Provide a Qualification Program for materials utilized for the construction of the Project in accordance with the Mobility Authority’s Quality Acceptance Program (“QAP”). Maintain documentation of all qualified individuals who perform required tests for acceptance of materials.

**ATTACHMENT B
RATE SCHEDULE**

LJA

CY 2021- Raw Rates				
Job Title	Actual*	Min	Max	Personnel*
Key Personnel				
Principal		\$90.00	\$120.00	
Construction Coordinator		\$95.00	\$100.00	
Quality Manager / Auditor				
Inspection Manager (Chief)		\$95.00	\$100.00	
Sr. Roadway Inspector		\$44.00	\$48.00	
Sr. Bridge Inspector		\$48.00	\$53.00	
Sr. Wall Inspector		\$46.00	\$52.00	
Sr. Signal Technician		\$35.00	\$40.00	
Traffic Control Inspector		\$38.00	\$42.00	
Lead Utility Inspector		\$46.00	\$50.00	
Lead Materials Manager				
Materials Records				
Survey Manager				
Project Controls Manager		\$76.00	\$80.00	
Record Keeper		\$37.00	\$43.00	
Field Support				
Sr. Construction Inspector		\$44.00	\$48.00	
Construction Inspector		\$40.00	\$45.00	
Structural Inspector		\$45.00	\$49.00	
Utility Inspector		\$36.00	\$40.00	
ROW Support		\$32.00	\$42.00	
Tolls Gantry Inspector		\$43.00	\$48.00	
Env. Compliance Manager		\$60.00	\$65.00	
Other Support Services				
Admin/Clerical		\$27.00	\$35.00	
Contract Coordinator		\$35.00	\$40.00	
Records Keeper Support		\$30.00	\$35.00	
Scheduler		\$48.00	\$55.00	
Sr. Scheduler		\$55.00	\$67.00	
Engineer in Training		\$32.00	\$38.00	
Engineering Technician				
Project Engineer		\$40.00	\$50.00	
Sr. Engineer		\$50.00	\$75.00	
Toll Operations Support				
Sr. Claims Specialist				
OH Rate (Home)	177.53%			
OH Rate (Field)	120.00%			

**ATTACHMENT B
RATE SCHEDULE**

BET

CY 2021- Loaded Rates	
Job Title	Max
Labor	
Senior Engineer/ Materials Manager (15+ yrs)	\$225.00
Project Engineer (PE)	\$145.00
Engineer-in-Training	\$97.00
Senior Eng. Tech (10+ yrs exp)	\$95.00
Field Inspector/Eng. Tech (<10 yrs exp)	\$89.00
Construction Inspector III (10 to 15 yrs)	\$99.00
Construction Inspector IV (15+ yrs)	\$110.00
Administrative/Clerical	\$75.00

**ATTACHMENT B
RATE SCHEDULE**

CPY

CY 2021- Raw Rates				
Job Title	Actual*	Min	Max	Personnel*
Key Personnel				
Principal				
Construction Coordinator				
Quality Manager / Auditor				
Inspection Manager (Chief)				
Sr. Roadway Inspector				
Sr. Bridge Inspector				
Sr. Wall Inspector		\$44.95	\$46.30	
Sr. Signal Technician				
Traffic Control Inspector		\$43.13	\$47.60	
Lead Utility Inspector		\$33.99	\$40.63	
Lead Materials Manager				
Materials Records				
Survey Manager				
Project Controls Manager				
Record Keeper		\$47.36	\$48.78	
Field Support				
Sr. Construction Inspector		\$44.95	\$50.00	
Construction Inspector		\$28.85	\$45.00	
Structural Inspector		\$37.84	\$50.00	
Utility Inspector		\$37.84	\$45.00	
ROW Support				
Tolls Gantry Inspector				
Env. Compliance Manager		\$44.86	\$48.78	
Other Support Services				
Admin/Clerical		\$31.78	\$35.00	
Contract Coordinator				
Records Keeper Support		\$37.50	\$47.36	
Scheduler		\$37.88	\$43.03	
Sr. Scheduler		\$43.03	\$43.03	
Engineer in Training		\$33.65	\$38.50	
Engineering Technician		\$40.34	\$40.63	
Project Engineer		\$48.50	\$57.69	
Sr. Engineer		\$78.85	\$91.34	
Toll Operations Support				

OH Rate (Home)	167.09%
OH Rate (Field)	145.57%

**ATTACHMENT B
RATE SCHEDULE**

FPE

CY 2021- Raw Rates				
Job Title	Actual*	Min	Max	Personnel*
Key Personnel				
Principal				
Construction Coordinator				
Quality Manager / Auditor				
Inspection Manager (Chief)				
Sr. Roadway Inspector				
Sr. Bridge Inspector				
Sr. Wall Inspector				
Sr. Signal Technician				
Traffic Control Inspector				
Lead Utility Inspector				
Lead Materials Manager				
Materials Records				
Survey Manager				
Project Controls Manager		\$68.00	\$76.92	
Record Keeper				
Field Support				
Sr. Construction Inspector				
Construction Inspector				
Structural Inspector				
Utility Inspector				
ROW Support				
Tolls Gantry Inspector				
Env. Compliance Manager				
Other Support Services				
Admin/Clerical		\$26.50	\$ 28.25	
Contract Coordinator		\$33.75	\$33.75	
Records Keeper Support				
Scheduler		\$33.50	\$ 57.75	
Sr. Scheduler		\$68.00	\$ 78.75	
Engineer in Training		\$31.00	\$ 37.02	
Engineering Technician		\$32.00	\$ 33.75	
Project Engineer		\$55.00	\$61.25	
Sr. Engineer		\$60.25	\$77.87	
Toll Operations Support				
Senior Claims Specialist		\$80.00	\$120.00	

OH Rate (Home)	144.48%
OH Rate (Field)	N/A

**ATTACHMENT B
RATE SCHEDULE**

GSL

CY 2021- Raw Rates				
Job Title	Actual*	Min	Max	Personnel*
Key Personnel				
Principal				
Construction Coordinator				
Quality Manager / Auditor				
Inspection Manager (Chief)				
Sr. Roadway Inspector				
Sr. Bridge Inspector				
Sr. Wall Inspector				
Sr. Signal Technician				
Traffic Control Inspector				
Lead Utility Inspector				
Lead Materials Manager				
Materials Records				
Survey Manager				
Project Controls Manager				
Record Keeper				
Field Support				
Sr. Construction Inspector		\$43.00	\$52.00	
Construction Inspector		\$28.00	\$38.00	
Structural Inspector		\$47.00	\$57.00	
Utility Inspector				
ROW Support				
Tolls Gantry Inspector				
Env. Compliance Manager				
Other Support Services				
Admin/Clerical				
Contract Coordinator				
Records Keeper Support				
Scheduler				
Sr. Scheduler				
Engineer in Training				
Engineering Technician				
Project Engineer				
Sr. Engineer				
Toll Operations Support				

OH Rate (Home)	144.49%
OH Rate (Field)	120.00%

**ATTACHMENT B
RATE SCHEDULE**

HNTB

CY 2021- Raw Rates				
Job Title	Actual*	Min	Max	Personnel*
Key Personnel				
Principal		\$153.12	\$155.52	
Construction Coordinator		\$98.08	\$120.62	
Quality Manager / Auditor		\$68.88	\$95.09	
Inspection Manager (Chief)		\$86.16	\$102.98	
Sr. Roadway Inspector		\$52.40	\$69.80	
Sr. Bridge Inspector		\$72.16	\$75.77	
Sr. Wall Inspector				
Sr. Signal Technician				
Traffic Control Inspector		\$46.64	\$48.97	
Lead Utility Inspector				
Lead Materials Manager				
Materials Records				
Survey Manager				
Project Controls Manager		\$57.44	\$95.09	
Record Keeper		\$35.00	\$42.00	
Field Support				
Sr. Construction Inspector		\$55.00	\$75.77	
Construction Inspector		\$34.56	\$62.83	
Structural Inspector		\$59.84	\$70.81	
Utility Inspector		\$69.76	\$82.91	
ROW Support		\$48.48	\$60.60	
Tolls Gantry Inspector		\$80.88	\$84.92	
Env. Compliance Manager		\$81.12	\$122.47	
Other Support Services				
Admin/Clerical		\$19.28	\$37.46	
Contract Coordinator		\$27.44	\$74.68	
Records Keeper Support				
Scheduler		\$31.12	\$60.31	
Sr. Scheduler		\$57.44	\$95.09	
Engineer in Training		\$29.20	\$50.30	
Engineering Technician		\$31.68	\$80.47	
Project Engineer		\$53.04	\$88.20	
Sr. Engineer		\$77.36	\$120.62	
Toll Operations Support		\$80.88	\$118.19	
Senior Claims Specialist		\$114.40	\$178.33	
OH Rate (Home)	138.00%			
OH Rate (Field)	88.15%			

ATTACHMENT B
RATE SCHEDULE

HVJ South Central Texas

CY 2021- Loaded Rates	
Job Title	Max
Labor	
Senior Engineer/ Materials Manager (15+ yrs)	\$225.00
Project Engineer (PE)	\$145.00
Engineer-in-Training	\$97.00
Field Inspector/Senior Eng. Tech (10+ yrs exp)	\$95.00
Field Inspector/Eng. Tech (<10 yrs exp)	\$89.00
Administrative/Clerical	\$75.00

**ATTACHMENT B
RATE SCHEDULE**

LJAS

CY 2021- Loaded Rates	
Job Title	Max
Labor - per hour	
Senior Project Manager	\$205.00
Project Manager	\$165.00
RPLS	\$145.00
Field Coordinator	\$105.00
Senior Survey Technichian	\$106.00
Survey Technichian	\$98.00
LiDAR Technichial	\$98.00
Researcher (Abstractor)	\$78.00
Administrative	\$68.00
Unit Rates - per hour	
Survey Crew - 1 Man Crew	\$110.00
Survey Crew - 2 Man Crew	\$160.00
Survey Crew - 3 Man Crew	\$196.00
GPS Field Person + GPS	\$150.00
Real Time Kinematic (RTK) Crew + Rover	\$220.00
Other Direct Costs	
LiDAR Scanner (per day)	\$100.00
Additional Vehichle (per day)	\$70.00
ATV (per day)	\$85.00

**ATTACHMENT B
RATE SCHEDULE**

LPCG

CY 2021- Raw Rates				
Job Title	Actual*	Min	Max	Personnel*
Key Personnel				
Principal				
Construction Coordinator				
Quality Manager / Auditor		\$45.00	\$50.00	
Inspection Manager (Chief)				
Sr. Roadway Inspector				
Sr. Bridge Inspector				
Sr. Wall Inspector				
Sr. Signal Technician				
Traffic Control Inspector				
Lead Utility Inspector		\$60.00	\$65.00	
Lead Materials Manager				
Materials Records				
Survey Manager				
Project Controls Manager		\$75.00	\$95.00	
Record Keeper				
Field Support				
Sr. Construction Inspector		\$49.00	\$55.00	
Construction Inspector		\$43.00	\$46.00	
Structural Inspector				
Utility Inspector				
ROW Support				
Tolls Gantry Inspector				
Env. Compliance Manager				
Other Support Services				
Admin/Clerical		\$48.00	\$55.25	
Contract Coordinator				
Records Keeper Support		\$32.00	\$36.00	
Scheduler				
Sr. Scheduler		\$65.00	\$75.00	
Engineer in Training				
Engineering Technician				
Project Engineer				
Sr. Engineer				
Toll Operations Support				

OH Rate (Home)	131.60%
OH Rate (Field)	118.16%

**ATTACHMENT B
RATE SCHEDULE**

M&M

CY 2021- Loaded Rates	
	Actual*
Principal	\$192.00
Project Manager	\$168.00
RPLS	\$147.00
Field Coordinator	\$98.00
GPS Processing	\$108.00
Senior Survey Technician	\$98.00
Survey Technician	\$92.00
LiDAR Technician	\$98.00
Researcher (Abstractor)	\$74.00
Administrative	\$65.00
Survey Crew - 1 Man Crew	\$115.00
Survey Crew - 2 Man Crew	\$155.00
Survey Crew - 3 Man Crew	\$190.00
GPS Field Person + GPS	\$150.00
Real Time Kinematic (RTK) Crew + Rover	\$220.00
LiDAR Scanner	\$100.00
Mobile Mapper (per day)	\$8,500.00
UAV (Drone) Aerial Mapper	\$3,500.00
Additional Vehicle (per day)	\$70.00
ATV (per day)	\$85.00

**ATTACHMENT B
RATE SCHEDULE**

RCL

CY 2021- Raw Rates				
Job Title	Actual*	Min	Max	Personnel*
Key Personnel				
Principal				
Construction Coordinator				
Quality Manager / Auditor				
Inspection Manager (Chief)				
Sr. Roadway Inspector		\$68.00	\$68.00	
Sr. Bridge Inspector				
Sr. Wall Inspector				
Sr. Signal Technician				
Traffic Control Inspector				
Lead Utility Inspector				
Lead Materials Manager				
Materials Records				
Survey Manager				
Project Controls Manager				
Record Keeper				
Field Support				
Sr. Construction Inspector		\$45.00	\$55.00	
Construction Inspector		\$40.00	\$45.00	
Structural Inspector				
Utility Inspector				
ROW Support				
Tolls Gantry Inspector				
Env. Compliance Manager		\$85.25	\$85.25	
Other Support Services				
Admin/Clerical		\$35.81	\$35.81	
Contract Coordinator		\$55.00	\$55.00	
Records Keeper Support				
Scheduler				
Sr. Scheduler				
Engineer in Training		\$32.00	\$38.00	
Engineering Technician				
Project Engineer		\$40.00	\$50.00	
Sr. Engineer		\$57.00	\$75.00	
Toll Operations Support				

OH Rate (Home)	153.64%
OH Rate (Field)	105.12%

**ATTACHMENT B
RATE SCHEDULE**

VOL

CY 2021- Raw Rates				
Job Title	Actual*	Min	Max	Personnel*
Key Personnel				
Principal				
Construction Coordinator				
Quality Manager / Auditor		\$50.00	\$60.00	
Inspection Manager (Chief)				
Sr. Roadway Inspector				
Sr. Bridge Inspector		\$50.00	\$60.00	
Sr. Wall Inspector				
Sr. Signal Technician				
Traffic Control Inspector				
Lead Utility Inspector				
Lead Materials Manager				
Materials Records				
Survey Manager				
Project Controls Manager				
Record Keeper				
Field Support				
Sr. Construction Inspector		\$42.00	\$50.00	
Construction Inspector		\$36.00	\$42.00	
Structural Inspector				
Utility Inspector				
ROW Support				
Tolls Gantry Inspector				
Env. Compliance Manager				
Other Support Services				
Admin/Clerical		\$32.00	\$35.00	
Contract Coordinator				
Records Keeper Support		\$37.00	\$45.00	
Scheduler				
Sr. Scheduler				
Engineer in Training				
Engineering Technician				
Project Engineer				
Sr. Engineer		\$85.00	\$95.00	
Toll Operations Support				

OH Rate (Home)	150.77%
OH Rate (Field)	119.28%

**ATTACHMENT B
RATE SCHEDULE**

HVJSCT & BET - Materials

Expense Table		
Materials Engineering Services	Unit	Rate
Soils Tests		
Preparing Soil and Flexible Base Materials for Testing	each	\$85.00
Determining Slaking Time	each	\$90.00
Determining Moisture Content in Soil Materials	each	\$20.00
Determining Liquid Limits of Soils	each	\$50.00
Determining Plastic Soil Limits	each	\$50.00
Calculating the Plasticity Index of Soils	each	\$40.00
Determining the Bar Linear Shrinkage of Soils	each	\$65.00
Determining the Specific Gravity of Soils	each	\$75.00
Particle Size Analysis of Soils	each	\$215.00
Determining the Amount of Material in Soils Finer than the 75 micrometer (No. 200) Sieve	each	\$75.00
Admixing Lime to Reduce Plasticity Index of Soils	each	\$200.00
Laboratory Compaction Characteristics and Moisture-Density Relationship of Base Materials	each	\$320.00
Laboratory Compaction Characteristics and Moisture-Density Relationship of Subgrade, Embankment Soils, and Backfill Material	each	\$295.00
Ball Mill Method for Determining the Disintegration of Flexible Base Material	each	\$225.00
Triaxial Compression for Disturbed Soils and Base Materials	each	\$2,000.00
Triaxial Compression Test for Undisturbed Soils	each	\$500.00
Soil-Cement Testing- Part 1	each	\$550.00
Soil-Cement Testing- Part 2	each	\$400.00
Soil-Lime Testing- Part 1	each	\$450.00
Soil-Lime Testing- Part 2	each	\$400.00
Soil-Lime Testing - Part 3	each	\$400.00
Determining Soil pH	each	\$65.00
Measuring the Resistivity of Soil Materials	each	\$125.00
Determining Sulfate Content in Soils - Colorimetric Method	each	\$105.00
Soil Organic Content using UV-VIS Method	each	\$450.00
Bituminous Tests		
Sieve Analysis of Fine and Coarse Aggregate	each	\$120.00
Bulk Specific Gravity and Water Absorption of Aggregate	each	\$90.00
Apparent Specific Gravity of Material Finer than No. 50 (300 micrometer) Sieve	each	\$90.00
Sand Equivalent Test	each	\$140.00
Design of Bituminous Mixtures	each	\$2,500.00
Laboratory Method of Mixing Bituminous Mixtures	set of 3	\$150.00
Compacting Specimens Using the Texas Gyrotory Compactor (TGC)	set of 3	\$105.00

**ATTACHMENT B
RATE SCHEDULE**

Expense Table		
Materials Engineering Services	Unit	Rate
Bulk Specific Gravity of Compacted Bituminous Mixtures	each	\$90.00
Determining Mat Segregation Using a Density-Testing Gauge	each	\$100.00
Bulk Specific Gravity of Compacted Bituminous Mixtures using the Vacuum Method	each	\$80.00
Determining Density of Permeable Friction Course (PFC) and Thin Bonded Wearing Course (TBWC) Mixtures	each	\$85.00
Test for Stabilometer Value of Bituminous Mixtures	set of 3	\$125.00
Determining Asphalt Content of Bituminous Mixtures by Extraction	each	\$250.00
Recovery of Asphalt from Bituminous Mixtures by the Abson Process	each	\$500.00
Determining Hydrocarbon-Volatile Content of Bituminous Mixtures	each	\$105.00
Determining Deleterious Material and Decantation Test for Coarse Aggregates (Bituminous Mixtures)	each	\$100.00
Determining Flakiness Index	each	\$100.00
Indirect Tensile Strength Test	set of 3	\$350.00
Theoretical Maximum Specific Gravity of Bituminous Mixtures	each	\$115.00
Determining Asphalt Content of Bituminous Mixtures by the Nuclear Method	each	\$325.00
Combined Bituminous Mixture Cold-Belt Sampling and Testing Procedure	each	\$100.00
Determining Asphalt Content from Asphalt Paving Mixtures by the Ignition Method	each	\$180.00
Asphalt Release Agents	each	\$100.00
Compacting Bituminous Specimens Using the Superpave Gyrotory Compactor (SGC)	set of 2	\$175.00
Hamburg Wheel-Tracking Test	each	\$660.00
Tack Coat Adhesion	each	\$250.00
Thermal Profile of Hot Mix Asphalt	each	\$180.00
Cantabro Loss	each	\$200.00
Permeability or Water Flow of Hot Mix Asphalt	each	\$80.00
Overlay Test	set of 3	\$750.00
Determining Flat and Elongated Particles	each	\$150.00
Concrete & Aggregate Tests		
Compressive Strength of Cement Mortars	set of 3	\$80.00
Sieve Analysis of Fine and Coarse Aggregate	each	\$90.00
Fineness Modulus of Fine Aggregate	each	\$85.00
Saturated Surface-Dry Specific Gravity and Absorption of Aggregates	each	\$85.00
Determining Unit Mass (Weight) of Aggregates	each	\$75.00
Determining the Percent of Solids and Voids in Concrete	each	\$65.00
Material Finer than 75 micrometer (No. 200) Sieve in Mineral Aggregates (Decantation Test for Concrete Aggregates)	each	\$80.00

**ATTACHMENT B
RATE SCHEDULE**

Expense Table		
Materials Engineering Services	Unit	Rate
Organic Impurities in Fine Aggregate for Concrete	each	\$80.00
Free Moisture and Water Absorption in Aggregate for Concrete	each	\$80.00
Abrasion of Coarse Aggregate Using the Los Angeles Machine	each	\$300.00
Soundness of Aggregate Using Sodium Sulfate or Magnesium Sulfate	each	\$350.00
Determining Deleterious Material in Mineral Aggregate	each	\$100.00
Unit Weight, Yield, and Air Content (Gravimetric) of Concrete	each	\$75.00
Compressive Strength of Cylindrical Concrete Specimens	each	\$30.00
Compressive Strength of Concrete Using Portions of Beams Broken in Flexure	each	
Determining Concrete Thickness by Direct Measurement	each	\$50.00
Obtaining and Testing Drilled Cores of Concrete	each	\$200.00
Absorption and Dry Bulk Specific Gravity of Lightweight Coarse Aggregate	each	\$100.00
Measuring Texture Depth by the Sand Patch Method	each	\$100.00
Test Flow of Grout Mixtures (Flow Cone Method)	each	\$95.00
Accelerated Polish Test for Coarse Aggregate - Single-Component Aggregate	each	\$100.00
Flexural Strength of Concrete Using Simple Beam Third-Point Loading	each	\$55.00
Capping Cylindrical Concrete Specimens	each	\$30.00
Determining Crushed Face Particle Count	each	\$110.00
Micro-Devel Abrasion of Aggregate	each	\$250.00
Other Direct Expenses		
Construction Truck	Trip	\$125.00
Nuclear Gauge	Trip	\$75.00
Cylinder Molds	Each	\$3.00

**ATTACHMENT B
RATE SCHEDULE**

Other Direct Expenses		
Description	Unit	Rate
Lodging/Hotel - Taxes and Fees	day/person	\$35.00
Lodging/Hotel (Taxes/fees not included)	day/person	\$158.00
Meals (Excluding alcohol & tips) (Overnight stay required)	day/person	\$61.00
Mileage	mile	\$0.56
Construction Truck	month	\$1,500.00
Rental Car (Includes taxes and fees; Insurance costs will not be reimbursed)	day	\$75.00
Air Travel - In State - Short Notice (Coach)	Rd Trip/person	\$600.00
Air Travel - In State - 2+ Wks Notice (Coach)	Rd Trip/person	\$400.00
Taxi/Cab fare	each/person	\$50.00
Parking	day	\$30.00
Standard Postage	letter	Postal Rate
Certified Letter Return Receipt	each	Postal Rate
Overnight Mail - letter size	each	\$50.00
Overnight Mail - oversized box	each	\$80.00
Courier Services	each	\$0.00
Photocopies B/W (11" X 17")	each	\$0.25
Photocopies B/W (8 1/2" X 11")	Each	\$0.12
Photocopies Color (11" X 17")	each	\$1.00
Photocopies Color (8 1/2" X 11")	each	\$0.75
Report Printing	each	\$35.00
Report Binding and tabbing	each	\$7.00
Notebooks	each	\$6.00
Reproduction of CD/DVD	each	\$5.00
CDs	each	\$2.00
Cellular Telephone & Data Plan	each/month	\$100.00
Laptop Computer/IPad and data plan	each/month	\$100.00
Field Staff PPE	person/year	\$150.00
Construction Truck Safety Lights	each	\$350.00
Electronic Document Management Systems (Procore)	monthly	\$2,500.00

**ATTACHMENT C
KEY TEAM MEMBERS**

At a minimum, the key team members shall consist of the following:

1. Construction Coordinator – Shri Eathalapaka, PE
2. Records Keeper – Roberto Montelongo
3. Lead Materials Manager – Jason Schwartz
4. Senior Bridge Inspector – Fred Lerma
5. Senior Roadway Inspector – Rickey Ayers

WORK AUTHORIZATION NO. 1

CONTRACT FOR CONSTRUCTION ENGINEERING & INSPECTION SERVICES

THIS WORK AUTHORIZATION is made pursuant to the terms and conditions of Article 4 of the Contract entered into by and between the Mobility Authority and the Engineer dated _____.

PART I. The Engineer will perform Construction Engineering & Inspection Services in accordance with the project description attached hereto in Exhibit B and made a part of this Work Authorization. The responsibilities of the Authority and the Engineer as well as the work schedule are further detailed in Exhibits A, B, and C which are attached hereto and made a part of the Work Authorization.

PART II. The maximum amount payable under this Work Authorization is \$_____ and the method of payment will be calculated on a per-hour basis using hourly billing rates. This amount is based upon the Engineer's estimated Work Authorization costs included in Exhibit D, Fee Schedule/Budget, which is attached and made a part of this Work Authorization. DBE participation shall be tracked and documented as detailed in Exhibits E, and F.

PART III. Payment to the Engineer for the services established under this Work Authorization shall be made in accordance with the appropriate sections of the Contract.

PART IV. This Work Authorization shall become effective on the date of final acceptance of the parties hereto and shall terminate upon completion of the work, unless extended by a Supplemental Work Authorization as provided in Article 4 of the Contract.

PART V. This Work Authorization does not waive the parties' responsibilities and obligations provided under the Contract.

IN WITNESS WHEREOF, this Work Authorization is executed in duplicate counterparts and hereby accepted and acknowledged below.

THE ENGINEER

MOBILITY AUTHORITY

(Signature)

(Signature)

(Printed Name)

James Bass

(Printed Name)

(Title)

Executive Director

(Title)

(Date)

(Date)

LIST OF EXHIBITS TO WORK AUTHORIZATION

Exhibits	Title
A	Services to Be Provided by the Mobility Authority
B	Services to Be Provided by the Engineer
C	Work Schedule
D	Fee Schedule/Budget
E	DBE Participation Forms (E-1 through E-7)
F	Disadvantaged Business Enterprise (DBE) for Federal Funded Professional or Technical Services Contracts Special Provision

EXHIBIT A
SERVICES TO BE PROVIDED BY THE MOBILITY AUTHORITY

Services to be Provided by the Mobility Authority To Be Included in Final Negotiated Work Authorization

EXHIBIT B
SERVICES TO BE PROVIDED BY THE ENGINEER

Services to be Provided by the Engineer To Be Included in Final Negotiated Work Authorization

**EXHIBIT C
WORK SCHEDULE**

Work Schedule To Be Included in Final Negotiated Work Authorization

**EXHIBIT D
FEE SCHEDULE/BUDGET**

Fee Schedule/Budget To Be Included in Final Negotiated Work Authorization

EXHIBIT E
DBE PARTICIPATION FORMS
INSTRUCTIONS

The following pages contain seven (7) different forms (Forms E-1 through E-7) covering participation of DBE providers and subproviders. The correct form to use is determined by whether or not a DBE goal has been set for the contract. The following pages contain separate reporting forms for federally funded DBE participation. **Select the forms that are appropriate for your contract and delete the rest along with these instructions from the Work Authorization.**

Federally Funded Contracts
<p>Exhibit F, Disadvantaged Business Enterprise (DBE) for Federal-Aid Professional or Technical Services Contracts</p> <ul style="list-style-type: none">◆ This provision is applicable to federally funded contracts with assigned DBE goals.◆ The appropriate forms for this provision are Forms E-1, E-2, E-3, E-4, E-5, E-6 and E-7. Examples of each form required is included in the contract. The native forms that will need to be submitted can be downloaded from the Mobility Authority’s website.◆ Note: a completed Form E-2 will be required with each Work Authorization, if a DBE will be performing work. If a non-DBE subprovider is used, insert N/A (not applicable) on the line provided on the Form E-2.◆ Form E-4 must be submitted monthly to the Mobility Authority even if there is no invoice being submitted or subcontracting to report.◆ Form E-4 must be submitted with each invoice to the appropriate agency contact for payment.
<p>Exhibit G, Disadvantaged Business Enterprise (DBE) for Race Neutral Professional or Technical Services Contracts</p> <ul style="list-style-type: none">◆ This provision is applicable to federally funded contracts with no DBE goal assigned.◆ If no subconsultants will be used, the appropriate forms for this provision are E-3 and E-5 forms. Examples of each form required is included in the contract. The native forms that will need to be submitted can be downloaded from the Mobility Authority’s website.◆ Note: If subconsultants are used, the required forms would be Forms E-1, E-2, E-3, E-4, E-5, E-6 and E-7. A copy of each form required is in the contract.◆ Form E-4 must be submitted monthly to the Mobility Authority even if there is no invoice being submitted or subcontracting to report.◆ Form E-4 must be submitted with each invoice to the appropriate agency contact for payment.
<p>Form E-4, Texas Department of Transportation/Mobility Authority Subprovider Monitoring System for Federally Funded Contracts. This is a DBE Monthly Progress Report.</p> <ul style="list-style-type: none">◆ Required for all federally funded contracts.◆ This form is required monthly and must be submitted to the Mobility Authority even if there is no invoice being submitted or subcontracting to report.◆ This form must be submitted with each invoice to the appropriate agency contact for payment.
<p>Form E-7, Federal Subprovider and Supplier Information</p> <p>Required for all federally funded contracts.</p>

FORM E-1
Central Texas Regional Mobility Authority
Subprovider Monitoring System
Commitment Worksheet

Contract #: _____ Assigned Goal: 15% Federally Funded _____ State Funded _____

Prime Provider: _____ Total Contract Amount: _____

Prime Provider Info: DBE ___ HUB ___ Both ___

Engineer ID #: _____ DBE/HUB Expiration Date: _____

(First 11 Digits Only)

If no subproviders are used on this contract, please indicate by placing "N/A" on the 1st line under Subproviders.

Subprovider(s) (List All)	Type of Work	Engineer ID # (First 11 Digits Only)	D=DBE H=HUB	Expiration Date	\$ Amount or % of Work *
Subprovider(s) Contract or % of Work* Totals					

*For Work Authorization Contracts, indicate the % of work to be performed by each subprovider.

Total DBE or HUB Commitment Dollars \$ _____

Total DBE or HUB Commitment Percentages of Contract _____%

(Commitment Dollars and Percentages are for Subproviders only)

Form SMS.4901 (Rev. 06/08)



FORM E-2
Disadvantaged Business Enterprise (DBE) Program
Commitment Agreement Form

(Rev. 06/08)
 Page 1 of 1

This commitment is subject to the award and receipt of a signed contract from the Texas Department of Transportation for the subject project.

Project #:		County:		Contract-CSJ:	
Items of work to be performed (attach a list of work items if more room is required):					
Bid Item #	Item Description	Unit of Measure	Unit Price	Quantity	Total Per Item
Total					

The contractor certifies by signature on this agreement that subcontracts will be executed between the prime contractor and the DBE subconsultants as listed on the agreement form. If a DBE Subconsultant is unable to perform the work as listed on this agreement form, the prime contractor will follow the substitution/replacement approval process as outlined in the Contract DBE Special Provision.

IMPORTANT: The signatures of the prime contractor and the DBE, and the total commitment amount must always be on the same page.

Prime Contractor:		Name/Title (please print):	
Address:		Signature:	
Phone:	Fax:		
E-mail:		Date:	
DBE:		Name/Title (please print):	
Engineer No.:		Signature:	
Address:			
Phone:	Fax:	Date:	
E-mail:			
Subconsultant (if the DBE will be a second tier sub):		Name/Title (please print):	
Address:		Signature:	
Phone:	Fax:		
E-mail:		Date:	

The Texas Department of Transportation maintains the information collected through this form. With few exceptions, you are entitled on request to be informed about the information that we collect about you. Under §§552.021 and 552.023 of the Texas Government Code, you also are entitled to receive and review the information. Under §559.004 of the Government Code, you are also entitled to have us correct information about you that is incorrect.

To ensure prompt and efficient handling of your project file we are requesting that all commitments to be presented to the Office of Civil Rights, using this basic format.



FORM E-3

Form SMS.4902

**DBE Prime Contractor
To Non-DBE Subconsultants**

(Rev. 05/08)

Page 1 of 1

Project: _____

Contract CSJ: _____

County: _____

District: _____

Letting Date: _____

For Month of (Mo./Yr.): _____

Contractor: _____

Contract Amount: _____

Name of Non-DBE Subconsultant	\$ Amount Paid This Period	Total \$ Amount Paid to Date

Send this report to the District DBE Coordinator. Report is due within 15 days following the end of each calendar month.

Signature: _____ Date: _____
 _____ Company Official

The Texas Department of Transportation maintains the information collected through this form. With few exceptions, you are entitled on request to be informed about the information that is collected about you. Under §§552.021 and 552.023 of the Texas Government Code, you also are entitled to receive and review the information. Under §559.004 of the Government Code, you are also entitled to have us correct information about you that is incorrect.



FORM E-4

Form SMS. 4903

TxDOT Department of Transportation

(Rev. 05/08)

DBE Monthly Progress Report

Page 1 of 1

Project: _____

Contract CSJ: _____

County: _____

District: _____

Letting Date: _____

For Month of (Mo./Yr.): _____

Contractor: _____

Contract Amount: _____

DBE Goal: _____%

DBE Goal Dollars: _____

Engineer Number	Name of DBE Sub/Supplier	* RC or RN	** DBE \$ Amt Paid for Work Performed this Period (X)	*** \$ Amt Paid to Non-DBE 2 nd - Tier Subs and Haulers (Y)	Amt Paid to DBEs to Date (X-Y)	For TxDOT use Only

* Race Conscious or Race Neutral.

**Goal/commitment progress report amount and/or race-neutral amount. Do not subtract non-DBE second-tier subcontracts and haulers from this column.

*** Report amount of payment DBE subconsultants paid to non-DBE subconsultants/haulers.

If using a non-DBE hauling firm that leases from DBE truck owner-operators, payments made to each owner-operator must be reported separately.

Any changes to the DBE commitments approved by the department must be reported to the area Engineer.*

Submissions of this report for periods of negative DBE activity is required. This report is required until all DBE subcontracting or material supply activity is completed.

I hereby certify that the above is a true and correct statement of the amounts paid to the DBE firms listed above.

Signature: _____

Date: _____

This report must be sent to the area Engineer's office within 15 days following the end of the calendar month.

The Texas Department of Transportation maintains the information collected through this form. With few exceptions, you are entitled on request to be informed about the information that is collected about you. Under §§552.021 and 552.023 of the Texas Government Code, you also are entitled to receive and review the information. Under §559.004 of the Government Code, you are also entitled to have us correct information about you that is incorrect.

FORM E-5

Central Texas Regional Mobility Authority Subprovider Monitoring System for Federally Funded Contracts

Progress Assessment Report for month of (Mo./Yr.) _____ / _____

Contract #: _____

Original Contract Amount: _____

Date of Execution: _____

Approved Supplemental Agreements: _____

Prime Provider: _____

Total Contract Amount: _____

Work Authorization No. _____

Work Authorization Amount: _____

If no subproviders are used on this contract, please indicate by placing "N/A" on the 1st line under Subproviders.

DBE	All Subproviders	Category of Work	Total Subprovider Amount	% Total Contract Amount	Amount Paid This Period	Amount Paid To Date	Subcontract Balance Remaining

Fill out Progress Assessment Report with each estimate/invoice submitted, *for all subcontracts*, and forward as follows:

1 Copy with Invoice - Contract Manager/Managing Office

1 Copy – CTRMA DBE Liaison, c/o Atkins or WSP, _____, Austin, Texas

I hereby certify that the above is a true and correct statement of the amounts paid to the firms listed above.

Print Name - Company Official /DBE Liaison Officer

Signature

Phone

Date

Email

Fax



FORM E-6
DBE Final Report

Form SMS. 4903

(Rev. 09/10)

Page 1 of 1

The DBE final report form should be filled out by the contractor and submitted to the appropriate district office upon completion of the project. One copy of the report must be submitted to the area Engineer's office. The report should reflect all DBE activity on the project. The report will aid in expediting the final estimate for payment. If the DBE goal requirements were not met, documentation supporting good faith efforts must be submitted.

Project: _____ Contract CSJ: _____
County: _____ Control Project: _____
Letting Date: _____ DBE Goal: _____
Contractor: _____ Contract Amount: _____

Table with 7 columns: Engineer Number, Name of DBE Sub/Supplier, * RC or RN, ** DBE \$ Amt Paid for Work Performed this Period (X), *** \$ Amt Paid to Non-DBE 2nd Tier Subs and Haulers (Y), Amt Paid to DBEs to Date (X-Y), For TxDOT use Only

* Race Conscious or Race Neutral.

**Goal/commitment progress report amount and/or race-neutral amount. Do not subtract non-DBE second-tier subcontracts and haulers from this column.

*** Report amount of payment DBE subconsultants paid to non-DBE subconsultants/haulers.

Was there a project under-run caused by a TxDOT change order that impacted DBE Goal attainment?

_____ Yes _____ No Change Order Number _____

This is to certify that _____ % of the work was completed by Disadvantaged Business Enterprises as stated above.

By _____ Per: _____

Name of General Contractor

Contractor's Signature

Subscribed and sworn to before me, this _____ day of _____, A.D. _____

Notary Public

County

EXHIBIT F
DISADVANTAGED BUSINESS ENTERPRISE (DBE)
FOR FEDERAL-AID PROFESSIONAL OR TECHNICAL SERVICES CONTRACTS
SPECIAL PROVISION

- 1) **PURPOSE.** The purpose of this attachment is to carry out the U.S. Department of Transportation's ("DOT") policy of ensuring nondiscrimination in the award and administration of DOT assisted contracts and creating a level playing field on which firms owned and controlled by minority or socially and economically disadvantaged individuals can compete fairly for DOT assisted contracts.
- 2) **POLICY.** It is the policy of the DOT, the Central Texas Regional Mobility Authority (the "Mobility Authority") and the Texas Department of Transportation (the "Department") that Disadvantaged Business Enterprises (DBEs) as defined in 49 CFR Part 26, Subpart A and the Department's Disadvantaged Business Enterprise Program ("DBE Program"), shall have the opportunity to participate in the performance of contracts financed in whole or in part with Federal funds. The Mobility Authority and the Department previously entered into a Memorandum of Understanding Regarding the Adoption of the Texas Department of Transportation's Federally-Approved Disadvantaged Business Opportunity Program by the Central Texas Regional Mobility Authority (the "MOU") dated effective February 1, 2007. The MOU provides that the Mobility Authority has adopted the Department's DBE Program with the consent of the Federal Highway Administration for contracts financed in whole or in part with Federal funds. Consequently, the Disadvantaged Business Enterprise requirements of 49 CFR Part 26, and the Department's DBE Program, apply to this contract as follows:
 - a. The Provider will offer Disadvantaged Business Enterprises, as defined in 49 CFR Part 26, Subpart A and the Department's DBE Program, the opportunity to compete fairly for contracts and subcontracts financed in whole or in part with Federal funds. In this regard, the Provider shall make a good faith effort to meet the Disadvantaged Business Enterprise goal for this contract.
 - b. The Provider and any subprovider(s) shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Provider shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT assisted contracts. The requirements of this Special Provision shall be physically included in any subcontract.
 - c. When submitting the contract for execution by the Mobility Authority, the Provider must complete and furnish Form E-1 which lists the commitments made to certified DBE subprovider(s) that are to meet the contract goal and Form E-2 which is a commitment agreement(s) containing the original signatures of the Provider and the proposed DBE(s). For Work Authorization Contracts, Form E-1 is required at the time of submitting the contract for execution by the Mobility Authority. Form E-2 will be required to be completed and attached with each work authorization number that is submitted for execution, if the DBE will be performing work. Any substitutions or changes to the DBE subcontract amount shall be subject to prior written approval by the Mobility Authority. If non-DBE subprovider is performing work, insert N/A (not applicable) on the line provided.
 - d. Failure to carry out the requirements set forth above shall constitute a material breach of this contract and may result; in termination of the contract by the Mobility Authority; in a deduction of the amount of DBE goal not accomplished by DBEs from the money due or to

become due to the Provider, not as a penalty but as liquidated damages to the Mobility Authority; or such other remedy or remedies as the Mobility Authority deems appropriate.

3) **DEFINITIONS.**

- a. "Mobility Authority" means the Central Texas Regional Mobility Authority.
- b. "Department" means the Texas Department of Transportation (TxDOT).
- c. "Federal-Aid Contract" is any contract between the Mobility Authority and a Provider which is paid for in whole or in part with U. S. Department of Transportation ("DOT") financial assistance.
- d. "Provider" is any individual or company that provides professional or technical services.
- e. "DBE Joint Venture" means an association of a DBE firm and one (1) or more other firm(s) to carry out a single business enterprise for profit for which purpose they combine their property, capital, efforts, skills and knowledge, and in which the DBE is responsible for a distinct, clearly defined portion of the work of the contract and whose share in the capital contribution, control, management, risks and profits of the joint venture are commensurate with its ownership interest.
- f. "Disadvantaged Business Enterprise" or "DBE" means a firm certified as such by the Department in accordance with 49 CFR Part 26 and listed on the Department's website under the Texas Unified Certification Program.
- g. "Good Faith Effort" means efforts to achieve a DBE goal or other requirement of this Special Provision which, by their scope, intensity, and appropriateness to the objective, can reasonably be expected to fulfill the program requirement.
- h. "Race-neutral DBE Participation" means any participation by a DBE through customary competitive procurement procedures.
- i. "DBE Liaison" shall have the meaning set forth in Section 5.e. herein.

4) **PERCENTAGE GOAL.** The goal for Disadvantaged Business Enterprise participation in the work to be performed under this contract is 15% of the contract amount. This goal is established in accordance with the provisions of the MOU.

5) **PROVIDER'S RESPONSIBILITIES.** A DBE prime may receive credit toward the DBE goal for work performed by his-her own forces and work subcontracted to DBEs. A DBE prime must make a good faith effort to meet the goals. In the event a DBE prime subcontracts to a non-DBE, that information must be reported to the Mobility Authority on Form E-3.

- a. A Provider who cannot meet the contract goal, in whole or in part, shall document the "Good Faith Efforts" taken to obtain DBE participation. The following is a list of the types of actions that may be considered as good faith efforts. It is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.

- (1) Soliciting through all reasonable and available means the interest of all certified DBEs who have the capability to perform the work of the contract. The solicitation must be done within sufficient time to allow the DBEs to respond to it. Appropriate steps must be taken to follow up initial solicitations to determine, with certainty, if the DBEs are interested.
- (2) Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the Provider might otherwise prefer to perform the work items with its own forces.
- (3) Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.
- (4) Negotiating in good faith with interested DBEs by making a portion of the work available to DBE subproviders and suppliers and selecting those portions of the work or material needs consistent with the available DBE subproviders and suppliers.
- (5) The ability or desire of the Provider to perform the work of a contract with its own organization does not relieve the Provider's responsibility to make a good faith effort. Additional costs involved in finding and using DBEs is not in itself sufficient reason for a Provider's failure to meet the contract DBE goal, as long as such costs are reasonable. Providers are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.
- (6) Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities.
- (7) Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or Provider.
- (8) Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials or related assistance or services.
- (9) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.
- (10) If the Department's Director of the Business Opportunity Programs Office or the Mobility Authority's DBE Liaison determines that the Provider has failed to meet the good faith effort requirements, the Provider will be given an opportunity for reconsideration by the Department or the Mobility Authority, as appropriate.

NOTE: The Provider must not cause or allow subproviders to bid their services.

- b. The preceding information shall be submitted directly to the Chair of the Engineer Selection Team responsible for the project.

- c. The Provider shall make all reasonable efforts to honor commitments to DBE subproviders named in the commitment submitted under Section 2.c. of this attachment. Where the Provider terminates or removes a DBE subprovider named in the initial commitment, the Provider must demonstrate on a case-by-case basis to the satisfaction of the Mobility Authority that the originally designated DBE was not able or willing to perform.
- d. The Provider shall make a good faith effort to replace a DBE subprovider that is unable or unwilling to perform successfully with another DBE, to the extent needed to meet the contract goal. The Provider shall submit a completed Form E-2 for the substitute firm(s). Any substitution of DBEs shall be subject to prior written approval by the Mobility Authority. The Mobility Authority may request a statement from the firm being replaced concerning its replacement prior to approving the substitution.
- e. The Provider shall designate a DBE liaison officer (“DBE Liaison”) who will administer the DBE program and who will be responsible for maintenance of records of efforts and contacts made to subcontract with DBEs.
- f. Providers are encouraged to investigate the services offered by banks owned and controlled by disadvantaged individuals and to make use of these banks where feasible.

6) **ELIGIBILITY OF DBEs.**

- a. The Department certifies the eligibility of DBEs, DBE joint ventures and DBE truck-owner operators to perform DBE subcontract work on DOT financially assisted contracts. Under the terms of the MOU, only DBEs certified as eligible to participate on Department roadway construction projects and listed on the Department’s website under the Texas Unified Certification Program are eligible to participate on Mobility Authority roadway construction projects.
- b. This certification will be accomplished through the use of the appropriate certification schedule contained in the Department’s DBE program and adopted by the Mobility Authority under the terms of the MOU.
- c. The Department publishes a Directory of Disadvantaged Business Enterprises containing the names of firms that have been certified to be eligible to participate as DBEs on DOT financially assisted contracts. The directory is available from the Department’s Business Opportunity Programs Office. The Texas Unified Certification Program DBE Directory can be found on the Internet at:

http://www.dot.state.tx.us/services/business_opportunity_programs/tucp_dbe_directory.htm .
- d. Only DBE firms certified at the time the contract is signed or at the time the commitments are submitted are eligible to be used in the information furnished by the Provider as required under Section 2.c. and 5.d. above. For purposes of the DBE goal on this contract, DBEs will only be allowed to perform work in the categories of work for which they were certified.

- 7) **DETERMINATION OF DBE PARTICIPATION.** A firm must be an eligible DBE and perform a professional or technical function relating to the project. Once a firm is determined to be an eligible DBE, the total amount paid to the DBE for work performed with his/her own forces is counted toward the DBE goal. When a DBE subcontracts part of the work of its contract to another firm, the value of the subcontracted work may be counted toward DBE goals only if

the subprovider is itself a DBE. Work that a DBE subcontracts to a non-DBE firm does not count toward DBE goals.

A DBE subprovider may subcontract no more than 70% of a federal aid contract. The DBE subprovider shall perform not less than 30% of the value of the contract work with assistance of employees employed and paid directly by the DBE; and equipment owned or rented directly by the DBE. DBE subproviders must perform a commercially useful function required in the contract in order for payments to be credited toward meeting the contract goal. A DBE performs a commercially useful function when it is responsible for executing the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. To perform a commercially useful function, the DBE must also be responsible, with respect to materials and supplies used on the contract, for negotiating price, determining quality and quantity, ordering the material, and installing (where applicable) and paying for the material itself. When a DBE is presumed not to be performing a commercially useful function, the DBE may present evidence to rebut this presumption.

A Provider may count toward its DBE goal a portion of the total value of the contract amount paid to a DBE joint venture equal to the distinct, clearly defined portion of the work of the contract performed by the DBE.

Proof of payment, such as copies of canceled checks, properly identifying the Mobility Authority's contract number or project number may be required to substantiate the payment, as deemed necessary by the Mobility Authority.

8) **RECORDS AND REPORTS.**

- a. After submission of the initial commitment reported (Form E-1), required by Section 2.c. of this attachment, the Provider shall submit Monthly Progress Assessment Reports (Forms E-4 and E-5), after contract work begins, on DBE involvement to meet the goal and for race-neutral participation. One copy of each report is to be sent monthly to the Mobility Authority as provided in Section 8.b. below and should also be submitted with the Provider's invoice. **Only actual payments made to subproviders are to be reported. These reports will be required until all subprovider activity is completed.** The Mobility Authority may verify the amounts being reported as paid to DBEs by requesting copies of canceled checks paid to DBEs on a random basis.
- b. DBE subproviders should be identified on the report by name, type of work being performed, the amount of actual payment made to each during the billing period, cumulative payment amount and percentage of the total contract amount. These reports will be due within fifteen (15) days after the end of a calendar month. Reports are required even when no DBE activity has occurred in a billing period.
- c. All such records must be retained for a period of four (4) years following final payment or until any investigation, audit, examination, or other review undertaken during the four (4) years is completed, and shall be available at reasonable times and places for inspection by authorized representatives of the Mobility Authority, the Department or the DOT.
- d. Prior to receiving final payment, the Provider shall submit a Final Report (Form E-6), detailing the DBE payments. The Final Report is to be sent to the Mobility Authority and one (1) copy is to be submitted with the Provider's final invoice. If the DBE goal requirement is not met,

documentation of the good faith efforts made to meet the goal must be submitted with the Final Report.

- 9) **COMPLIANCE OF PROVIDER.** To ensure that DBE requirements of this DOT-assisted contract are complied with, the Mobility Authority and/or the Department will monitor the Provider's efforts to involve DBEs during the performance of this contract. This will be accomplished by a review of DBE Monthly Progress Reports (Form E-4), submitted to the Mobility Authority by the Provider indicating his progress in achieving the DBE contract goal, and by compliance reviews conducted by the Mobility Authority or the Department. The DBE Monthly Progress Report (Form E-4) must be submitted at a minimum monthly to the Mobility Authority, in addition to with each invoice to the appropriate agency contact.

The Provider shall receive credit toward the DBE goal based on actual payments to the DBE subproviders with the following exceptions and only if the arrangement is consistent with standard industry practice. The Provider shall immediately contact the Mobility Authority in writing if he/she withholds or reduces payment to any DBE subprovider.

- (1) A DBE firm is paid but does not assume contractual responsibility for performing the service;
- (2) A DBE firm does not perform a commercially useful function;
- (3) Payment is made to a DBE that cannot be linked by an invoice or canceled check to the contract under which credit is claimed;
- (4) Payment is made to a broker or a firm with a brokering-type operation; or
- (5) Partial credit is allowed, in the amount of the fee or commission provided the fee or commission does not exceed that customarily allowed for similar services, for a bona fide service, such as professional, technical, Engineer, or managerial services, and assistance in the procurement of essential personnel, facilities, equipment, materials, or supplies required for performance of the contract.

A Provider's failure to comply with the requirements of this Special Provision shall constitute a material breach of this contract. In such a case, the Mobility Authority reserves the right to terminate the contract; to deduct the amount of DBE goal not accomplished by DBEs from the money due or to become due the Provider, not as a penalty but as liquidated damages to the Mobility Authority; or such other remedy or remedies as the Mobility Authority deems appropriate.



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

June 30, 2021
AGENDA ITEM #8

Discuss and consider approving a contract with ACI Group, LLC for independent environmental compliance management services for the 183 North Mobility Project

Strategic Plan Relevance:	Regional Mobility
Department:	Engineering
Contact:	Mike Sexton, P.E., Acting Director of Engineering
Associated Costs:	\$1,533,422
Funding Source:	Toll revenue bonds and Transportation Infrastructure Finance and Innovation Act (TIFIA) funds
Action Requested:	Consider and act on the draft resolution

Project Description/Background: The 183 North Mobility Project will expand capacity along a nine mile stretch of US 183 between SH 45 and MoPac by adding two tolled express lanes in each direction in the median of US 183, expanding the existing US 183 to four non-tolled general-purpose lanes in each direction, and constructing a shared use path, and sidewalks between SH 45/RM 620 and Loop 1. The project also includes the addition of a direct connector between the existing express lanes on MoPac and the proposed express lanes on US 183, and additional operational improvements along MoPac including an option to add a collector-distributor road.

The Mobility Authority requires Independent Environmental Compliance Management (IECM) services to monitor Design-Build Contractor compliance with the 183 North Mobility Project's National Environmental Policy Act (NEPA) commitments, Biological Opinion mitigation measures, Water Pollution Abatement Plan, and all applicable environmental laws and regulations during construction. The IECM will audit and conduct oversight of the measures implemented during construction operations for compliance by the DB Contractor with various environmental requirements.

Previous Actions & Brief History of the Program/Project: On May 26, 2021 the Board awarded an Independent Environmental Compliance Management services contract to

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

RESOLUTION NO. 21-0XX

**APPROVING A CONTRACT WITH ACI GROUP, LLC FOR INDEPENDENT
ENVIRONMENTAL COMPLIANCE MANAGEMENT SERVICES FOR THE
183 NORTH MOBILITY PROJECT**

WHEREAS, the Central Texas Regional Mobility Authority (Mobility Authority) requires independent environmental compliance management services for the 183 North Mobility Project; and

WHEREAS, following a procurement conducted by Mobility Authority staff, by Resolution No. 21-034 dated May 26, 2021, the Board of Directors (Board) authorized the Executive Director to negotiate a contract with ACI Group, LLC to provide independent environmental compliance management services for the 183 North Mobility Project; and

WHEREAS, the Executive Director has completed those negotiations and now recommends that the Board approve the proposed contract with ACI Group, LLC for independent environmental compliance management services for the 183 North Mobility Project in an amount not to exceed \$1,533,422 which is which is attached hereto as Exhibit A

NOW THEREFORE, BE IT RESOLVED, that the Board approves the contract with ACI Group, LLC for independent environmental compliance management services for the 183 North Mobility Project in an amount not to exceed \$1,533,422 and hereby authorizes the Executive Director to finalize and execute the contract on behalf of the Mobility Authority in the form or in substantially the same form attached hereto as Exhibit A.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 30th day of June 2021.

Submitted and reviewed by:

Approved:

Geoffrey Petrov, General Counsel

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

Exhibit A

MASTER CONTRACT

CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY CONTRACT FOR PROFESSIONAL SERVICES

THIS CONTRACT FOR PROFESSIONAL SERVICES (the Contract) is made by and between the Central Texas Regional Mobility Authority, 3300 N. I-35, Suite 300, Austin, Texas 78705, (the Authority) and ACI Group, LLC having its principal business address at 1001 MoPac Circle, Austin, Texas 78746 (the Consultant).

WITNESSETH

WHEREAS, the Authority desires to contract for services generally described as professional services, and more specifically described in Article 1 (the Services); and,

WHEREAS, pursuant to a qualifications-based selection conducted in accordance with the Professional Services Procurement Act (Tex. Gov't Code Sec. 2254.001, et. seq.), and the Authority's Policy Code regarding the procurement of professional services, the Authority has selected the Consultant to provide the needed Services; and

WHEREAS, the Consultant has agreed to provide the Services subject to the terms and conditions hereinafter set forth.

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

AGREEMENT

ARTICLE 1 SCOPE OF SERVICES

The Consultant will perform the Services and provide the items necessary for fulfillment of the Contract as identified in Attachment A, Services to be Provided by the Consultant. All Services provided by the Consultant shall comply with the terms and conditions of this Contract and any Work Authorizations issued pursuant hereto. As applicable, all Services provided by the Consultant will conform to standard engineering practices and applicable rules and regulations of the Texas Engineering Practices Act and the rules of the Texas Board of Professional Engineers, and applicable environmental laws and regulations.

This Contract does not obligate the Authority or the Executive Director or his designee to proceed with the Services or authorize the performance of work through a Work Authorization.

ARTICLE 2
CONTRACT PERIOD

This Contract becomes effective when fully executed by all parties hereto and it shall terminate on the Final Acceptance Date, defined as the later of final acceptance of the construction contract for the project or the completion of all work under this Contract.

ARTICLE 3
COMPENSATION

Compensation for the performance of the Services shall be provided as follows:

A. Maximum Amount Payable. The total amount payable under the Contract without modification is an amount not to exceed \$1,533,422.00.

B. Methods for Compensation. The method for compensating Consultant for Services performed shall be specified in the Work Authorization issued pursuant to Article 5 and shall be one of the following types:

(1) Cost-Plus

Subject to the terms of a Work Authorization issued pursuant to Article 5 below (including any maximum amount to be paid as stated therein), the Authority will agree to pay, and the Consultant will agree to accept as full and sufficient compensation and reimbursement for the performance of all Services as set forth in this Contract and the Work Authorization, hourly rates for the staff working on the assignment computed as follows:

Direct Labor Cost x (1.0 + Overhead Rate) x (1.0 + Profit %, in decimal form)

where Direct Labor Cost equals employee's actual annual salary divided by 2080 hours per year (subject to any applicable cap); Overhead Rate equals the Consultant's most recent auditable overhead rate under 48 C.F.R. Part 31, Federal Acquisition Regulations (FAR) or otherwise approved overhead rate pursuant to this subarticle; and Profit % reflects a ten percent (10%) profit. No increase shall be made to the specified profit percentage.

The Direct Labor Cost caps for the classifications of employees working for the Authority as of the Contract execution of this Contract are reflected in Attachment B. Revisions to Direct Labor Cost caps for employee classifications and the auditable overhead rate may be proposed no more frequently than once per calendar year, and no sooner than 12 months after Contract execution, and are subject to the written approval of the Executive Director or his designee.

The actual annual salaries for all Key Team Members and employees anticipated to work a minimum of 40 hours/month will be set as of the Contract execution. Revisions to actual annual salaries billed to the Authority may be proposed no more frequently than once per calendar year, and no sooner than 12 months after Contract execution, are limited to no more than a 3% increase per year and are subject to the written approval of the Executive Director or his designee. Actual annual salaries billed to the Authority in excess of the 3% annual increase

threshold will be considered only on a case by case basis and shall be approved by the Executive Director or his designee in writing.

The Authority shall have the right to review and/or audit the Consultant's Direct Labor Costs, auditable overhead rates, and annual salaries of Key Team Members upon written request. Once approved, the range of Direct Labor Costs and auditable overhead rate will be used going forward until the next annual adjustment is requested and approved. Changes to the auditable overhead rate will not be applied retroactively to Direct Labor Costs incurred in the previous year. If the Consultant or a subconsultant of the Consultant does not have a FAR Part 31 overhead rate, they may submit, for approval by the Executive Director or his designee, alternate documentation supporting an appropriate auditable overhead rate. If an auditable overhead rate is not submitted or available, fixed hourly rates must be submitted per subarticle 3.B.4. During the term of this Contract, the Consultant shall provide to the Executive Director or his designee, prior to requesting any adjustment to its auditable overhead rate, a copy of the report establishing a new FAR Part 31 rate for the Consultant.

The payment of the hourly rates and allowed costs shall constitute full payment for all Services, liaisons, products, materials, and equipment required to deliver the Services.

(2) Unit Cost

Subject to the terms of a Work Authorization issued pursuant to Article 5 below (including any maximum amount to be paid as stated therein), the Authority will agree to pay the Consultant, and the Consultant will agree to accept as full and sufficient compensation and reimbursement for the performance of all Services as set forth in this Contract and the Work Authorization, an agreed upon unit price multiplied by the number of units completed for each billing. This method of payment is generally reserved for work which has a definable work product but the quantity is uncertain and the Consultant assumes the risks for all costs. Each invoice submitted shall identify the specific Contract task(s) and completed work product/deliverable for the agreed upon price outlined in the Work Authorization.

(3) Lump Sum

Subject to the terms of a Work Authorization issued pursuant to Article 5 below (including any maximum amount to be paid as stated therein), the Authority will agree to pay Consultant, and the Consultant will agree to accept as full and sufficient compensation and reimbursement for the performance of all Services as set forth in this Contract and the Work Authorization, a Lump Sum amount for the specified category of services.

The Lump Sum will include compensation for Consultant's services and services of subconsultants, if any. Appropriate amounts will be incorporated in the Lump Sum to account for labor, overhead, profit, and Reimbursable Expenses.

The portion of the Lump Sum amount billed for Consultant's Services will be based upon Consultant's estimate, as approved by the Authority's Director of

Engineering, of the proportion of the total Services completed during the billing period to the Lump Sum amount.

(4) Specified Rate

Subject to the terms of a Work Authorization issued pursuant to Article 5 below (including any maximum amount to be paid as stated therein), and for the specified category of services, the Authority will agree to pay the Consultant, and the Consultant will agree to accept as full and sufficient compensation and reimbursement for the performance of all Services as set forth in this Contract and the Work Authorization, an amount equal to the cumulative hours charged to the specific project by each class of Consultant's employees multiplied by the Standard Hourly Rates for each applicable billing class for all Services performed on the specific project, plus Reimbursable Expenses and sub consultant's charges, if any.

Standard Hourly Rates include salaries and wages paid to personnel in each billing class plus the cost of customary and statutory benefits, general and administrative overhead, non-project operating costs, and operating margin or profit.

Consultant's Reimbursable Expenses Schedule and Standard Hourly Rates are included in Attachment B.

The total estimated compensation for the specified category of services shall be stated in the Work Authorization. This total estimated compensation will incorporate all labor at Standard Hourly Rates, Reimbursable Expenses, and sub consultants' charges, if any.

The amounts billed will be based on the cumulative hours charged to the specified category of services during the billing period by each class of Consultant's employees multiplied by the Standard Hourly Rates for each applicable billing class, plus Reimbursable Expenses and Consultant's sub consultant's charges, if any.

Revisions to the Standard Hourly Rates may be proposed no more frequently than once per calendar year, and no sooner than 12 months after contract execution, and are subject to written approval of the Executive Director or his designee.

C. Limitations on Rates Utilized. The Consultant represents that at all times, subject to the limitations on timing and approval in Article 2, throughout the term of this Contract that it shall not use an auditable overhead rate that exceeds the rate determined in accordance with FAR Part 31 (or successor regulations); and shall be based on actual salary amounts for the individuals performing the Services; that the Direct Labor Costs shall not exceed the caps reflected in Attachment B and shall be based on actual salary amounts for the individuals performing the Services.

D. Reimbursable Expenses. Notwithstanding the foregoing, and subject to the limitations herein, the Consultant shall be entitled to reimbursement for reasonable out-of-pocket expenses actually incurred by the Consultant that are necessary for the performance of its duties under this Contract and which are not included in the approved overhead rate, said expenses being limited to travel costs at the Current State Rate, printing costs for specified

reports and deliverables, automobile expenses being reimbursed at the federal mileage rates for travel originating from the office of the Consultant employee or subconsultant, and other expenses directly approved, in advance, by the Executive Director or his designee (collectively, "Reimbursable Expenses"). Except as otherwise authorized in an executed Work Authorization, and only then to the extent reimbursable by the Texas Department of Transportation ("TxDOT") under the terms of any form of financial assistance agreement, the Authority shall not reimburse the Consultant for travel, lodging, and similar expenses incurred by the Consultant to bring additional staff to its local office or to otherwise reassign personnel to provide basic consulting support of the Consultant's performance of the Services, provided, however, that the Authority shall reimburse, but only in accordance with the terms of this subsection, such costs incurred by the Consultant to bring to its local office or the Authority's facilities, with advance approval by the Executive Director or his designee, staff with specialized skills or expertise required for the Services and not customarily available from a staff member providing services of the type described in this Contract. Roadway tolls incurred by Consultant or any of its subconsultants in connection with the performance of the Services will not be a reimbursable expense under this Contract.

Consultant acknowledges that all expenses and costs paid or reimbursed by the Authority using federal or state funds shall be paid or reimbursed in accordance with, and subject to, applicable policies of the Authority and other applicable state and federal laws, including the applicable requirements of OMB Circular A-87, which may reduce the amount of expenses and costs reimbursed to less than what was incurred.

The Consultant shall acquire all goods and services subject to the reimbursement by the Authority under this Contract on a tax-free basis pursuant to the Authority's tax-exempt status described in subarticle 2.H. This provision applies to the extent the Authority's tax-exempt status can reasonably be extended to purchases made directly by the Consultant.

E. Subconsultants. For the purposes of this Contract, a "subconsultant" is an individual or entity contracted by the Consultant to provide services related to or part of those which the Consultant owes to the Authority under this Contract. The Consultant may engage a subconsultant to provide services, and the Authority will reimburse the Consultant for the Consultant's cost of engaging the subconsultant for those services, if the Consultant provides a written description of the proposed services and the proposed price (using rates approved in Attachment B), to the Authority's Director of Engineering before the Services are provided, and the Authority's Director of Engineering has provided to the Consultant a written approval for the Services and the proposed price. If an approved subconsultant bills on an hourly rate, each invoice from the subconsultant submitted to the Authority for reimbursement must report the tasks performed by each billing person and the amount of time spent performing the task. The Consultant may not charge a mark-up or commission on a subconsultant's invoice, and the Authority will not reimburse the Consultant in an amount that exceeds the price proposal from the subconsultant that was approved by the Authority's Director of Engineering.

F. Non-compensable Time. Time spent by the Consultant's personnel or subconsultants in an administrative or supervisory capacity not related to the performance of the Services is not compensable and shall not be billed to the Authority. Time spent on work in excess of what would reasonably be considered appropriate under industry standards for the performance of such Services is not compensable, unless that additional time spent resulted from

the Authority's delay in providing information, materials, feedback, or other necessary cooperation to the Consultant. The Authority will not pay any hourly compensation to the Consultant for Services or deliverables required due to an error, omission, or fault of the Consultant.

G. Consistency of Classification/Duties and Hourly Rates. Time spent by the Consultant's employees or subconsultants to perform services or functions capable of being carried out by other, subordinate personnel with a lower hourly rate shall be billed at a rate equivalent to that of the applicable qualified subordinate personnel.

H. Taxes. All payments to be made by the Authority to the Consultant pursuant to this Contract are inclusive of federal, state, or other taxes, if any, however designated, levied, or based. The Authority acknowledges and represents that it is a tax-exempt entity under Sections 151.309, et seq., of the Texas Tax Code. A "Texas Sales and Use Tax Exemption Certificate" is available from the Authority for use toward project-related expenses upon request. Title to any consumable items purchased by the Consultant in performing this Contract shall be deemed to have passed to the Authority at the time the Consultant takes possession or earlier, and such consumable items shall immediately be marked, labeled, or physically identified as the property of the Authority, to the extent practicable.

ARTICLE 4 INVOICE REQUIREMENTS

The Consultant shall submit its monthly invoices certifying the fees charged and any Reimbursable Expenses for Services provided during the previous month and shall also present a reconciliation of monthly invoices (and related estimates) to which the work relates. Each invoice shall be in such detail as is required by the Authority and, if the work is eligible for payment through an agreement with TxDOT, in such detail as TxDOT may require, including a breakdown of Services provided on a project-by-project basis, together with other Services requested by the Authority. Upon request of the Authority, the Consultant shall also submit certified time and expense records directly related to Services provided to the Authority, and copies of invoices that support invoiced fees and Reimbursable Expenses. All invoices must be consistent with the rates established by this Contract and the compensation method specified in the Work Authorization. Unless waived in writing by the Executive Director, or his designee, no invoice may contain, and the Authority will not be required to pay, any charge for billable hours which is more than (90) days old at the time of invoicing.

A. Form of Invoices. The invoice shall show: (1) the Work Authorization number for each Work Authorization included in the billing; (2) the total amount earned thru the billing period; and (3) the amount due and payable as of the date of the current billing statement for each Work Authorization. The invoice shall indicate if the work has been completed or if the invoice is for partial completion of the work. The invoice shall be in the format provided by the Authority.

B. Disadvantaged Business Enterprise (DBE)/Historically Underutilized Business (HUB) Forms. The Consultant will be responsible for completing and including with each invoice all required DBE/HUB reporting forms included in the Work Authorization(s).

C. Time and Place of Payment. Upon receipt of an invoice that complies with all invoice requirements set forth in this Contract, the Authority shall make a good faith effort to

pay the amount, which is due and payable within thirty (30) days, provided that if all or a portion of the Services reflected in the invoice are to be reimbursed by TxDOT through an agreement between TxDOT and the Authority, the Authority shall make a good faith effort to pay such amounts within thirty (30) days of receipt of such payments from TxDOT. If the Authority disputes a request for payment by the Consultant, the Authority agrees to pay any undisputed portion of the invoice when due. The basis for any such dispute must be stated in writing within thirty (30) days after the Authority's receipt of the monthly invoice.

D. Withholding Payments. The Authority reserves the right to withhold payment of all or portion of the Consultant's invoice in the event of any of the following: (1) a dispute over all or part of the work performed or costs thereof is not resolved within a thirty (30) day period following receipt of the invoice; (2) verification of satisfactory work performed has not been completed; or (3) if required reports (including third-party verifications, if any) are not received.

E. Invoice and Progress Report Submittal Process. The protocol for invoice and progress report submittal, review, and approval will be as follows:

- (1) The invoice submittal shall include:
 - o Progress report
 - o Forecast for completion of the scope
 - o Invoice (in the required format provided by the Authority)
 - o Supporting documents as requested
- (2) A progress report shall be submitted to Authority at least once each calendar month;
- (3) An update to the project schedule (using critical path method analysis) indicating the project's overall status versus the baseline schedule (originally submitted with the Project Management Plan) shall be submitted to Authority at least once each calendar month;
- (4) In the event that invoices are not submitted on a monthly basis, a monthly submittal of the progress report and project schedule information will be required nevertheless;
- (5) The invoice submittal shall not be later than the 10th day of the month following service unless otherwise directed; if submitted after the 10th day, it will be processed the following month;
- (6) As it relates to the Authority's end of fiscal year closeout efforts, the Consultant shall submit the invoice including their services through June 30th for a given year no later than July 7th of that same year;
- (7) The Authority's Director of Engineering and/or the Authority's General Engineering Consultant (GEC) (as defined in Article 19) will review the invoices to confirm that supporting documentation is included, and for compliance with the Contract and consistency with the submitted progress report; and

- (8) The invoice will either be recommended for approval by the Authority's Director of Engineering and/or GEC, or the Authority's Director of Engineering and/or GEC will return it to the Consultant for required correction.

F. Effect of Payments. No payment by the Authority shall relieve the Consultant of its obligation to perform on a timely basis the Services required under this Contract. If, prior to acceptance of any Service, product or other deliverable, the Executive Director or his designee determines that said Service, product or deliverable does not satisfy the requirements of this Contract, the Executive Director or his designee may reject same and require the Consultant to correct or cure same within a reasonable period of time and at no additional cost to the Authority.

G. Audit. The Authority shall have the right to examine the books and records of the Consultant. The Consultant shall maintain all books, documents, papers, accounting records and other evidence pertaining to cost incurred and shall make such materials available at its office during the Contract period and for four (4) years from the date of final payment under this Contract or until any pending litigation has been completely and fully resolved, and the Executive Director or his designee approves of the destruction of records, whichever occurs last. The Authority or any of its duly authorized representatives, TxDOT, the Federal Highway Administration ("FHWA"), the United States Department of Transportation Office of Inspector General and the Comptroller General shall have access to any and all books, documents, papers and records of the Consultant which are directly pertinent to this Contract for the purpose of making audits, examinations, excerpts and transcriptions.

ARTICLE 5 WORK AUTHORIZATIONS

A. Use. The Consultant shall not begin any work until the Executive Director and the Consultant have signed a Work Authorization and received a Notice to Proceed as defined in the Work Authorization. Costs incurred by the Consultant before a Work Authorization is fully executed or after the completion date specified in the Work Authorization are not eligible for reimbursement. Services performed shall be in strict accordance with the scope, schedule, and budget set forth in each Work Authorization issued pursuant to this Contract, and no Services shall be performed which are not the subject of a validly issued Work Authorization. The Executive Director or his designee will issue Work Authorizations to authorize all work under this Contract. No work shall begin on the activity until the Work Authorization is approved and fully executed. All work must be completed on or before the completion date specified in the Work Authorization.

B. Contents. Each Work Authorization shall include: (1) scope of Services including types of Services to be performed and a full description of the work required to perform those Services (2) a full description of general administration tasks exclusive to that Work Authorization (3) a work schedule (including beginning and ending dates) with milestones; (4) the basis of payment whether cost-plus, unit cost, lump sum, or specified rate; (5) a Work Authorization budget as described in subarticle 5.C.; and (6) DBE/HUB Requirements. The Consultant shall not include additional contract terms and conditions in the Work Authorization.

C. Work Authorization Budget. A Work Authorization budget shall be prepared by the Consultant and shall set forth in detail the following: (1) the computation of the estimated cost of the work as described in the scope of Services to be provided by the Consultant; (2) the

estimated time (hours/days) required to complete the work using the fees set forth in Attachment B; (3) a work plan that includes a list of the work to be performed; and (4) a maximum cost (not-to-exceed) amount or unit or lump sum cost and the total cost or price of the work as defined in the scope of Services.

D. No Guaranteed Work. Work Authorizations will be issued at the sole discretion of the Executive Director or his designee. While it is the Executive Director's or his designee's intent to issue Work Authorizations hereunder, the Consultant shall have no cause of action conditioned upon the lack of, failure to issue, or number of Work Authorizations issued.

E. Incorporation into Contract. Each Work Authorization shall be signed by both parties and become a part of the Contract. No Work Authorization will waive the Authority's or the Consultant's responsibilities and obligations established in this Contract. The Consultant shall promptly notify the Executive Director or his designee of any event that will affect completion of the Work Authorization in accordance with the terms thereof.

F. Supplemental Work Authorizations. Before additional work may be performed or additional costs incurred beyond those authorized in a Work Authorization, a change in a Work Authorization shall be enacted by a written Supplemental Work Authorization to be approved by the Executive Director or his designee. Supplemental Work Authorizations, if required, must be executed by both parties. The Authority shall not be responsible for actions by the Consultant or any costs incurred by the Consultant relating to additional work not directly associated with the performance or prior to the execution of the Supplemental Work Authorization. The Executive Director or his designee shall take such time as it deems necessary, in his sole discretion, to review the Supplemental Work Authorization.

(1) Notice. If the Consultant is of the opinion that any assigned work is beyond the scope of this Contract and constitutes additional work beyond the Services to be provided under this Contract or a Work Authorization, it shall promptly notify the Executive Director or his designee and submit written justification presenting the facts of the work and demonstrating how the work constitutes supplementary work.

(2) More Time Needed. If the Consultant determines or reasonably anticipates that the work authorized in a Work Authorization cannot be completed before the specified completion date, the Consultant shall promptly notify the Executive Director or his designee. The Executive Director or his designee, at his sole discretion, may extend the Work Authorization period by execution of a Supplemental Work Authorization.

(3) Changes in Scope. Changes that would modify the scope of the work authorized in a Work Authorization must be enacted by a written Supplemental Work Authorization. If the change in scope affects the amount payable under the Work Authorization, the Consultant shall prepare a revised Work Authorization budget for the Executive Director's or his designee's approval. The Executive Director or his designee shall analyze the proposed justification, work hour estimate and cost. Upon approval of the need, the Executive Director or his designee shall negotiate the Supplemental Work Authorization scope with the

Consultant, and then process the final Supplemental Work Authorization, subject to final written approval by the Executive Director or his designee.

(4) Limitation of Liability. The Authority shall not be responsible for actions by the Consultant or any costs incurred by the Consultant relating to additional work not directly associated with (or incurred prior to) the execution of a Supplemental Work Authorization.

G. Deliverables. Upon satisfactory completion of the Work Authorization, the Consultant shall submit the deliverables as specified in the executed Work Authorization and updated project schedule to the Executive Director or his designee for review and acceptance.

ARTICLE 6 PROGRESS

A. Progress meetings. As required and detailed in the Work Authorizations or as otherwise directed by the Executive Director or his designee, the Consultant shall from time to time during the progress of the work confer with the Executive Director or his designee. The Consultant shall prepare and present such information as may be pertinent and necessary or as may be requested by the Executive Director or his designee in order to evaluate features of the work.

B. Conferences. At the request of the Executive Director or his designee and as required and detailed in the Work Authorizations, conferences shall be held at the Consultant's office, the office of the Authority, or at other locations designated by the Executive Director or his designee. These conferences may also include evaluation of the Consultant's Services and work when requested by the Executive Director or his designee.

C. Reports. The Consultant shall promptly advise the Executive Director or his designee in writing of events that have a significant impact upon the progress of a Work Authorization, including:

(1) problems, delays, adverse conditions that will materially affect the ability to meet the time schedules and goals, or preclude the attainment of project work units by established time periods; this disclosure will be accompanied by a statement of the action taken or contemplated, and any Authority or state/federal assistance needed to resolve the situation; and

(2) favorable developments or events that enable meeting the work schedule goals sooner than anticipated.

D. Corrective Action. Should the Executive Director or his designee determine that the progress of work does not satisfy the milestone schedule (or other deadlines) set forth in a Work Authorization, the Executive Director or his designee shall review the work schedule with the Consultant to determine the nature of corrective action needed. The Executive Director or his designee's participation in reviewing the work schedule and determining corrective actions needed will not, in any way, excuse the Consultant from any responsibility or costs of failure to timely perform the Services.

E. More Time Needed. If the Consultant determines or reasonably anticipates that the work authorized in a Work Authorization cannot be completed within the work schedule contained therein, the Consultant shall promptly notify the Executive Director or his designee

and shall follow the procedure set forth in the Work Authorization. The Executive Director or his designee may, at his sole discretion, modify the work schedule to incorporate an extension of time with the execution of a Supplemental Work Authorization.

ARTICLE 7 SUSPENSION OF WORK AUTHORIZATION

A. Notice. Should the Executive Director or his designee desire to suspend a Work Authorization (or a portion of the work authorized thereunder) but not terminate the Contract, the Executive Director or his designee may provide written notification to the Consultant, giving ten (10) business days prior notice. Both parties may waive the ten (10) business day notice requirement in writing.

B. Reinstatement. A Work Authorization may be reinstated and resumed in full force and effect within thirty (30) days of receipt of written notice from the Executive Director or his designee to resume the work. Both parties may waive the thirty (30) day notice in writing.

C. Limitation of Liability. The Authority shall have no liability for work performed or costs incurred prior to the date authorized by the Executive Director or his designee to begin work, during periods when work is suspended, or after the completion of the Contract or Work Authorization.

ARTICLE 8 CHANGES IN WORK

A. Work Previously Submitted as Satisfactory. If the Consultant has submitted work in accordance with the terms of this Contract and Work Authorization(s) but the Executive Director or his designee requests changes to the completed work or parts thereof which involve changes to the original scope of Services or character of work under the Contract and Work Authorization(s), the Consultant shall make such revisions as requested and as directed by the Executive Director or his designee, provided the work is reflected in a Supplemental Work Authorization.

B. Work Does Not Comply with Contract. If the Consultant submits work that does not comply with the terms of this Contract or Work Authorization(s), the Executive Director or his designee shall instruct the Consultant to make such revision as is necessary to bring the work into compliance with the Contract or Work Authorization(s). No additional compensation shall be paid for this work.

ARTICLE 9 OWNERSHIP OF DATA

A. Work for Hire. All services provided under this Contract are considered work for hire and, as such, all data, basic sketches, charts, calculations, plans, specifications, electronic files, and other documents created or collected under the terms of this Contract are the property of the Authority.

B. Ownership of Plans. Notwithstanding any provision in this Contract or in common law or statute to the contrary all of the plans, tracings, estimates, specifications, computer records, discs, tapes, proposals, sketches, diagrams, charts, calculations, correspondence, memoranda, survey notes, and other data and materials, and any part thereof, created, compiled or to be compiled by or on behalf of the Consultant, including all information prepared for or

posted on the Authority's website and together with all materials and data furnished to it by the Authority, are and at all times shall be and remain the property of the Authority and shall not be subject to any restriction or limitation on their further use by or on behalf of the Authority. Consultant hereby assigns any and all rights and interests it may have in the foregoing to the Authority, and Consultant hereby agrees to provide reasonable cooperation as may be requested by the Authority in connection with the Authority's efforts to perfect or protect rights and interests in the foregoing; and if at any time demand be made by the Authority for any of the above materials, records, and documents, whether after termination of this Contract or otherwise, such shall be turned over to the Authority without delay. The Authority hereby grants the Consultant a revocable license to retain and utilize the foregoing materials for the limited purpose of fulfilling Consultant's obligations under this Contract, said license to terminate and expire upon the earlier to occur of (a) the completion of Services described in this Contract or (b) the termination of this Contract, at which time the Consultant shall deliver to the Authority all such materials and documents. If the Consultant or a subconsultant desires later to use any of the data generated or obtained by it in connection with the Projects or any other portion of the work product resulting from the Services, it shall secure the prior written approval of the Executive Director or his designee. The Consultant shall retain its copyright and ownership rights in its own back-office databases and computer software that are not developed for the Authority or for purposes of this Contract. Intellectual property developed, utilized, or modified in the performance of Services for which the Consultant is compensated under the terms of this Contract shall remain the property of the Authority, Consultant hereby agrees to provide reasonable cooperation as may be requested by the Authority in connection with the Authority's efforts to perfect or protect such intellectual property. The Authority retains an unrestricted license for software packages developed in whole or in part with Authority funds.

C. Separate Assignment. If for any reason the agreement of the Authority and the Consultant set forth in subarticle 9.B. regarding the ownership of work product and other materials is determined to be unenforceable, either in whole or in part, the Consultant hereby assigns and agrees to assign to the Authority all right, title, and interest that Consultant may have or at any time acquire in said work product and other materials, without royalty, fee or other consideration of any sort, and without regard to whether this Contract has terminated or remains in force. The Authority hereby acknowledges, however, that all documents and other work product provided by the Consultant to the Authority and resulting from the Services performed under this Contract are intended by the Consultant solely for the use for which they were originally prepared. Notwithstanding anything contained herein to the contrary, the Consultant shall have no liability for the use by the Authority of any work product generated by the Consultant under this Contract on any project other than for the specific purpose and project for which the work product was prepared.

D. Disposition of Documents. All documents and electronic files prepared by the Consultant and all documents furnished to the Consultant by the Authority shall be delivered to the Authority upon request. The Consultant, at its own expense, may retain copies of such documents or any other data which it has furnished the Authority under this Contract, but further use of the data is subject to express written permission by the Executive Director or his designee.

E. Release of Design Plan. The Consultant: (1) will not release any design plan created or collected under this Contract except to its subconsultants as necessary to complete the Contract; (2) shall include a provision in all subcontracts which acknowledges the Authority's

ownership of the design plan and prohibits its use for any use other than the project identified in this Contract; and (3) is responsible for any improper use of the design plan by its employees, officers, or subconsultants, including costs, damages, or other liability resulting from improper use. Neither the Consultant nor any subconsultants may charge a fee for any portion of the design plan created by the Authority.

ARTICLE 10 PUBLIC INFORMATION AND CONFIDENTIALITY

A. Public Information. The Authority will comply with Government Code, Chapter 552, the Texas Public Information Act in the release of information produced under this Contract.

B. Confidentiality. The Consultant shall not disclose information obtained from the Authority under this Contract without the express written consent of the Executive Director or his designee. All employees of the Consultant and its subconsultants working on the Project may be required to sign a non-disclosure and confidentiality agreement.

C. Access to Information. The Consultant is required to make any information created or exchanged with the Authority pursuant to this Contract, and not otherwise excepted from disclosure under the Texas Public Information Act as determined by the Authority, available in a format that is accessible by the public at no additional charge to the Authority.

ARTICLE 11 PERSONNEL, EQUIPMENT AND MATERIAL

A. Consultant Resources. The Consultant shall furnish and maintain an office for the performance of all Services, in addition to providing adequate and sufficient personnel and equipment to perform the Services required under the Contract. The Consultant certifies that it presently has adequate qualified personnel in its employment for performance of the Services required under this Contract, or it will be able to obtain such personnel from sources other than the Authority.

B. Removal of Employee. All employees of the Consultant assigned to this Contract shall have such knowledge and experience as will enable them to perform the duties assigned to them. The Executive Director or his designee may instruct the Consultant to remove any employee from association with work authorized in this Contract if, in the sole opinion of the Executive Director or his designee, the work of that employee does not comply with the terms of this Contract; the conduct of that employee becomes detrimental to the work; or for any other reason identified by the Executive Director or his designee.

C. Authority Approval of Replacement Personnel. The Consultant may not replace any Key Team Member, as designated in the applicable Work Authorization, without prior written approval of the Director of Engineering. If any Key Team Member cease to work on this Contract, the Consultant must notify the Director of Engineering in writing as soon as possible, but in any event within (3) three business days. The notification must give the reason for removal. The Consultant must receive written approval from the Director of Engineering of proposed replacement Key Team Member. The Director of Engineering's approval will be based upon the proposed replacement Key Team Member qualifications to provide the required Services. Approval will not be unreasonably withheld.

D. Liquidated Damages. The selection of Consultant to provide the Services under this Contract was based, in part, on the Key Team Member identified in Consultant's proposal. Because of the importance and unique nature of the Services to be provided by Key Team Member identified in Attachment C it is impractical to calculate the actual losses that would be suffered by the Authority by the loss of Key Team Member from the Contract. Therefore, the Consultant agrees to compensate the Authority for its losses by paying liquidated damages in the amount of \$2,500 per day per Key Team Member position in Attachment C if any Key Team Member are removed by the Consultant by reassignment without prior written approval from the Director of Engineering. Liquidated damages will accrue from the date the Consultant removes the Key Team Member in Attachment C from the Contract if the parties do not agree on a replacement within (14) calendar days after the Key Team Member are removed from the Contract. If a replacement is agreed upon within that fourteen (14) calendar day period the Liquidated damages will be waived. Liquidated damages shall cease when the parties agree on a substitute or when the Contract is terminated.

E. Ownership of Acquired Property. Except to the extent that a specific provision of this Contract states to the contrary, and as provided in subarticle 9.B., the Authority shall own all intellectual and other property acquired or developed under this Contract and all equipment purchased by the Consultant or its subconsultants under this Contract. All intellectual property and equipment owned by the Authority shall be delivered to the Director of Engineering when the Contract or applicable Work Authorization terminates, or when it is no longer needed for work performed under this Contract, whichever occurs first. In the event that a capital item is purchased for the sole use of the Authority, title shall pass or transfer to the Authority prior to any use of the item by the Consultant.

ARTICLE 12 SUBCONTRACTING

A. Prior Approval. The Consultant shall not assign, subcontract, or transfer any portion of professional services related to the work under this Contract unless specified in an executed Work Authorization or otherwise without first obtaining the prior written approval from the Executive Director or his designee. Request for approval should include a written description of the proposed services, and, using rates established in Attachment B, a proposed price.

B. DBE/HUB Compliance. The Consultant's subcontracting program shall comply with the requirements of the Work Authorization(s).

C. Required Provisions. All subcontracts for professional services shall include the provisions included in this Contract and any provisions required by law. The Consultant is authorized to pay subconsultants in accordance with the terms of the subcontract.

D. Consultant Responsibilities. No subcontract shall relieve the Consultant of any of its responsibilities under this Contract and of any liability for work performed under this Contract, even if performed by a subconsultant or other third-party performing work for or on behalf of the Consultant.

E. Invoice Approval and Processing. All subconsultants shall prepare and submit their invoices on the same billing cycle and format as the Consultant (so as to be included in invoices submitted by the Consultant).

ARTICLE 13
INSPECTION OF WORK

A. Review Rights. Under this Contract, the Authority, TxDOT, and the U.S. Department of Transportation, and any authorized representative of the Authority, TxDOT, or the U.S. Department of Transportation, shall have the right at all reasonable times to review or otherwise evaluate the work performed hereunder and the premises in which it is being performed.

B. Reasonable Access. If any review or evaluation is made on the premises of the Consultant or a subconsultant under this Article, the Consultant shall provide and require its subconsultants to provide all reasonable facilities and assistance for the safety and convenience of the persons performing the review in the performance of their duties.

ARTICLE 14
SUBMISSION OF REPORTS

All applicable study reports shall be submitted in preliminary form for approval by the Director of Engineering before a final report is issued. The Director of Engineering's comments on the Consultant's preliminary report must be addressed in the final report. Draft reports shall be considered confidential unless otherwise indicated by the Director of Engineering.

ARTICLE 15
VIOLATION OF CONTRACT TERMS

A. Increased Costs. Violation of Contract terms, breach of contract, or default by the Consultant shall be grounds for termination of the Contract pursuant to Article 16, and any increased or additional cost incurred by the Authority arising from the Consultant's default, breach of contract or violation of contract terms shall be paid by the Consultant.

B. Remedies. This Contract shall not be considered as specifying the exclusive remedy for any default, but all remedies existing at law and in equity may be availed of by either party and shall be cumulative.

C. Excusable Delays. Except with respect to defaults of subconsultants, the Consultant shall not be in default by reason of any failure in performance of this Contract in accordance with its terms (including any failure to progress in the performance of the work) if such failure arises out of causes beyond the control and without the default or negligence of the Consultant. Such causes may include, but are not restricted to, acts of God or the public enemy, acts of the Government in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather.

ARTICLE 16
TERMINATION

A. Termination. The Contract may be terminated before the stated completion date by any of the following conditions:

- (1) by mutual agreement and consent, in writing from both parties;
- (2) by the Executive Director or his designee by notice in writing to the Consultant as a consequence of failure by the Consultant to perform the Services set

forth herein in a satisfactory manner or if the Consultant violates the provisions of Article 23, Gratuities, or DBE/HUB Requirements;

(3) by either party, upon the failure of the other party to fulfill its obligations as set forth herein, following thirty (30) days written notice and opportunity to cure;

(4) by the Executive Director or his designee for his convenience and in its sole discretion, not subject to the consent of the Consultant, by giving thirty (30) days written notice of termination to the Consultant; or

(5) by satisfactory completion of all Services and obligations described herein.

B. Measurement. Should the Executive Director or his designee terminate this Contract as herein provided, no fees other than fees due and payable at the time of termination shall thereafter be paid to the Consultant. In determining the value of the work performed by the Consultant prior to termination, the Executive Director or his designee shall be the sole judge. Compensation for work at termination will be based on a percentage of the work completed at that time. Should the Executive Director or his designee terminate this Contract under subarticles 16.A.3 & 4, the Consultant shall not incur costs during the thirty-day notice period in excess of the amount incurred during the preceding thirty (30) days.

C. Value of Completed Work. If the Consultant defaults in the performance of this Contract or if the Executive Director or his designee terminates this Contract for fault on the part of the Consultant, the Executive Director or his designee will give consideration to the following when calculating the value of the completed work: (1) the actual costs incurred (not to exceed the rates set forth in the applicable Work Authorization) by the Consultant in performing the work to the date of default; (2) the amount of work required which was satisfactorily completed to date of default; (3) the value of the work which is usable to the Authority; (4) the cost to the Authority of employing another firm to complete the required work; (5) the time required to employ another firm to complete the work; (6) delays in opening a revenue generating project and costs (including lost revenues) resulting therefrom; and (7) other factors which affect the value to the Authority of the work performed.

D. Calculation of Payments. The Executive Director or his designee shall use the fee structure established by the applicable Work Authorization in determining the value of the work performed up to the time of termination. Nothing herein shall preclude the Executive Director or his designee from offsetting against amounts earned for work completed prior to termination costs resulting from the termination or the circumstances leading to the termination.

E. Surviving Requirements. The termination of this Contract and payment of an amount in settlement as prescribed above shall extinguish the rights, duties, and obligations of the Authority and the Consultant under this Contract, except for those provisions that establish responsibilities that extend beyond the Contract period, including without limitation the provisions of Article 18.

F. Payment of Additional Costs. If termination of this Contract is due to the failure of the Consultant to fulfill its Contract obligations, the Authority may take over the project and prosecute the work to completion, and the Consultant shall be liable to the Authority for any additional cost to the Authority.

ARTICLE 17
COMPLIANCE WITH LAWS

The Consultant shall comply with all applicable federal, state and local laws, statutes, codes, ordinances, rules and regulations, and the orders and decrees of any court, or administrative bodies or tribunals in any manner affecting the performance of this Contract, including, without limitation, worker's compensation laws, minimum and maximum salary and wage statutes and regulations, nondiscrimination, licensing laws and regulations, the Authority's enabling legislation (Chapter 370 of the Texas Transportation Code), and all amendments and modifications to any of the foregoing, if any. When required, the Consultant shall furnish the Authority with satisfactory proof of its compliance therewith.

ARTICLE 18
INDEMNIFICATION

THE CONSULTANT SHALL INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND ITS OFFICERS, DIRECTORS, EMPLOYEES, ENGINEERS, AND AGENTS WHICH, FOR THE PURPOSES OF THIS CONTRACT, SHALL INCLUDE THE AUTHORITY'S GEC, GENERAL COUNSEL, BOND COUNSEL, FINANCIAL ADVISORS, TRAFFIC AND REVENUE ENGINEERS, TOLL OPERATIONS/COLLECTIONS FIRMS, AND UNDERWRITERS (COLLECTIVELY THE "INDEMNIFIED PARTIES") FROM ANY CLAIMS, COSTS, OR LIABILITIES OF ANY TYPE OR NATURE AND BY OR TO ANY PERSONS WHOMSOEVER, TO THE EXTENT CAUSED BY THE NEGLIGENT ACTS, ERRORS, OR OMISSIONS OF THE CONSULTANT OR ITS OFFICERS, DIRECTORS, EMPLOYEES, SUBCONSULTANTS AND AGENTS WITH RESPECT TO THE CONSULTANT'S PERFORMANCE OF THE WORK TO BE ACCOMPLISHED UNDER THIS CONTRACT OR ACTIONS RESULTING IN CLAIMS AGAINST THE INDEMNIFIED PARTIES. IN SUCH EVENT, THE CONSULTANT SHALL ALSO INDEMNIFY AND HOLD HARMLESS THE AUTHORITY AND THE INDEMNIFIED PARTIES FROM ANY AND ALL REASONABLE AND NECESSARY EXPENSES, INCLUDING REASONABLE ATTORNEYS' FEES, INCURRED BY THE AUTHORITY IN LITIGATING OR OTHERWISE RESISTING SAID CLAIMS, COSTS OR LIABILITIES. IN THE EVENT THE AUTHORITY AND/OR ANY OF THE INDEMNIFIED PARTIES, IS/ARE FOUND TO BE PARTIALLY AT FAULT, THE CONSULTANT SHALL, NEVERTHELESS, INDEMNIFY THE AUTHORITY FROM AND AGAINST THE PERCENTAGE OF FAULT ATTRIBUTABLE TO THE CONSULTANT OR ITS OFFICERS, DIRECTORS, EMPLOYEES, SUBCONSULTANTS AND AGENTS OR TO THEIR CONDUCT.

ARTICLE 19
ROLE OF GENERAL ENGINEERING CONSULTANT (GEC)

The Authority will utilize a GEC to assist in its management of this Contract. The GEC is an independent contractor and is authorized by the Authority to provide the management and technical direction for this Contract on behalf of the Authority, provided that the GEC is not an agent of the Authority. All the technical and administrative provisions of the Contract shall be managed by the GEC, and the Consultant shall comply with all of the GEC's directives that are within the purview of the Consultant. Decisions concerning Contract amendments and adjustments, such as time extensions and Supplemental Work Authorizations, shall be made by the Executive Director or his designee, unless otherwise specified; however, requests for such amendments or adjustments shall be made through the GEC, who shall forward such requests to the Executive Director or his designee with its comments and recommendations.

Should any dispute arise between the GEC and the Consultant, concerning the conduct of this Contract, either party may request a resolution of said dispute by the Executive Director or his

designee, whose decision shall be final.

ARTICLE 20 CONSULTANT'S RESPONSIBILITY

A. Accuracy. The Consultant shall have total responsibility for the accuracy and completeness of all work prepared and completed under this Contract and shall check all such material accordingly. The Consultant shall promptly make necessary revisions or corrections resulting from its errors, omissions, or negligent acts without additional compensation.

B. Errors and Omissions. The Authority and Consultant will address errors and omissions as follows:

(1) The Consultant's responsibility for all questions and/or clarification of any ambiguities arising from errors and omissions will be determined by the Executive Director or his designee.

(2) A problem resulting from an error and omission may be identified during the development of the PS&E, as well as before, during, or after construction. The Consultant will be responsible for errors and omissions before, during, and after construction of a project, as well as before and after Contract termination.

(3) The phrase error and omission is used throughout to mean an error, an omission, or a combination of error and omission.

(4) When an apparent error and omission is identified in work provided by the Consultant, the Executive Director or his designee will notify the Consultant of the problem and involve the Consultant in efforts to resolve it and determine the most effective solution, provided that the Executive Director or his designee shall ultimately determine the solution that is chosen.

(5) Errors and omissions identified during PS&E development/prior to project construction should be corrected at the Consultant's expense with no additional cost to the Authority.

(6) During and after construction, errors and omissions can potentially result in significant additional costs to the Authority that they would not have incurred if the construction plans had been correct. The resulting additional costs are considered damages that the Authority will collect from the Consultant, including through offset to amounts owed to the Consultant.

(7) After a project is constructed and is in use, there is a possibility of a contractor claim that may involve a previous error and omission by the Consultant identified during construction; it is also possible the Consultant could be responsible for some or all of the cost of the contractor claim. If there is a possibility of Consultant responsibility, upon notice of the contractor claim, the Executive Director or his designee must notify the Consultant of the situation and provide the Consultant the opportunity to contribute any information to the Executive Director or his designee that may be useful in addressing the contractor claim. The Consultant will not be involved in any discussions or negotiations with the contractor during the claims process. Upon settlement of all previous claims with the contractor, if additional costs are identified, the Executive Director or his designee should consider the same factors as during

construction in determining the Consultant's level of responsibility.

(8) The additional costs which are considered damages to the Authority and are to be recovered should represent actual cost to the Authority.

(9) The Executive Director or his designee will not accept in-kind services from the Consultant as payment for additional costs owed.

(10) The Consultant is responsible for promptly correcting errors and omissions without compensation. In the situation of a dispute concerning whether or not the work is compensable, the Consultant shall not delay the work.

(11) A letter will be transmitted by the Executive Director or his designee formally notifying the Consultant of payment required for the error and omission and will indicate the Consultant's apparent liability for the identified additional costs. The letter will include an outline of the errors and omissions, along with the additional costs, and references to any previous points of coordination and preliminary agreements. Within 30 calendar days of the date of the letter, a response is required from the Consultant with: (a) payment, (b) a request for a meeting, or (c) a request for the Executive Director or his designee to consider whether the Executive Director or his designee should pursue reimbursement for the identified error and omission. If a response or payment is not received from the Consultant, the Authority may consider legal action.

(12) It is the Executive Director or his designee's responsibility to identify errors and omissions and fairly evaluate the responsibility for additional cost when applicable. It is the responsibility of the Authority staff to ensure that the Authority's business practices are professional, fair, equitable, and reasonable.

C. Professionalism. The Consultant shall perform the services it provides under the Contract: (1) with the professional skill and care ordinarily provided by competent engineers or professionals practicing under the same or similar circumstances and professional license and (2) as expeditiously as is prudent considering the ordinary professional skill and care of a competent engineer or professional.

D. Seal. The responsible Consultant shall sign, seal and date all appropriate engineering submissions to the Authority in accordance with the Texas Engineering Practice Act and the rules of the Texas Board of Professional Engineers.

E. Resealing of Documents. Once the work has been sealed and accepted by the Director of Engineering, the Authority, as the owner, will notify the Consultant, in writing, of the possibility that an Authority engineer, as a second engineer, may find it necessary to alter, complete, correct, revise or add to the work. If necessary, the second engineer will affix his seal to any work altered, completed, corrected, revised or added. The second engineer will then become responsible for any alterations, additions or deletions to the original design including any effect or impacts of those changes on the original engineer's design.

ARTICLE 21 NONCOLLUSION

A. Warranty. The Consultant warrants that it has not employed or retained any company or person, other than a bona fide employee working solely for the Consultant, to solicit

or secure this Contract and that it has not paid or agreed to pay any company or Consultant any fee, commission, percentage, brokerage fee, gifts, or any other consideration, contingent upon or resulting from the award or making of this Contract.

B. Liability. For breach or violation of this warranty, the Authority shall have the right to annul this Contract without liability or, in its discretion, to deduct from the Contract compensation, or otherwise recover, the full amount of such fee, commission, percentage, brokerage fee, gift or contingent fee.

ARTICLE 22 INSURANCE

The Consultant and all subconsultants shall furnish the Authority a properly completed Certificate of Insurance approved by the Executive Director or his designee prior to beginning work under the Contract and shall maintain such insurance through the Contract period. The Consultant shall provide proof of insurance (and the Professional Liability Insurance discussed herein) in a form reasonably acceptable by the Executive Director or his designee. The Consultant certifies that it has and will maintain insurance coverages as follows:

A. Workers Compensation Insurance. In accordance with the laws of the State of Texas and employer's liability coverage with a limit of not less than \$1,000,000. This policy shall be endorsed to include a waiver of subrogation in favor of the Authority.

B. Comprehensive General Liability Insurance. With limits not less than \$1,000,000 for bodily injury, including those resulting in death, and \$1,000,000 for property damage on account of any one occurrence, with an aggregate limit of \$1,000,000.

C. Comprehensive Automobile Liability Insurance. Applying to owned, non-owned, and hired automobiles in an amount not less than \$1,000,000 for bodily injury, including death, to any one person, and \$1,000,000 on account on any one occurrence, and \$1,000,000 for property damage on account of any one occurrence. This policy shall not contain any limitation with respect to a radius of operation for any vehicle covered and shall not exclude from the coverage of the policy any vehicle to be used in connection with the performance of the Consultant's obligations under this Contract.

D. Excess Liability Insurance. In an amount of \$5,000,000 per occurrence and aggregate.

E. Valuable Papers Insurance. In an amount sufficient to assure the full restoration of any plans, drawings, field notes, logs, test reports, diaries, or other similar data or materials relating to the Services provided under this Contract in the event of their loss or destruction, until such time as the work has been delivered to the Authority.

F. Architects and/or Engineers Professional Liability insurance. Consultant shall provide and maintain professional liability coverage, with limits not less than \$5,000,000 per claim and \$5,000,000 aggregate. The professional liability coverage shall protect against any negligent act, error or omission arising out of design or engineering activities, including environmental related activities, with respect to the project, including coverage for negligent acts, errors or omissions by any member of the Consultant and its subconsultants (including, but not limited to design subconsultants and subconsultants) of any tier. The policy must provide

that coverage extends a minimum of three (3) years beyond the Consultant's completion of the Services. This policy shall be endorsed to include a waiver of subrogation in favor of the Authority.

G. General for All Insurance. The Consultant shall promptly, upon execution of this Contract, furnish certificates of insurance to the Executive Director or his designee indicating compliance with the above requirements. Certificates shall indicate the name of the insured, the name of the insurance company, the name of the agency/agent, the policy number, the term of coverage, and the limits of coverage.

All policies are to be written through companies (a) authorized to transact that class of insurance in the State of Texas; (b) rated (i), with respect to the companies providing the insurance under subarticles 22.A. through D., above, by A. M. Best Company as "A-X" or better (or the equivalent rating by another nationally recognized rating service) and (ii) with respect to the company providing the insurance under subarticle 22.E., a rating by A. M. Best Company or similar rating service satisfactory to the Authority and/or its insurance consultant; and (c) otherwise acceptable to the Executive Director or his designee.

All policies are to be written through companies authorized to transact that class of insurance in the State of Texas. Such insurance shall be maintained in full force and effect during the life of this Contract or for a longer term as may be otherwise provided for hereunder. Insurance furnished under subarticles 22.B., C., and D., above, shall name the Authority as additional insured and shall protect the Authority, its officers, employees, and directors, agents, and representatives from claims for damages for bodily injury and death and for damages to property arising in any manner from the negligent or willful acts or failures to act by the Consultant, its officers, employees, directors, agents, and representatives in the performance of the Services rendered under this Contract. Certificates shall also indicate that the contractual liability assumed in Article 18, above, is included.

The insurance carrier shall include in each of the insurance policies required under subarticles 22.A. through F., the following statement: "This policy will not be canceled or materially changed during the period of coverage without at least thirty (30) days prior written notice addressed to the Central Texas Regional Mobility Authority, 3300 N. IH-35, Suite 300, Austin, Texas 78705, Attn: Executive Director"

H. Subconsultant. In the event a subconsultant selected by the Consultant to perform work associated with this Contract is unable to secure insurance coverage in the amounts set forth in subarticles 22.B., D., and F. above, Consultant may provide to the Executive Director or his designee an explanation of coverages that a subconsultant does possess, why those coverages are adequate to cover the potential exposure for the work to be performed by the subconsultant, and an acknowledgement that the Consultant remains liable for the work performed under the Contract, including that performed by the subconsultant. The Executive Director or his designee may decide, in its sole discretion, whether to accept the coverages available to the subconsultant, and may condition its acceptance, if granted, on satisfactory evidence that Consultant will remain liable for work performed by the subconsultant and that Consultant's insurance will cover the work, actions, errors and omissions of the subconsultant

ARTICLE 23
GRATUITIES

A. Employees Not to Benefit. Authority policy mandates that the director, employee or agent of the Authority shall not accept any gift, favor, or service that might reasonably tend to influence the director, employee or agent in making of procurement decisions. The only exceptions allowed are ordinary business lunches and items that have received the advance written approval of the Executive Director of the Authority.

B. Liability. Any person doing business with or who reasonably speaking may do business with the Authority under this Contract may not make any offer of benefits, gifts or favors to Authority employees, except as mentioned above. Failure on the part of the Consultant to adhere to this policy may result in the termination of this Contract.

ARTICLE 24
DISADVANTAGED BUSINESS ENTERPRISE/HISTORICALLY UNDERUTILIZED BUSINESS
REQUIREMENTS

The Consultant agrees to comply with the DBE/HUB requirements and reporting guidelines set forth in the Work Authorization(s). The DBE/HUB Goal established for this project is as set forth in the Work Authorization. The Consultant also agrees to comply with the DBE/HUB subcontracting plan that was included in the response that the Consultant submitted to the Authority's Request for Qualifications.

ARTICLE 25
CERTIFICATE OF INTERESTED PARTIES (FORM 1295)

The Consultant must comply with the Certificate of Interested Parties (Form 1295) adopted by the Texas Legislature as House Bill 1295, which added section 2252.908 of the Government Code, available for review at the Texas Ethics Commission website:

<https://www.ethics.state.tx.us/tec/1295-Info.htm>

The Consultant, after award, is required to complete and submit Form 1295 if the Consultant has either of the following contracts with a governmental entity or state agency starting as of January 1, 2016:

- (1) Requires an action or vote by the governing body of the entity or agency before the contract may be signed; or
- (2) Has a value of at least \$1 million.

ARTICLE 26
MAINTENANCE, RETENTION AND AUDIT OF RECORDS

A. Retention Period. The Consultant shall maintain all books, documents, papers, accounting records and other evidence pertaining to costs incurred and Services provided (hereinafter called the Records). The Consultant shall make the Records available at its office during the Contract period and for four (4) years from the date of final payment under this

Contract, until completion of all audits, or until pending litigation has been completely and fully resolved, whichever occurs last.

B. Availability. The Authority shall have the exclusive right to examine the books and records of the Consultant for the purpose of checking the amount of work performed by the Consultant. The Consultant shall maintain all books, documents, papers, accounting records and other evidence pertaining to cost incurred and shall make such materials available at its office during the contract period and for four (4) years from the date of final payment under this Contract or until pending litigation has been completely and fully resolved, whichever occurs last. The Authority or any of its duly authorized representatives, TxDOT, FHWA, the United States Department of Transportation Office of Inspector General, and the Comptroller General shall have access to any and all books, documents, papers and records of the Consultant which are directly pertinent to this Contract for the purpose of making audits, examinations, excerpts and transcriptions.

ARTICLE 27

CIVIL RIGHTS COMPLIANCE

A. Compliance with Regulations. The Consultant shall comply with the Acts and Regulations relative to Nondiscrimination in Federally-assisted programs of the U.S. Department of Transportation (USDOT), FHWA, as they may be amended from time to time, which are herein incorporated by reference and made part of this Contract.

B. Nondiscrimination. The Consultant, with regard to the work performed by it during the Contract, shall not discriminate on the grounds of race, color, sex, or national origin in the selection and retention of subconsultants, including procurement of materials and leases of equipment. The Consultant shall not participate directly or indirectly in the discrimination prohibited by the Acts and Regulations, including employment practices when the Contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.

C. Solicitations for Subcontracts, Including Procurement of Materials and Equipment. In all solicitations either by competitive bidding or negotiation made by the Consultant for work to be performed under a subcontract, including procurement of materials or leases of equipment, each potential subconsultant or supplier shall be notified by the Consultant of the Consultant's obligations under this Contract and the Acts and Regulations relative to Nondiscrimination on the grounds of race, color, sex, or national origin.

D. Information and Reports. The Consultant shall provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and facilities as may be determined by the Authority or the FHWA to be pertinent to ascertain compliance with such Acts, Regulations or directives. Where any information required of the Consultant is in the exclusive possession of another who fails or refuses to furnish this information, the Consultant shall so certify to the Authority or the FHWA, as appropriate, and shall set forth what efforts it has made to obtain the information.

E. Sanctions for Noncompliance. In the event of the Consultant's noncompliance with the Nondiscrimination provisions of this Contract, the Authority shall impose such Contract sanctions as it or the FHWA may determine to be appropriate, including, but not limited to:

- (1) withholding of payments to the Consultant under the Contract until the Consultant complies and/or
- (2) cancelling, terminating, or suspending of the Contract, in whole or in part.

ARTICLE 28 PATENT RIGHTS

The Authority and the U. S. Department of Transportation shall have the royalty free, nonexclusive and irrevocable right to use and to authorize others to use any patents developed by the Consultant under this Contract.

ARTICLE 29 DISPUTES

A. Disputes Not Related to Contract Services. The Consultant shall be responsible for the settlement of all contractual and administrative issues arising out of any procurement made by the Consultant in support of the Services authorized herein.

B. Disputes Concerning Work or Cost. The Executive Director of the Authority shall decide all questions, difficulties and dispute of any nature whatsoever that may arise under or by reason of this Contract, and his decision upon all claims, questions and disputes shall be final. The Consultant shall comply with the provisions of Article 29 in proceeding with such disputes.

ARTICLE 30 SUCCESSORS AND ASSIGNS

The Consultant and the Authority do each hereby bind themselves, their successors, executors, administrators and assigns to each other party of this Contract and to the successors, executors, administrators and assigns of such other party in respect to all covenants of this Contract. The Consultant shall not assign, subcontract, or transfer its interest in this Contract without the prior written consent of the Executive Director or his designee.

ARTICLE 31 SEVERABILITY

In the event any one or more of the provisions contained in this Contract shall for any reason be held to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision thereof and this Contract shall be construed as if such invalid, illegal, or unenforceable provision had never been contained herein.

ARTICLE 32 PRIOR CONTRACTS SUPERSEDED

This Contract, including all attachments, constitutes the sole agreement of the parties hereto for the Services authorized herein and supersedes any prior understandings or written or oral contracts between the parties respecting the subject matter defined herein.

ARTICLE 33
CONFLICT OF INTEREST

A. Representation by Consultant. The undersigned Consultant represents that it has no conflict of interest that would in any way interfere with its or its employees' performance of Services for the Authority or which in any way conflicts with the interests of the Authority and certifies that it is in full compliance with the Authority's Policy Code related to Conflicts of Interest. The Consultant shall prevent any actions or conditions that could result in a conflict with the Authority's interests.

B. Certification Status. The Consultant certifies that it is not:

- (1) a person required to register as a lobbyist under Chapter 305, Government Code
- (2) a public relations firm
- (3) a government consultant

C. Environmental Disclosure. If the Consultant will prepare an environmental impact statement or an environmental assessment under this Contract, the Consultant certifies by executing this Contract that it has no financial or other interest in the outcome of the project on which the environmental impact statement or environmental assessment is prepared.

D. Engineering Services for the Construction Contractor. Specific to the Project for which the Services are being provided under this Contract, the Consultant shall not provide services directly to the contractor responsible for constructing the Project unless approved by the Executive Director or his designee.

ARTICLE 34
ENTIRETY OF AGREEMENT

This writing, including attachments and addenda, if any, embodies the entire agreement and understanding between the parties hereto, and there are no agreements and understandings, oral or written, with reference to the subject matter hereof that are not merged herein and superseded hereby. No alteration, change or modification of the terms of the Contract shall be valid unless made in writing signed by both parties hereto.

ARTICLE 35
SIGNATORY WARRANTY

The undersigned signatory for the Consultant hereby represents and warrants that he or she is an officer of the organization for which he or she has executed this Contract and that he or she has full and complete authority to enter into this Contract on behalf of the firm. These representations and warranties are made for the purpose of inducing the Authority to enter into this Contract.

ARTICLE 36
NOTICES

A notice, demand, request, report, and other communication required or permitted under this Contract, or which any party may desire to give, shall be in writing and shall be deemed to have been given on the sooner to occur of (i) receipt by the party to whom the notice is hand-delivered, with a written receipt of notice provided by the receiving party, or (ii) two days after deposit in a

regularly maintained express mail receptacle of the United States Postal Service, postage prepaid, or registered or certified mail, return receipt requested, express mail delivery, addressed to such party at their address set forth below, or to such other address as a party may from time to time designate under this article, or (iii) receipt of an electronic mail transmission (attaching scanned documents in a format such as .pdf or .tif) for which confirmation of receipt by the other party has been obtained by the sending party:

In the case of the Consultant:

Kevin Ramberg, COO
ACI Group, LLC
1001 MoPac Circle
Austin, Texas 78746
Email: kramberg@aci-group.net

In the case of the Authority:

James Bass, Executive Director
Central Texas Regional Mobility Authority
3300 North IH 35, Suite 300
Austin, TX 78705
Email: jbass@ctrma.org

with a copy to:

Robert Goode, Deputy Executive Director
Central Texas Regional Mobility Authority
3300 North IH 35, Suite 300
Austin, TX 78705
Email: rgoode@ctrma.org

Mike Sexton, Acting Director of Engineering
Central Texas Regional Mobility Authority
3300 North IH 35, Suite 300
Austin, TX 78705
Email: msexton@ctrma.org

A party may change the information provided in this article for notification purposes by providing notice to the other party of the new information and the effective date of the change.

ARTICLE 37
BUSINESS DAYS AND DAYS

For purposes of this Contract, "business days" shall mean any day the Authority is open for business and "days" shall mean calendar days.

ARTICLE 38
INCORPORATION OF PROVISIONS

Attachments A through C are attached hereto and incorporated into this Contract as if fully set forth herein.

ARTICLE 39
PRIORITY OF DOCUMENTS/ORDER OF PRECEDENCE

This Contract, and each of the Attachments (together, the "Contract Documents"), are an essential part of the agreement between the Authority and the Consultant, and a requirement occurring in one is as binding as though occurring in all. The Contract Documents are intended to be complementary and to describe and provide for a complete Contract. In the event of any conflict among the Contract Documents or between the Contract Documents and other documents, the order of precedence shall be as set forth below:

- A. Supplemental Work Authorizations;
- B. Work Authorizations;
- C. Contract Amendments;
- D. This Contract;
- E. The Request for Qualifications;
- F. The Consultant's Response to the Request for Qualifications.

Additional details and more stringent requirements contained in a lower priority document will control unless the requirements of the lower priority document present an actual conflict with the requirements of the higher-level document. Notwithstanding the order of precedence among Contract Documents set forth in this Article 39, in the event of a conflict within a Contract Document or set of Contract Documents with the same order of priority (including within documents referenced therein), the Executive Director or his designee shall have the right to determine, in his sole discretion, which provision applies.

IN WITNESS WHEREOF, the Authority and the Consultant have executed this Contract in duplicate.

THE CONSULTANT	CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY
_____ (Signature)	_____ (Signature)
_____ (Printed Name)	James Bass _____ (Printed Name)
_____ (Title)	Executive Director _____ (Title)
_____ (Date)	_____ (Date)

Attachments to Contract for Professional Services

Attachments	Title
A	Services to be Provided by the Consultant
B	Rate Schedule
C	Key Team Members

ATTACHMENT A

SERVICES PROVIDED BY THE CONSULTANT

The Consultant's scope of Services generally described as Independent Environmental Compliance Management services during the implementation of the 183 North Mobility Project.

The Consultant will work at the direction and supervision of the Authority and any of its authorized agents to provide the services. The Consultant will serve as a member of the Project Oversight Team alongside the Authority and its General Engineering Consultant, TxDOT, and the Construction Engineering and Inspection Team.

The following describes the general scope of services to be provided by the Consultant:

1. The Consultant will provide professional services including providing and maintaining inspection staff at the field office supplied by the Authority's Design-Build Contractor (Contractor).
2. The Consultant will monitor the Contractor compliance with the Design-Build Agreement, any environmental agreements, and all applicable laws.
3. The Consultant will oversee the Contractor's Environmental Compliance Manager (ECM) and advise the Authority's management team regarding the Contractor's environmental regulatory compliance to environmental commitments and requirements.
4. The Consultant will audit, oversee, review and document construction activities performed by the Contractor and ECM described in the Design-Build Agreement.
5. The Consultant will report audit findings and verify corrections to those findings.

ATTACHMENT B
183 NORTH MOBILITY PROJECT IECM RATE TABLES

**ATTCHMENT B
RATE SCHEDULE**

ACI Group, LLC

CY 2021 - Raw Rates		
Job Title	Raw Rate	Loaded Rate
Office Support		
Project Manager	\$ 65.00	\$ 178.75
Admin/Clerical	\$ 25.00	\$ 68.75
Qualified Biologist	\$ 55.00	\$ 151.25
Karst Species Specialist	\$ 55.00	\$ 151.25
Geoscientist	\$ 45.00	\$ 123.75
Archeologist	\$ 37.50	\$ 103.13
Hazardous Materials Specialist	\$ 57.50	\$ 158.13
Field Support		
Environmental Compliance Manager	\$ 57.50	\$ 143.89
Environmental Compliance Specialist	\$ 32.00	\$ 80.08
OH Rate (Office)	150.00%	
OH Rate (Field)	127.50%	
Profit Rate	10%	

Rodriguez Transportation Group, Inc.

CY 2021 - Raw Rates		
Job Title	Raw Rate	Loaded Rate
Water Quality Specialist	\$ 49.00	\$ 136.96
OH Rate (Office)	154.10%	
Profit Rate	10%	

Valenzuela Preservation Studio, LLC

CY 2021 - Raw Rates		
Job Title	Raw Rate	Loaded Rate
Architectural Historian	\$ 45.00	\$ 121.28
OH Rate (Office)	145.00%	
Profit Rate	10%	

Expense Table

Expense Table		
Other Direct Expenses		
Description	Unit	Rate
Mileage	mile	\$ 0.56
Cellular Telephone & Date Plan	each/month	\$ 90.00
Construction Truck	month	\$ 1450.00
Field Staff PPE	each	\$ 250.00
Computer/Laptop/Tablet and Data	each/month	\$ 125.00

ATTACHMENT C
KEY TEAM MEMBERS

At a minimum, the key team members shall consist of the following:

1. Project Manager – Kevin Ramberg
2. Environmental Compliance Manager – Stan Reece, PG, CAPM
3. Qualified Biologist – Kevin Ramberg
4. Karst Species Specialist – Kevin Ramberg
5. Geoscientist – Mark Adams, PG, CAPM
6. Water Quality Specialist – Blake Crosby
7. Archeologist – Joey O’Keefe, MA, RPA
8. Architectural Historian – Dan Valenzuela
9. Hazardous Materials Specialist – Stan Reece, PG, CAPM

WORK AUTHORIZATION NO. 1
CONTRACT FOR INDEPENDENT ENVIRONMENTAL COMPLIANCE
MANAGEMENT SERVICES

THIS WORK AUTHORIZATION is made pursuant to the terms and conditions of Article 4 of the Contract for Independent Environmental Compliance Management Services (“the Contract”) entered into by and between the Mobility Authority and ACI Group, LLC (“the Consultant”) dated _____.

PART I. The Consultant will perform Independent Environmental Compliance Management Services in accordance with the project description attached hereto in Exhibit B and made a part of this Work Authorization. The responsibilities of the Authority and the Consultant as well as the work schedule are further detailed in Exhibits A, B, and C which are attached hereto and made a part of the Work Authorization.

PART II. The maximum amount payable under this Work Authorization is \$_____ and the method of payment will be calculated on a per-hour basis using hourly billing rates. This amount is based upon the Consultant’s estimated Work Authorization costs included in Exhibit D, Fee Schedule/Budget, which is attached and made a part of this Work Authorization.

PART III. Payment to the Consultant for the services established under this Work Authorization shall be made in accordance with the appropriate sections of the Contract.

PART IV. This Work Authorization shall become effective on the date of final acceptance of the parties hereto and shall terminate upon completion of the work, unless extended by a Supplemental Work Authorization as provided in Article 4 of the Contract.

PART V. This Work Authorization does not waive the parties' responsibilities and obligations provided under the Contract.

IN WITNESS WHEREOF, this Work Authorization is executed in duplicate counterparts and hereby accepted and acknowledged below.

THE CONSULTANT

**CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY**

(Signature)

(Printed Name)

(Title)

(Date)

(Signature)

James Bass

(Printed Name)

Executive Director

(Title)

(Date)

LIST OF EXHIBITS TO WORK AUTHORIZATION

Exhibits	Title
A	Services to Be Provided by the Authority
B	Services to Be Provided by the Consultant
C	Work Schedule
D	Fee Schedule/Budget
E	DBE Participation Forms (E-1 through E-7)
F	Disadvantaged Business Enterprise (DBE) for Federal Funded Professional or Technical Services Contracts – See Exhibit E Instructions
G	Disadvantaged Business Enterprise (DBE) for Race-Neutral Professional or Technical Services Contracts Special Provision– See Exhibit E Instructions

EXHIBIT A
SERVICES TO BE PROVIDED BY THE MOBILITY AUTHORITY

Services to be Provided by the Mobility Authority to be Included in Final Negotiated Work Authorization.

EXHIBIT B

SERVICES TO BE PROVIDED BY THE CONSULTANT

Services to be Provided by the Consultant to be Included in Final Negotiated Work Authorization.

EXHIBIT C
WORK SCHEDULE

Work Schedule to be Included in Final Negotiated Work Authorization.

EXHIBIT D
FEE SCHEDULE / BUDGET

Fee Schedule/Budget to be Included in Final Negotiated Work Authorization.

EXHIBIT E
DBE PARTICIPATION FORMS
INSTRUCTIONS

The following pages contain seven (7) different forms (Forms E-1 through E-7) covering participation of DBE providers and subproviders. The correct form to use is determined by whether or not a DBE goal has been set for the contract. The following pages contain separate reporting forms for federally funded DBE participation. **Select the forms that are appropriate for your contract and delete the rest along with these instructions from the Work Authorization.**

Federally Funded Contracts
<p>Exhibit F, Disadvantaged Business Enterprise (DBE) for Federal-Aid Professional or Technical Services Contracts</p> <ul style="list-style-type: none">◆ This provision is applicable to federally funded contracts with assigned DBE goals.◆ The appropriate forms for this provision are Forms E-1, E-2, E-3, E-4, E-5, E-6 and E-7. Examples of each form required is included in the contract. The native forms that will need to be submitted can be downloaded from the Mobility Authority’s website.◆ Note: a completed Form E-2 will be required with each Work Authorization, if a DBE will be performing work. If a non-DBE subprovider is used, insert N/A (not applicable) on the line provided on the Form E-2.◆ Form E-4 must be submitted monthly to the Mobility Authority even if there is no invoice being submitted or subcontracting to report.◆ Form E-4 must be submitted with each invoice to the appropriate agency contact for payment.
<p>Exhibit G, Disadvantaged Business Enterprise (DBE) for Race Neutral Professional or Technical Services Contracts</p> <ul style="list-style-type: none">◆ This provision is applicable to federally funded contracts with no DBE goal assigned.◆ If no subconsultants will be used, the appropriate forms for this provision are E-3 and E-5 forms. Examples of each form required is included in the contract. The native forms that will need to be submitted can be downloaded from the Mobility Authority’s website.◆ Note: If subconsultants are used, the required forms would be Forms E-1, E-2, E-3, E-4, E-5, E-6 and E-7. A copy of each form required is in the contract.◆ Form E-4 must be submitted monthly to the Mobility Authority even if there is no invoice being submitted or subcontracting to report.◆ Form E-4 must be submitted with each invoice to the appropriate agency contact for payment.
<p>Form E-4, Texas Department of Transportation/Mobility Authority Subprovider Monitoring System for Federally Funded Contracts. This is a DBE Monthly Progress Report.</p> <ul style="list-style-type: none">◆ Required for all federally funded contracts.◆ This form is required monthly and must be submitted to the Mobility Authority even if there is no invoice being submitted or subcontracting to report.◆ This form must be submitted with each invoice to the appropriate agency contact for payment.
<p>Form E-7, Federal Subprovider and Supplier Information</p> <p>Required for all federally funded contracts.</p>

FORM E-1
Central Texas Regional Mobility Authority
Subprovider Monitoring System
Commitment Worksheet

Contract #: _____ Assigned Goal: 0% Federally Funded _____ State Funded _____

Prime Provider: _____ Total Contract Amount: _____

Prime Provider Info: DBE ___ HUB ___ Both ___

Engineer ID #: _____ DBE/HUB Expiration Date: _____

(First 11 Digits Only)

If no subproviders are used on this contract, please indicate by placing "N/A" on the 1st line under Subproviders.

Subprovider(s) (List All)	Type of Work	Engineer ID # (First 11 Digits Only)	D=DBE H=HUB	Expiration Date	\$ Amount or % of Work *
Subprovider(s) Contract or % of Work* Totals					

*For Work Authorization Contracts, indicate the % of work to be performed by each subprovider.

Total DBE or HUB Commitment Dollars \$ _____

Total DBE or HUB Commitment Percentages of Contract _____%

(Commitment Dollars and Percentages are for Subproviders only)

Form SMS.4901 (Rev. 06/08)

FORM E-2

Disadvantaged Business Enterprise (DBE) Program

(Rev. 06/08)



Commitment Agreement Form

Page 1 of 1

This commitment is subject to the award and receipt of a signed contract from the Texas Department of Transportation for the subject project.

Project #:		County:		Contract-CSJ:	
Items of work to be performed (attach a list of work items if more room is required):					
Bid Item #	Item Description	Unit of Measure	Unit Price	Quantity	Total Per Item
Total					
The contractor certifies by signature on this agreement that subcontracts will be executed between the prime contractor and the DBE subconsultants as listed on the agreement form. If a DBE Subconsultant is unable to perform the work as listed on this agreement form, the prime contractor will follow the substitution/replacement approval process as outlined in the Contract DBE Special Provision.					
IMPORTANT: The signatures of the prime contractor and the DBE, and the total commitment amount must always be on the same page.					
Prime Contractor:			Name/Title (please print):		
Address:			Signature:		
Phone:	Fax:				
E-mail:			Date:		
DBE:			Name/Title (please print):		
Engineer No.:			Signature:		
Address:					
Phone:	Fax:		Date:		
E-mail:					
Subconsultant (if the DBE will be a second tier sub):			Name/Title (please print):		
Address:			Signature:		
Phone:	Fax:				
E-mail:			Date:		

The Texas Department of Transportation maintains the information collected through this form. With few exceptions, you are entitled on request to be informed about the information that we collect about you. Under §§552.021 and 552.023 of the Texas Government Code, you also are entitled to receive and review the information. Under §559.004 of the Government Code, you are also entitled to have us correct information about you that is incorrect.

To ensure prompt and efficient handling of your project file we are requesting that all commitments to be presented to the Office of Civil Rights, using this basic format.



FORM E-3
DBE Prime Contractor
To Non-DBE Subconsultants

Form SMS.4902
 (Rev. 05/08)
 Page 1 of 1

Project: _____

Contract CSJ: _____

County: _____

District: _____

Letting Date: _____

For Month of (Mo./Yr.): _____

Contractor: _____

Contract Amount: _____

Name of Non-DBE Subconsultant	\$ Amount Paid This Period	Total \$ Amount Paid to Date

Send this report to the District DBE Coordinator. Report is due within 15 days following the end of each calendar month.

Signature: _____ Date: _____
 _____ Company Official

The Texas Department of Transportation maintains the information collected through this form. With few exceptions, you are entitled on request to be informed about the information that is collected about you. Under §§552.021 and 552.023 of the Texas Government Code, you also are entitled to receive and review the information. Under §559.004 of the Government Code, you are also entitled to have us correct information about you that is incorrect.



FORM E-4

Form SMS. 4903

TxDOT Department of Transportation

(Rev. 05/08)

DBE Monthly Progress Report

Page 1 of 1

Project: _____

Contract CSJ: _____

County: _____

District: _____

Letting Date: _____

For Month of (Mo./Yr.): _____

Contractor: _____

Contract Amount: _____

DBE Goal: _____%

DBE Goal Dollars: _____

Engineer Number	Name of DBE Sub/Supplier	* RC or RN	** DBE \$ Amt Paid for Work Performed this Period (X)	*** \$ Amt Paid to Non-DBE 2 nd - Tier Subs and Haulers (Y)	Amt Paid to DBEs to Date (X-Y)	For TxDOT use Only

* Race Conscious or Race Neutral.

**Goal/commitment progress report amount and/or race-neutral amount. Do not subtract non-DBE second-tier subcontracts and haulers from this column.

*** Report amount of payment DBE subconsultants paid to non-DBE subconsultants/haulers.

If using a non-DBE hauling firm that leases from DBE truck owner-operators, payments made to each owner-operator must be reported separately.

Any changes to the DBE commitments approved by the department must be reported to the area Engineer.*

Submissions of this report for periods of negative DBE activity is required. This report is required until all DBE subcontracting or material supply activity is completed.

I hereby certify that the above is a true and correct statement of the amounts paid to the DBE firms listed above.

Signature: _____

Date: _____

This report must be sent to the area Engineer's office within 15 days following the end of the calendar month.

The Texas Department of Transportation maintains the information collected through this form. With few exceptions, you are entitled on request to be informed about the information that is collected about you. Under §§552.021 and 552.023 of the Texas Government Code, you also are entitled to receive and review the information. Under §559.004 of the Government Code, you are also entitled to have us correct information about you that is incorrect.

FORM E-5

Central Texas Regional Mobility Authority Subprovider Monitoring System for Federally Funded Contracts

Progress Assessment Report for month of (Mo./Yr.) _____ / _____

Contract #: _____

Original Contract Amount: _____

Date of Execution: _____

Approved Supplemental Agreements: _____

Prime Provider: _____

Total Contract Amount: _____

Work Authorization No. _____

Work Authorization Amount: _____

If no subproviders are used on this contract, please indicate by placing "N/A" on the 1st line under Subproviders.

DBE	All Subproviders	Category of Work	Total Subprovider Amount	% Total Contract Amount	Amount Paid This Period	Amount Paid To Date	Subcontract Balance Remaining

Fill out Progress Assessment Report with each estimate/invoice submitted, *for all subcontracts*, and forward as follows:

1 Copy with Invoice - Contract Manager/Managing Office

1 Copy – CTRMA DBE Liaison, c/o Atkins or WSP, _____, Austin, Texas

I hereby certify that the above is a true and correct statement of the amounts paid to the firms listed above.

Print Name - Company Official /DBE Liaison Officer

Signature

Phone

Date

Email

Fax



FORM E-6
DBE Final Report

Form SMS. 4903

(Rev. 09/10)

Page 1 of 1

The DBE final report form should be filled out by the contractor and submitted to the appropriate district office upon completion of the project. One copy of the report must be submitted to the area Engineer's office. The report should reflect all DBE activity on the project. The report will aid in expediting the final estimate for payment. If the DBE goal requirements were not met, documentation supporting good faith efforts must be submitted.

Project: _____

Contract CSJ: _____

County: _____

Control Project: _____

Letting Date: _____

DBE Goal: _____

Contractor: _____

Contract Amount: _____

Table with 7 columns: Engineer Number, Name of DBE Sub/Supplier, * RC or RN, ** DBE \$ Amt Paid for Work Performed this Period (X), *** \$ Amt Paid to Non-DBE 2nd Tier Subs and Haulers (Y), Amt Paid to DBEs to Date (X-Y), For TxDOT use Only.

* Race Conscious or Race Neutral.

**Goal/commitment progress report amount and/or race-neutral amount. Do not subtract non-DBE second-tier subcontracts and haulers from this column.

*** Report amount of payment DBE subconsultants paid to non-DBE subconsultants/haulers.

Was there a project under-run caused by a TxDOT change order that impacted DBE Goal attainment?

_____ Yes _____ No Change Order Number _____

This is to certify that _____ % of the work was completed by Disadvantaged Business Enterprises as stated above.

By _____ Per: _____

Name of General Contractor

Contractor's Signature

Subscribed and sworn to before me, this _____ day of _____, A.D. _____

Notary Public

County

EXHIBIT F
Disadvantaged Business Enterprise (DBE)
for Federal-Aid Professional or Technical Services Contracts
Special Provision

- 1) **PURPOSE.** The purpose of this attachment is to carry out the U.S. Department of Transportation's ("DOT") policy of ensuring nondiscrimination in the award and administration of DOT assisted contracts and creating a level playing field on which firms owned and controlled by minority or socially and economically disadvantaged individuals can compete fairly for DOT assisted contracts.

- 2) **POLICY.** It is the policy of the DOT, the Central Texas Regional Mobility Authority (the "Mobility Authority") and the Texas Department of Transportation (the "Department") that Disadvantaged Business Enterprises (DBEs) as defined in 49 CFR Part 26, Subpart A and the Department's Disadvantaged Business Enterprise Program ("DBE Program"), shall have the opportunity to participate in the performance of contracts financed in whole or in part with Federal funds. The Mobility Authority and the Department previously entered into a Memorandum of Understanding Regarding the Adoption of the Texas Department of Transportation's Federally-Approved Disadvantaged Business Opportunity Program by the Central Texas Regional Mobility Authority (the "MOU") dated effective February 1, 2007. The MOU provides that the Mobility Authority has adopted the Department's DBE Program with the consent of the Federal Highway Administration for contracts financed in whole or in part with Federal funds. Consequently, the Disadvantaged Business Enterprise requirements of 49 CFR Part 26, and the Department's DBE Program, apply to this contract as follows:
 - a. The Provider will offer Disadvantaged Business Enterprises, as defined in 49 CFR Part 26, Subpart A and the Department's DBE Program, the opportunity to compete fairly for contracts and subcontracts financed in whole or in part with Federal funds. In this regard, the Provider shall make a good faith effort to meet the Disadvantaged Business Enterprise goal for this contract.
 - b. The Provider and any subprovider(s) shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Provider shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT assisted contracts. The requirements of this Special Provision shall be physically included in any subcontract.
 - c. When submitting the contract for execution by the Mobility Authority, the Provider must complete and furnish Form E-1 which lists the commitments made to certified DBE subprovider(s) that are to meet the contract goal and Form E-2 which is a commitment agreement(s) containing the original signatures of the Provider and the proposed DBE(s). For Work Authorization Contracts, Form E-1 is required at the time of submitting the contract for execution by the Mobility Authority. Form E-2 will be required to be completed and attached with each work authorization number that is submitted for execution, if the DBE will be performing work. Any substitutions or changes to the DBE subcontract amount shall be subject to prior written approval by the Mobility Authority. If non-DBE subprovider is performing work, insert N/A (not applicable) on the line provided.

- d. Failure to carry out the requirements set forth above shall constitute a material breach of this contract and may result; in termination of the contract by the Mobility Authority; in a deduction of the amount of DBE goal not accomplished by DBEs from the money due or to become due to the Provider, not as a penalty but as liquidated damages to the Mobility Authority; or such other remedy or remedies as the Mobility Authority deems appropriate.

3) **DEFINITIONS.**

- a. “Mobility Authority” means the Central Texas Regional Mobility Authority.
- b. “Department” means the Texas Department of Transportation (TxDOT).
- c. “Federal-Aid Contract” is any contract between the Mobility Authority and a Provider which is paid for in whole or in part with U. S. Department of Transportation (“DOT”) financial assistance.
- d. “Provider” is any individual or company that provides professional or technical services.
- e. “DBE Joint Venture” means an association of a DBE firm and one (1) or more other firm(s) to carry out a single business enterprise for profit for which purpose they combine their property, capital, efforts, skills and knowledge, and in which the DBE is responsible for a distinct, clearly defined portion of the work of the contract and whose share in the capital contribution, control, management, risks and profits of the joint venture are commensurate with its ownership interest.
- f. “Disadvantaged Business Enterprise” or “DBE” means a firm certified as such by the Department in accordance with 49 CFR Part 26 and listed on the Department’s website under the Texas Unified Certification Program.
- g. “Good Faith Effort” means efforts to achieve a DBE goal or other requirement of this Special Provision which, by their scope, intensity, and appropriateness to the objective, can reasonably be expected to fulfill the program requirement.
- h. “Race-neutral DBE Participation” means any participation by a DBE through customary competitive procurement procedures.
- i. “DBE Liaison” shall have the meaning set forth in Section 5.e. herein.

- 4) **PERCENTAGE GOAL.** The goal for Disadvantaged Business Enterprise participation in the work to be performed under this contract is 0% of the contract amount. This goal is established in accordance with the provisions of the MOU.

- 5) **PROVIDER’S RESPONSIBILITIES.** A DBE prime may receive credit toward the DBE goal for work performed by his-her own forces and work subcontracted to DBEs. A DBE prime must make a good faith effort to meet the goals. In the event a DBE prime subcontracts to a non-DBE, that information must be reported to the Mobility Authority on Form E-3.

- a. A Provider who cannot meet the contract goal, in whole or in part, shall document the “Good Faith Efforts” taken to obtain DBE participation. The following is a list of the types of actions that may be considered as good faith efforts. It is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.

- (1) Soliciting through all reasonable and available means the interest of all certified DBEs who have the capability to perform the work of the contract. The solicitation must be done within sufficient time to allow the DBEs to respond to it. Appropriate steps must be taken to follow up initial solicitations to determine, with certainty, if the DBEs are interested.
- (2) Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the Provider might otherwise prefer to perform the work items with its own forces.
- (3) Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.
- (4) Negotiating in good faith with interested DBEs by making a portion of the work available to DBE subproviders and suppliers and selecting those portions of the work or material needs consistent with the available DBE subproviders and suppliers.
- (5) The ability or desire of the Provider to perform the work of a contract with its own organization does not relieve the Provider's responsibility to make a good faith effort. Additional costs involved in finding and using DBEs is not in itself sufficient reason for a Provider's failure to meet the contract DBE goal, as long as such costs are reasonable. Providers are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.
- (6) Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities.
- (7) Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or Provider.
- (8) Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials or related assistance or services.
- (9) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.
- (10) If the Department's Director of the Business Opportunity Programs Office or the Mobility Authority's DBE Liaison determines that the Provider has failed to meet the good faith effort requirements, the Provider will be given an opportunity for reconsideration by the Department or the Mobility Authority, as appropriate.

NOTE: The Provider must not cause or allow subproviders to bid their services.

- b. The preceding information shall be submitted directly to the Chair of the Engineer Selection Team responsible for the project.
- c. The Provider shall make all reasonable efforts to honor commitments to DBE subproviders named in the commitment submitted under Section 2.c. of this attachment. Where the Provider terminates or removes a DBE subprovider named in the initial commitment, the Provider must

demonstrate on a case-by-case basis to the satisfaction of the Mobility Authority that the originally designated DBE was not able or willing to perform.

- d. The Provider shall make a good faith effort to replace a DBE subprovider that is unable or unwilling to perform successfully with another DBE, to the extent needed to meet the contract goal. The Provider shall submit a completed Form E-2 for the substitute firm(s). Any substitution of DBEs shall be subject to prior written approval by the Mobility Authority. The Mobility Authority may request a statement from the firm being replaced concerning its replacement prior to approving the substitution.
- e. The Provider shall designate a DBE liaison officer (“DBE Liaison”) who will administer the DBE program and who will be responsible for maintenance of records of efforts and contacts made to subcontract with DBEs.
- f. Providers are encouraged to investigate the services offered by banks owned and controlled by disadvantaged individuals and to make use of these banks where feasible.

6) **ELIGIBILITY OF DBEs.**

- a. The Department certifies the eligibility of DBEs, DBE joint ventures and DBE truck-owner operators to perform DBE subcontract work on DOT financially assisted contracts. Under the terms of the MOU, only DBEs certified as eligible to participate on Department roadway construction projects and listed on the Department’s website under the Texas Unified Certification Program are eligible to participate on Mobility Authority roadway construction projects.
- b. This certification will be accomplished through the use of the appropriate certification schedule contained in the Department’s DBE program and adopted by the Mobility Authority under the terms of the MOU.
- c. The Department publishes a Directory of Disadvantaged Business Enterprises containing the names of firms that have been certified to be eligible to participate as DBEs on DOT financially assisted contracts. The directory is available from the Department’s Business Opportunity Programs Office. The Texas Unified Certification Program DBE Directory can be found on the Internet at:
http://www.dot.state.tx.us/services/business_opportunity_programs/tucp_dbe_directory.htm .
- d. Only DBE firms certified at the time the contract is signed or at the time the commitments are submitted are eligible to be used in the information furnished by the Provider as required under Section 2.c. and 5.d. above. For purposes of the DBE goal on this contract, DBEs will only be allowed to perform work in the categories of work for which they were certified.

- 7) **DETERMINATION OF DBE PARTICIPATION.** A firm must be an eligible DBE and perform a professional or technical function relating to the project. Once a firm is determined to be an eligible DBE, the total amount paid to the DBE for work performed with his/her own forces is counted toward the DBE goal. When a DBE subcontracts part of the work of its contract to another firm, the value of the subcontracted work may be counted toward DBE goals only if the subprovider is itself a DBE. Work that a DBE subcontracts to a non-DBE firm does not count toward DBE goals.

A DBE subprovider may subcontract no more than 70% of a federal aid contract. The DBE subprovider shall perform not less than 30% of the value of the contract work with assistance of employees employed and paid directly by the DBE; and equipment owned or rented directly by the DBE. DBE subproviders must perform a commercially useful function required in the contract in order for payments to be credited toward meeting the contract goal. A DBE performs a commercially useful function when it is responsible for executing the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. To perform a commercially useful function, the DBE must also be responsible, with respect to materials and supplies used on the contract, for negotiating price, determining quality and quantity, ordering the material, and installing (where applicable) and paying for the material itself. When a DBE is presumed not to be performing a commercially useful function, the DBE may present evidence to rebut this presumption.

A Provider may count toward its DBE goal a portion of the total value of the contract amount paid to a DBE joint venture equal to the distinct, clearly defined portion of the work of the contract performed by the DBE.

Proof of payment, such as copies of canceled checks, properly identifying the Mobility Authority's contract number or project number may be required to substantiate the payment, as deemed necessary by the Mobility Authority.

8) **RECORDS AND REPORTS.**

- a. After submission of the initial commitment reported (Form E-1), required by Section 2.c. of this attachment, the Provider shall submit Monthly Progress Assessment Reports (Forms E-4 and E-5), after contract work begins, on DBE involvement to meet the goal and for race-neutral participation. One copy of each report is to be sent monthly to the Mobility Authority as provided in Section 8.b. below and should also be submitted with the Provider's invoice. **Only actual payments made to subproviders are to be reported. These reports will be required until all subprovider activity is completed.** The Mobility Authority may verify the amounts being reported as paid to DBEs by requesting copies of canceled checks paid to DBEs on a random basis.
- b. DBE subproviders should be identified on the report by name, type of work being performed, the amount of actual payment made to each during the billing period, cumulative payment amount and percentage of the total contract amount. These reports will be due within fifteen (15) days after the end of a calendar month. Reports are required even when no DBE activity has occurred in a billing period.
- c. All such records must be retained for a period of four (4) years following final payment or until any investigation, audit, examination, or other review undertaken during the four (4) years is completed, and shall be available at reasonable times and places for inspection by authorized representatives of the Mobility Authority, the Department or the DOT.
- d. Prior to receiving final payment, the Provider shall submit a Final Report (Form E-6), detailing the DBE payments. The Final Report is to be sent to the Mobility Authority and one (1) copy is to be submitted with the Provider's final invoice. If the DBE goal requirement is not met, documentation of the good faith efforts made to meet the goal must be submitted with the Final Report.

- 9) **COMPLIANCE OF PROVIDER.** To ensure that DBE requirements of this DOT-assisted contract are complied with, the Mobility Authority and/or the Department will monitor the Provider's efforts to involve DBEs during the performance of this contract. This will be accomplished by a review of DBE Monthly Progress Reports (Form E-4), submitted to the Mobility Authority by the Provider indicating his progress in achieving the DBE contract goal, and by compliance reviews conducted by the Mobility Authority or the Department. The DBE Monthly Progress Report (Form E-4) must be submitted at a minimum monthly to the Mobility Authority, in addition to with each invoice to the appropriate agency contact.

The Provider shall receive credit toward the DBE goal based on actual payments to the DBE subproviders with the following exceptions and only if the arrangement is consistent with standard industry practice. The Provider shall immediately contact the Mobility Authority in writing if he/she withholds or reduces payment to any DBE subprovider.

- (1) A DBE firm is paid but does not assume contractual responsibility for performing the service;
- (2) A DBE firm does not perform a commercially useful function;
- (3) Payment is made to a DBE that cannot be linked by an invoice or canceled check to the contract under which credit is claimed;
- (4) Payment is made to a broker or a firm with a brokering-type operation; or
- (5) Partial credit is allowed, in the amount of the fee or commission provided the fee or commission does not exceed that customarily allowed for similar services, for a bona fide service, such as professional, technical, Engineer, or managerial services, and assistance in the procurement of essential personnel, facilities, equipment, materials, or supplies required for performance of the contract.

A Provider's failure to comply with the requirements of this Special Provision shall constitute a material breach of this contract. In such a case, the Mobility Authority reserves the right to terminate the contract; to deduct the amount of DBE goal not accomplished by DBEs from the money due or to become due the Provider, not as a penalty but as liquidated damages to the Mobility Authority; or such other remedy or remedies as the Mobility Authority deems appropriate.

EXHIBIT G

Disadvantaged Business Enterprise (DBE) for Race-Neutral Professional or Technical Services Contracts Special Provision

It is the policy of the DOT, the Central Texas Regional Mobility Authority (the "Mobility Authority") and the Texas Department of Transportation (the "Department") that Disadvantaged Business Enterprises (DBEs) as defined in 49 CFR Part 26, Subpart A and the Department's Disadvantaged Business Enterprise Program ("DBE Program"), shall have the opportunity to participate in the performance of contracts financed in whole or in part with Federal funds and it is the DOT's policy that a maximum feasible portion of the Department's and the Mobility Authority's overall DBE goal be met using race-neutral means. The Mobility Authority and the Department previously entered into a Memorandum of Understanding Regarding the Adoption of the Texas Department of Transportation's Federally-Approved Disadvantaged Business Opportunity Program by the Central Texas Regional Mobility Authority (the "MOU") dated effective February 1, 2007. The MOU provides that the CTRMA has adopted the Department's DBE Program with the consent of the Federal Highway Administration for contracts financed in whole or in part with Federal funds. Consequently, if there is no DBE goal, the DBE requirements of 49 CFR Part 26, apply to this contract as follows:

The Provider will offer DBEs as defined in 49 CFR Part 26, Subpart A, the opportunity to compete fairly for contracts and subcontracts financed in whole or in part with federal funds. Race-Neutral DBE participation on projects with no DBE goal should be reported on the Form E-3. Payments to DBEs reported on Form E-3 are subject to the following requirements:

DETERMINATION OF DBE PARTICIPATION.

A firm must be an eligible DBE and perform a professional or technical function relating to the project. Once a firm is determined to be an eligible DBE, the total amount paid to the DBE for work performed with his/her own forces must be reported as race-neutral DBE participation. When a DBE subcontracts part of the work of its contract to another firm, the value of the subcontracted work should not be reported unless the subcontractor is itself a DBE.

A DBE subprovider may subcontract no more than 70% of a federal aid contract. The DBE subprovider shall perform not less than 30% of the value of the contract work with assistance of employees employed and paid directly by the DBE; and equipment owned or rented directly by the DBE. DBE subproviders must perform a commercially useful function required in the contract. A DBE performs a commercially useful function when it is responsible for execution of the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. To perform a commercially useful function, the DBE must also be responsible, with respect to materials and supplies used on the contract, for negotiating price, determining quality and quantity, ordering the material, and installing (where applicable) and paying for the material itself. When a DBE is presumed not to be performing a commercially useful function, the DBE may present evidence to rebut this presumption.

A Provider must report a portion of the total value of the contract amount paid to a DBE joint venture equal to the distinct, clearly defined portion of the work of the contract performed by the DBE.

Proof of payment, such as copies of canceled checks, properly identifying the Mobility Authority's contract number or project number may be required to substantiate the payment, as deemed necessary by the Mobility Authority.

The Provider and any subprovider shall not discriminate on the basis of race, color, national origin or sex in the award and performance of contracts. These requirements shall be physically included in any subcontract.

Failure to carry out the requirements set forth above shall constitute a material breach of this contract and, may result in termination of the contract by the Mobility Authority or other such remedy as the Mobility Authority deems appropriate.



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

June 30, 2021
AGENDA ITEM #9

Discuss and consider approving a contract with Angel Brothers Holdings Corp. for roadway maintenance on 183A Toll and 290E Toll

Strategic Plan Relevance:	Regional Mobility
Department:	Engineering
Contact:	Mike Sexton, P.E., Acting Director of Engineering
Associated Costs:	\$3,968,858.29
Funding Source:	183A Phase III Project Funds, FY21 Operating Budget R&R Funds
Action Requested:	Consider and act on draft resolution

Background: The FY20-1 Maintenance Project began design in February 2021 as part of the Authority's maintenance program. This project will preserve the existing asphalt pavement structure and extend the pavement life along the 183A Frontage Roads and the east end of 290E.

Project Description: The FY20-1 Maintenance Project includes an asphalt overlay, pavement structure repairs, edge milling, and pavement markings on the 183A corridor from Hero Way to Avery Ranch Blvd and on the 290E corridor from Parmer Lane to Gilleland Creek.

Previous Actions & Brief History of the Program/Project: In June of 2020, the Authority approved the adoption of the FY2021 Operating Budget which included renewal and replacement funds to maintain the Mobility Authorities existing assets. Final plans were completed in April 2021 and the project was advertised for bids in May 2021.

Construction Contract Procurement Timeline:

- May 6th, 2021 Advertised Project
- May 6th, 2021 Pre-Bid Meeting

- June 8th, 2021 Bid Opening

Bids:

A total of 3 bids were received and came in as shown below.

Contractor	Bid Price	Responsive Bid
Angel Brothers Holding Corp.	\$3,968,858.29	Yes
Texas Materials Group, Inc.	\$4,369,411.69	Yes
Asphalt Inc., LLC dba Lone Star Paving	\$4,578,956.50	Yes

The lowest responsive and responsible bidder is Angel Brothers Holding Corp. at \$3,968,858.29. The engineer's estimate was \$4,992,500.

This bid has been reviewed by the Authority staff and the lowest responsive and responsible bidder is Angel Brothers Holding Corp.

Financing: 183A Phase III Project Funds and FY2020 Operating Budget: Renewal and Replacement Fund.

Action requested/Staff Recommendation: Staff recommends that the Board award the contract for construction of the FY20-1 Maintenance Project to Angel Brothers Holding Corp. and authorize and directs the Executive Director to execute a contract with Angel Brothers Holding Corp. in an amount not to exceed \$3,968,858.29 for construction of the FY20-1 Maintenance Project.

Backup provided: Draft Resolution
Draft Contract

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

RESOLUTION NO. 21-0XX

**APPROVING A CONTRACT WITH ANGEL BROTHERS HOLDINGS CORP. FOR
THE FY20-1 MAINTENANCE PROJECT**

WHEREAS, in order to preserve the existing asphalt pavement structure and extend the pavement life along the 183A Frontage Roads and the east end of 290E, the Mobility Authority has planned an asphalt overlay, pavement structure repairs, edge milling, and pavement markings on the 183A corridor from Hero Way to Avery Ranch Blvd and on the 290E corridor from Parmer Lane to Gilleland Creek (the “FY20-1 Maintenance Project”); and

WHEREAS, the Mobility Authority advertised and released bid documents for the FY20-1 Maintenance Project on May 6, 2021; and

WHEREAS, a total of three bids were received by the bid opening on June 8, 2021; and

WHEREAS, the Mobility Authority reviewed the bids and the apparent low bid submitted by Angel Brothers Holdings Corp. was found to be responsive, mathematically correct, and materially balanced; and

WHEREAS, the Executive Director recommends that the Board approve a contract with Angel Brothers Holdings Corp. for the FY20-1 Maintenance Project in an amount not to exceed \$3,968,858.29 and in the form published in the bid documents attached hereto as Exhibit A.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors approves a contract with Angel Brothers Holdings Corp. for the FY20-1 Maintenance Project in an amount not to exceed \$3,968,858.29 and hereby authorizes the Executive Director to finalize and execute the contract on behalf of the Mobility Authority in the form or in substantially the same form published in the bid documents attached hereto as Exhibit A.

Adopted by the Board of Directors of the Central Texas Regional Mobility Authority on the 30th day of June 2021.

Submitted and reviewed by:

Approved:

Geoffrey Petrov, General Counsel

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

Exhibit A



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

FY20-1
Maintenance Project

CTRMA Contract No.: 20VARI24601M

Bid Documents

Advertisement: May 6, 2021
Addendum #1: May 6, 2021

Central Texas Regional Mobility Authority

FY20-1
MAINTENANCE PROJECT

CONTRACT NO. 20VARI24601M

BID DOCUMENTS
CONTRACT AND CONTRACT BOND
SPECIAL PROVISIONS
SPECIAL SPECIFICATIONS
PLANS

May 6, 2021

Central Texas Regional Mobility Authority

FY20-1
MAINTENANCE PROJECT

CONTRACT NO. 20VARI24601M

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CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY

FY20-1 MAINTENANCE PROJECT

CONTRACT NO. 20VARI24601M

INVITATION TO BID

Electronic proposal forms for the above project shall be submitted via the project's CivCast <https://www.civcastusa.com/project/605de3f70654de047d3d58d8/summary> to the Central Texas Regional Mobility Authority (Authority), by **2:00 PM local time, June 8, 2021**. The bids will be publicly posted via the project's CivCast website within 48 hours after the bids are opened.

The contractor will have eighty-five (85) working days after the date stated in the written Full Notice to Proceed to achieve full completion of all work. The Authority reserves the right to make changes in the work to complete the contract, as defined in the specifications.

Upon execution of the contract, a Partial Notice to Proceed (NTP) may be issued at the sole discretion of the Authority to allow the Contractor to perform such tasks as secure materials on hand, place the field office, produce shop drawings for approval, etc. No time charges will be incurred until a Full NTP is issued.

A Full NTP will be issued no later than 20 calendar days after award for the Contractor to begin work. Time charges will begin accruing upon issuance of the Full NTP.

The complete list of quantities is located in the Bid Form. The principal items of work are as follows:

- Asphalt Overlay
- Asphalt Pavement Repairs
- Planing Asphalt Pavement
- Pavement Markings

The Official Bid Form for this Contract will be made available to prospective bidders who have met all prequalification requirements on or before 5:00 PM local time, on May 20, 2021 via the project's CivCastUSA website <https://www.civcastusa.com/project/605de3f70654de047d3d58d8/summary>.

Prequalification requirements:

- Be registered with State of Texas,
- Be fully prequalified by Texas Department of Transportation (TxDOT),
- Have a bidding capacity per TxDOT prequalification system of \$5,000,000,
- Submit a valid Non-Collusion Affidavit, Debarment Affidavit, Certification to Not Boycott Israel, and Child Support Statement.

The deadline for meeting the prequalification requirements and still obtaining an Official Bid Form is May 19, 2021 at Noon.

The Authority cannot be held liable in the event a party is unable to submit a valid bid due to delay in the prequalification procedure. Securing prequalification through TxDOT and the timing thereof, shall at all times be the sole responsibility of the Prospective Bidder.

Complete Contract documents will be available on May 6, 2021 for potential bidders and others through the Authority's website (www.mobilityauthority.com) and CivCast's website <https://www.civcastusa.com/project/605de3f70654de047d3d58d8/summary>.

Standard Specifications (Texas Department of Transportation "Standard Specifications for Construction and Maintenance of Highways, Streets and Bridges", November 1, 2014) which form an integral part of this Contract, are available on line at the Texas Department of Transportation (TxDOT) website (<https://www.txdot.gov/business/resources/txdot-specifications.html>).

The contract will be awarded in accordance with the Authority's Procurement policy. A copy of the Procurement Policy is available online at the Authority website: (https://www.mobilityauthority.com/upload/files/resources/Policy%20Code/32_Policy_Code_Novemeber_18,_2020.pdf).

For more information, please submit a question to the project team through CivCast.com.

Each bid must be accompanied by a Bid Guaranty consisting of a Bid Bond (on the form provided) in the amount of at least five percent (5%) of the Total Bid Amount. The apparent low bidder shall deliver the original sealed Bid Bond to CTRMA within five (5) calendar days of such notification.

CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY
William Chapman, Interim Executive Director & Chief Financial Officer
Austin, Texas

CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY

FY20-1 Maintenance Project
CTRMA Contract #: 20VARI24601M
Addendum #1 Summary
Issue Date: 05/06/2021

Bid Document

Invitation to Bid – Pages 1-2: Revised Bid Due from Thursday June 3rd to Tuesday June 8th.

Non-Collusion Affidavit – Pages 8-9: Revised Bid Due from Thursday June 3rd to Tuesday June 8th.

Debarment Affidavit – Pages 10-11: Revised Bid Due from Thursday June 3rd to Tuesday June 8th.

Central Texas Regional Mobility Authority

FY20-1 MAINTENANCE PROJECT

CONTRACT NO. 20VARI24601M

BID DOCUMENT CHECKLIST

Prior to submitting a bid, prospective bidders should review the checklist below to ensure that the bid is accepted and not declared nonresponsive. No joint venture participants will be allowed.

Bid Document:

- Are you aware if your affiliates are bidding on the same project?
- Are you pre-qualified by TxDOT through the Confidential Questionnaire process and have a bidding capacity of \$5,000,000.
- Have you submitted a valid Non-Collusion Affidavit, Debarment Affidavit, and Child Support Statement in order to receive an Official Bid Form?

Bid Document Preparation:

- Is the bid being submitted on the Official Bid Form via the CivCast website?
- Are you submitting only one bid for this project?
- Is the bid signed by your company representative or each joint venture participant?
- Have you entered prices for all bid items?
- Does the bid document contain all items included in the Official Bid Form?
- Does the bid document contain a total bid value?
- Is the bid free of any additional conditions not included in the bid document provided to you?
- Have you electronically submitted a complete and executed Bid Bond?
- Have you acknowledged each Addendum on CivCast?

Bid Bonds:

- Is the bid bond signed by the surety?
- Is the bid bond signed by the company representative?
- Is the exact name of the contractor(s) listed as the principal?
- Is the impressed surety seal affixed to the bid bond?
- Does the name on the surety seal match the name of the surety on the bond?
- Is the bond dated on or earlier than the letting date of the project?
- Is the signer for the surety listed on the power of attorney attached to the bond?
- Is the surety authorized to issue the bond?

Bid Document Submission:

- Are you aware of the time and date deadline for submission for the bid document?
- Are you submitting a complete bid document?

FY20-1 Maintenance Project Bid Form

ITEM NO.	DESC. CODE	DESCRIPTION	UNIT	QTY	UNIT PRICE
0134	6001	BACKFILL (TY A)	STA	68.00	\$150.00
0347	6001	TOM (ASPHALT) PG 76-22	TON	1211.00	\$128.00
0347	6002	TOM-C (AGGREGATE) SAC-A	TON	18283.00	\$128.00
0351	6002	FLEXIBLE PAVEMENT STRUCTURE REPAIR(6")	SY	1000.00	\$45.00
0351	6004	FLEXIBLE PAVEMENT STRUCTURE REPAIR(8")	SY	2640.00	\$56.00
0351	6012	FLEXIBLE PAVEMENT STRUCTURE REPAIR(2")	SY	3400.00	\$16.70
0354	6020	PLANE ASPH CONC PAV(0" TO 1")	SY	65123.00	\$1.25
0500	6001	MOBILIZATION	LS	1.00	\$210,000.00
0502	6001	BARRICADES, SIGNS AND TRAFFIC HANDLING	MO	5.00	\$2,700.00
0506	6041	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	1000.00	\$8.00
0506	6043	BIODEG EROSN CONT LOGS (REMOVE)	LF	1000.00	\$2.00
0662	6109	WK ZN PAV MRK SHT TERM (TAB)TY W	EA	8472.00	\$0.90
0662	6111	WK ZN PAV MRK SHT TERM (TAB)TY Y-2	EA	2242.00	\$0.90
0666	6035	REFL PAV MRK TY I (W)8"(SLD)(090MIL)	LF	31394.00	\$0.62
0666	6041	REFL PAV MRK TY I (W)12"(SLD)(090MIL)	LF	4267.00	\$2.60
0666	6047	REFL PAV MRK TY I (W)24"(SLD)(090MIL)	LF	4779.00	\$5.80
0666	6053	REFL PAV MRK TY I (W)(ARROW)(090MIL)	EA	93.00	\$110.00
0666	6056	REFL PAV MRK TY I(W)(DBL ARROW)(090MIL)	EA	13.00	\$155.00
0666	6062	REFL PAV MRK TY I(W)(UTURN ARW)(090MIL)	EA	13.00	\$210.00
0666	6077	REFL PAV MRK TY I (W)(WORD)(090MIL)	EA	109.00	\$170.00
0666	6101	REF PAV MRK TY I(W)36"(YLD TRI)(090MIL)	EA	115.00	\$35.00
0666	6140	REFL PAV MRK TY I (Y)12"(SLD)(090MIL)	LF	361.00	\$2.70
0666	6146	REFL PAV MRK TY I (Y)24"(SLD)(090MIL)	LF	651.00	\$6.00
0666	6283	REF PROF PAV MRK TY I(W)4"(SLD)(090MIL)	LF	37599.00	\$0.55
0666	6287	REF PROF PAV MRK TY I(Y)4"(SLD)(090MIL)	LF	33396.00	\$0.55
0666	6299	RE PM W/RET REQ TY I (W)4"(BRK)(090MIL)	LF	21170.00	\$0.35
0666	6302	RE PM W/RET REQ TY I (W)4"(SLD)(090MIL)	LF	4803.00	\$0.35
0666	6314	RE PM W/RET REQ TY I (Y)4"(SLD)(090MIL)	LF	11427.00	\$0.35
0672	6008	REFL PAV MRKR TY I-R	EA	56.00	\$4.50
0672	6009	REFL PAV MRKR TY II-A-A	EA	55.00	\$3.50
0672	6010	REFL PAV MRKR TY II-C-R	EA	2670.00	\$3.50
0677	6001	ELIM EXT PAV MRK & MRKS (4")	LF	108395.00	\$0.35
0677	6003	ELIM EXT PAV MRK & MRKS (8")	LF	31394.00	\$0.64
0677	6005	ELIM EXT PAV MRK & MRKS (12")	LF	4628.00	\$0.80
0677	6007	ELIM EXT PAV MRK & MRKS (24")	LF	5430.00	\$1.10
0677	6008	ELIM EXT PAV MRK & MRKS (ARROW)	EA	93.00	\$23.00
0677	6009	ELIM EXT PAV MRK & MRKS (DBL ARROW)	EA	13.00	\$33.00
0677	6012	ELIM EXT PAV MRK & MRKS (WORD)	EA	109.00	\$33.00
0677	6019	ELIM EXT PAV MRK & MRKS (36")(YLD TRI)	EA	115.00	\$8.00
0677	6036	ELIM EXT PAV MRK & MRKS (UTURN ARROW)	EA	13.00	\$53.00
3076	6051	D-GR HMA TY-D PG76-22 (LEVEL-UP)	TON	1950.00	\$87.00
3084	6001	BONDING COURSE	GAL	33497.00	\$3.00
6001	6002	PORTABLE CHANGEABLE MESSAGE SIGN	EA	2.00	\$4,000.00
6185	6002	TMA (STATIONARY)	DAY	124.00	\$150.00
6185	6003	TMA (MOBILE OPERATION)	HR	177.00	\$25.00
		CONTINGENCY ALLOWANCE	LS	1.00	\$300,000.00
		FORCE ACCOUNT	LS	1.00	\$50,000.00

Central Texas Regional Mobility Authority

FY20-1
MAINTENANCE PROJECT

CONTRACT NO. 20VARI24601M

BID FOR FY20-1 MAINTENANCE PROJECT MAINTENACE CONTRACT

To the Central Texas Regional Authority
3300 N I-35, Suite 300
Austin, Texas 78705

Gentlemen:

I/we, the undersigned, declare: that no other person, firm or corporation is interested in this Bid; that I/we have carefully examined the Plans, Standard Specifications, Special Provisions, and all other documents pertaining to this Contract which form a part of this Bid as if set forth at length herein; that I/we understand that the quantities of items shown herein below are approximate only; that I/we have examined the location of the proposed work; that I/we agree to bind myself/ourselves, upon award to me/us by the Central Texas Regional Authority under this Bid, to enter into and execute a Contract, for the project named above; that I/we agree to start work within seven (7) calendar days after the date stated in the written Notice-to-Proceed (Item 8.1 of the Specifications), to furnish all necessary materials, provide all necessary labor, equipment, tools and plant, pay for all required insurance, bonds, permits, fees and service, and do all required work in strict compliance with the terms of all documents comprising said Contract, and to fully complete the entire project within eighty-five (85) working days after Notice-to-Proceed; and that I/we agree to accept as full compensation for the satisfactory prosecution of this project the contractual bid amount after it is adjusted based on the terms and conditions specified in the contract.

The quantities shown in the above schedule of items are considered to be approximate only and are given as the basis for comparison of bids. The Authority may increase or decrease the amount of any item or portion of the work as may be deemed necessary or expedient. Any increase or decrease in the amount of any item or portion of work will be added or deducted from the total Contract bid price based on the terms and conditions specified in TxDOT Specification Item 4. It is understood that payment for this project will be by unit prices bid.

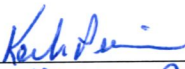
The cost of any work performed, materials furnished, services provided, or expenses incurred, whether or not specifically delineated in the Contract documents but which are incidental to the scope and plans, intent, and completion of this Contract, have been included in the price bid for the various items scheduled hereinabove.

Accompanying this Bid is a bid guaranty consisting of a Bid Bond (on the form provided) in the amount of at least five percent (5%) of the Official Total Bid Amount. It is hereby understood and agreed that said Bid Bond is to be forfeited as liquidated damages in the event that, on the basis of this Bid, the Authority should award this Contract to me/us and that I/we should fail to execute and deliver said Contract and the prescribed Contract Bond, together with the proof of proper insurance coverage and other necessary documents, all within fifteen (15) calendar days after award of the Contract; otherwise, said check or bond is to be returned to the undersigned.

Business Name of Bidder Angel Brothers Holdings Corp

Type of Organization Individual
 Partnership
 Corporation

Address of Bidder: 723 Kruger Canyon
New Braunfels, TX 78132

Signature of Owner,
Partner or Corp. Officer: 
Title: VICE - President
Date: 6/8/21

Central Texas Regional Mobility Authority

FY20-1
MAINTENANCE PROJECT

CONTRACT NO. 20VARI24601M

NON-COLLUSION AFFIDAVIT

STATE OF Texas)

COUNTY OF Comal)

I, Keith Pierson, of the
City of New Braunfels, County of Comal and State of
Texas, being of full age and duly sworn according to law on my oath
depose and say:

That I am vice president (Title) of
Angel Brothers Holding Corp, the Bidder making
the Bid submitted to the Central Texas Regional Mobility Authority, on the 8th day of June,
2021, for Contract No. 20VARI24601M in connection with the FY20-1 Maintenance Project;
that I executed the said Bid with full authority to do so;

The said Bidder has not, directly or indirectly, entered into any combination or arrangement with any person, firm or corporation or entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free, competitive bidding or which would increase the cost of construction or maintenance in connection with the said Contract; that no person or selling agency has been employed or retained to solicit or secure the said Contract upon an agreement or understanding for a commission, percentage, brokerage or contingent fee, except bona fide full-time employees;

And that said Bidder is or has been a member of the following highway contractors' association during the preceding twelve months:

Name of Association	Location of Principal Office
<u>Associated General Contractors</u>	<u>300 Barton Springs Rd, Austin TX 78704</u>
<u>Texas Asphalt Pavement Association of America</u>	<u>219 Commercial Dr. Buda TX 78610</u>

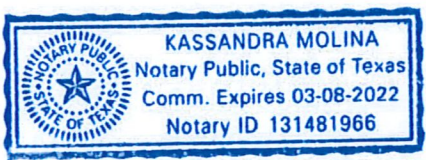
I further warrant that all statements contained in said Bid and in this Affidavit are true and correct and made with full knowledge that the said Authority relies upon the truth of the statements contained in said Bid and in this Affidavit in awarding the said Contract.

Sworn to and subscribed
before me this 14
day of May,
2021.

By: *Keith Pierson*
Person Signing Bid

Print Name: Keith Pierson
Title: VICIE President

Kassandra Molina
Notary Public



My commission expires: 03.08.2022

Central Texas Regional Mobility Authority

FY20-1
MAINTENANCE PROJECT

CONTRACT NO. 20VARI24601M

DEBARMENT AFFIDAVIT

STATE OF Texas)
COUNTY OF Comal)

I, Keith Pierson, of the City
of New Braunfels, County of Comal and State of
Texas, being of full age and duly sworn according to law on my oath
depose and say:

That I am Vice President (Title) of
Angel Brothers Holding Corp, the Bidder making
the Bid submitted to the Central Texas Regional Mobility Authority, on the 8th day of June, 2021,
for Contract No. 20VARI24601M in connection with the FY20-1 Maintenance Project; that I
executed the said Bid with full authority to do so;

The said Bidder has not been excluded or disqualified from doing business on State or
Federal projects;

And that said Bidder is or has been a member of the following highway contractors'
association during the preceding twelve months:

Name of Association	Location of Principal Office
<u>Associated General Contractors of America</u>	<u>300 Barton Springs Rd, Austin TX, 78704</u>
<u>Texas Asphalt pavement Ass</u>	<u>219 Commercial Dr. Buda, TX 78610</u>

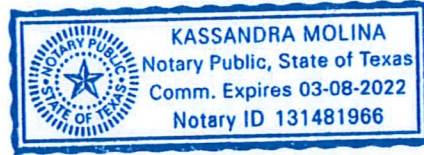
I further warrant that all statements contained in said Bid and in this Affidavit are true and correct and made with full knowledge that the said Authority relies upon the truth of the statements contained in said Bid and in this Affidavit in awarding the said Contract.

Sworn to and subscribed
before me this 14
day of May,
2021.

By: Keith Pierson
Person Signing Bid

Print Name: Keith Pierson
Title: VICE President

Kassandra Molina
Notary Public



My commission expires: 03-08-2022

CHILD SUPPORT STATEMENT

Under section 231.006, Family Code, the vendor or applicant certifies that the individual or business entities named in this contract, bid, or application is not ineligible to receive the specified grant, loan, or payment and acknowledges that this contract may be terminated, and payment may be withheld if this certification is inaccurate.



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

CHILD SUPPORT STATEMENT FOR NEGOTIATED CONTRACTS AND GRANTS

Under Family Code, Section 231.006, Greg/Gary Angel
Certifies that Angel Brothers Holdings Corp., TAX ID # 74-1710671,
as of May 14, 2021 is eligible to receive a grant, loan or payment and acknowledges
that any contract may be terminated and payment may be withheld if this certification is inaccurate.

List below the name and social security number of the individual or sole proprietor and each partner, shareholder, or owner with an ownership interest of at least 25% of the business entity submitting the bid or application. This form must be updated whenever any party obtains a 25% ownership interest in the business entity.

NAME <i>(please print legibly, if handwritten)</i>	SOCIAL SECURITY NUMBER
Greg Angel	450-90-8191
Gary Angel	450-90-8507

Family Code, Section 231.006, specifies that a child support obligor who is more than thirty (30) days delinquent in paying child support and a business entity in which the obligor is a sole proprietor, partner, shareholder, or owner with an ownership interest of at least 25% is not eligible to receive payments from state funds under a contract to provide property, materials, or services; or receive a state-funded grant or loan.

A child support obligor or business entity ineligible to receive payments described above remains ineligible until all arrearage have been paid or the obligor is in compliance with a written repayment agreement or court order as to any existing delinquency.

Except as provided in Family Code, Section 231.302(d), a social security number is confidential and may be disclosed only for the purposes of responding to a request for information from an agency operating under the provisions of Subchapters A and D of Title IV of the federal Social Security Act (42 U.S.C. Sections 601 et seq. and 651 et seq.)

CERTIFICATION TO NOT BOYCOTT ISRAEL

Pursuant to Texas Government Code 2271.002, the Mobility Authority must include a provision requiring a written verification that the Contractor does not boycott Israel and will not boycott Israel during the term of the Contract. By signing the contract, the Contractor certifies that it does not boycott Israel and will not boycott Israel during the term of this contract.

Violation of this certification may result in action by the Mobility Authority.



Signature



Date

Central Texas Regional Mobility Authority

FY20-1
MAINTENANCE PROJECT

CONTRACT NO. 20VARI24601M

BID BOND

KNOW ALL PERSONS MEN BY THESE PRESENTS,
that Angel Brothers Holdings Corp., as Principal/Contractor, and
Liberty Mutual Fire Insurance Company, as Surety, legally authorized to do
business in the State of Texas, are held and firmly bounded unto the Central Texas Regional
Mobility Authority, as Authority, in the amount of at least five percent (5%) percent of the Total
Bid amount, on which the Contract is awarded lawful money of the United States of America, for
the payment of which, well and truly to be made, we bind ourselves, our heirs, executors,
administrators, successors and assigns, jointly and severally and firmly by these presents:

WHEREAS, the Contractor is herewith submitting its Bid for Contract No.
20VARI24601M, entitled FY20-1 Maintenance Project, and

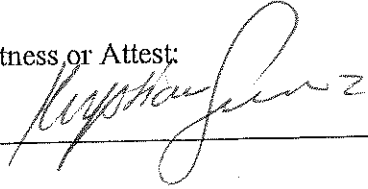
NOW, THEREFORE, the condition of this obligation is such, that if the Contractor shall be
awarded the Contract upon said Bid and shall, within fifteen (15) calendar days after the date of
written notice of such award, enter into and deliver a signed Contract and the prescribed
Performance Bond for the faithful performance of the Contract, together with the required proof of
proper insurance coverage and other necessary documents, then this obligation shall be null and
void; otherwise, to remain in full force and effect, and the Contractor and Surety will pay unto the
Authority the difference in money between the amount of the Total Amount written in the Bid of
said Contractor and the amount for which the Authority may legally contract with another party to
perform the said work, if the latter amount be in excess of the former; but in no event shall the
Surety's liability exceed the penal sum hereof.

SIGNED AND SEALED this 8th day of June, 2021.

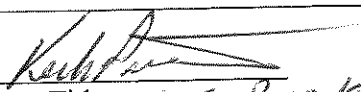
PRINCIPAL/CONTRACTOR

Angel Brothers Holdings Corp.
Business Name
3003 Kilgore Parkway, Building A
Baytown, TX 77523
Address

Witness or Attest:



By:

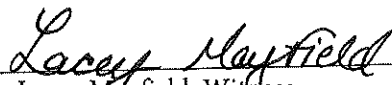

Title: VICE-PRESIDENT


(Affix Corporate Seal Here)

SURETY:

Liberty Mutual Fire Insurance Company
Business Name
175 Berkeley Street
Boston, MA 02116
Address

Witness or Attest:


Lacey Mayfield, Witness


By: Lauren O. Moudy
Title: Attorney in Fact

(Attach evidence of Power of Attorney)

(Affix Corporate Seal Here)



This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Liberty Mutual Fire Insurance Company
Wausau, Wisconsin

Certificate No: 8204953-971801

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: Liberty Mutual Fire Insurance Company, being a Wisconsin Corporation having its principal office in the City of Wausau, State of Wisconsin does hereby make, constitute and appoint Alyson Carmichael; Ashley Britt; Barry K. McCord; David T. Mickette; Lacey Mayfield; Lauren O. Moudy; Nikole Jeannette; Robert C. Davis; Robert M. Overbey, Jr.; Tabitha Dorman

all of the city of Houston state of TX each individually if there be more than one named, its true and lawful attorney(s)-in-fact, with full power and authority hereby conferred in their/its name, place and stead, to sign, execute, acknowledge and deliver in their/its behalf, and as their/its act and deed, without power of redelegation, as follows:

Bonds, undertakings, recognizances, contracts of indemnity, and all other surety obligations, as required, unlimited as to Dollar amount

and to bind the Company(ies) making this appointment thereby as fully and to the same extent as if such bond or undertaking was signed by the duly authorized officers of the Company(ies), and all the acts of said attorney(s), pursuant to the authority herein given, are hereby ratified and confirmed.

AUTHORITY FOR MAKING APPOINTMENT OF ATTORNEYS-IN-FACT

Appointment of Attorneys-in-Fact by Liberty Mutual Fire Insurance Company are made pursuant to Article V, Section 10 of Liberty Mutual Fire Insurance Company's By-Laws, as amended and by Unanimous Consent of the Board of Directors dated May 21st, 2013. Further, the President of Liberty Mutual Fire Insurance Company, executed a Delegation of Authority and authorized the assistant secretary signing below to appoint attorneys-in-fact as may be necessary to act on behalf of Liberty Mutual Fire Insurance Company to make execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances, and other surety obligations.

IN WITNESS WHEREOF, Liberty Mutual Fire Insurance Company has caused these presents to be signed by its authorized representatives, and its Corporate Seal to be hereto affixed, this 15th day of March, 2021.



Liberty Mutual Fire Insurance Company
By: David M. Carey
David M. Carey, Assistant Secretary

Attest: Heather B. Magee
Heather B. Magee

State of PENNSYLVANIA
County of MONTGOMERY ^{SS}

The foregoing instrument was acknowledged before me this 15th day of March, 2021 by David M. Carey, an authorized representative of Liberty Mutual Fire Insurance Company.



Commonwealth of Pennsylvania - Notary Seal
Teresa Pastella, Notary Public
Montgomery County
My commission expires March 28, 2025
Commission number 1128044
Member, Pennsylvania Association of Notaries

By: Teresa Pastella
Teresa Pastella, Notary Public

CERTIFICATE

I, the undersigned, an Assistant Secretary of Liberty Mutual Fire Insurance Company, do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy, is in full force and effect on the date of this certificate; and I do further certify that the officer or official who executed the said power of attorney was one of the officers or officials specially authorized by the Board of Directors to appoint attorneys-in-fact as provided in the Unanimous Consent and Vote of the Board of Directors of Liberty Mutual Fire Insurance Company dated May 21, 2013.

This certificate and the above power of attorney may be signed by facsimile or mechanically reproduced signatures under and by authority of the Board of Directors of Liberty Mutual Fire Insurance Company evidenced by the Unanimous Consent and Vote of the Board of Directors dated June 28, 2008 wherein it was

VOTED that the signatures of such officers and the seal of the Company may be affixed to any such power of attorney or to any certificate relating thereto by facsimile, and any such power of attorney or certificate bearing such facsimile signature and facsimile seal shall be valid and binding upon the Company when so affixed and in the future with respect to any surety undertakings, bonds, recognizances and other surety obligations to which it is attached.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seal of the said company, affixed, this 8th day of June, 2021



By: Renee C. Llewellyn
Renee C. Llewellyn, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, currency rate, interest rate or residual value guarantees.

For bond and/or Power of Attorney (POA) verification inquiries, please call 610-832-8240 or email HOSUR@libertymutual.com.



TEXAS
IMPORTANT NOTICE

To obtain information or make a complaint:

You may call toll-free for information or to make a complaint at

1-877-751-2640

You may also write to:

2200 Renaissance Blvd., Ste. 400
King of Prussia, PA 19406-2755

You may contact the Texas Department of Insurance to obtain information on companies, coverages, rights or complaints at
1-800-252-3439

You may write the Texas Department of Insurance
Consumer Protection (111-1A)
P. O. Box 149091
Austin, TX 78714-9091
FAX: (512) 490-1007
Web: <http://www.tdi.texas.gov>
E-mail: ConsumerProtection@tdi.texas.gov

PREMIUM OR CLAIM DISPUTES:

Should you have a dispute concerning your premium or about a claim you should first contact the agent or call 1-800-843-6446. If the dispute is not resolved, you may contact the Texas Department of Insurance.

ATTACH THIS NOTICE TO YOUR
POLICY:

This notice is for information only and does not become a part or condition of the attached document.

TEXAS
AVISO IMPORTANTE

Para obtener informacion o para someter una queja:

Usted puede llamar al numero de telefono gratis para informacion o para someter una queja al

1-877-751-2640

Usted tambien puede escribir a:

2200 Renaissance Blvd., Ste. 400
King of Prussia, PA 19406-2755

Puede comunicarse con el Departamento de Seguros de Texas para obtener informacion acerca de companias, coberturas, derechos o quejas al
1-800-252-3439

Puede escribir al Departamento de Seguros de Texas Consumer Protection (111-1A)
P. O. Box 149091
Austin, TX 78714-9091
FAX # (512) 490-1007
Web: <http://www.tdi.texas.gov>
E-mail: ConsumerProtection@tdi.texas.gov

DISPUTAS SOBRE PRIMAS O RECLAMOS:

Si tiene una disputa concerniente a su prima o a un reclamo, debe comunicarse con el agente o primero. Si no se resuelve la disputa, puede entonces comunicarse con el departamento (TDI)

UNA ESTE AVISO A SU POLIZA:

Este aviso es solo para proposito de informacion y no se convierte en parte o condicion del documento adjunto.

Central Texas Regional Mobility Authority

FY20-1
MAINTENANCE PROJECT

CONTRACT NO. 20VARI24601M

CONTRACT AGREEMENT

THIS AGREEMENT, made this ____ day of _____, 20__, between the Central Texas Regional Mobility Authority, 3300 N. I-35, Suite 300, Austin, Texas, 78705, hereinafter called the "Authority" and _____, or his, its or their successors, executors, administrators and assigns, hereinafter called the Contractor.

WITNESSETH, that the Contractor agrees with the Authority for the consideration herein mentioned, and at his, its or their own proper cost and expense, to do all the work and furnish all the materials, equipment, teams and labor necessary to prosecute and complete and to extinguish all liens therefore, Contract No. 20VAIR24601M, entitled FY20-1 Maintenance Project, in the manner and to the full extent as set forth in the Plans, Standard Specifications, Special Provisions, Bid (for the basis of award stated herein below) and other documents related to said Contract which are on file at the office of the Authority and which are hereby adopted and made part of this Agreement as completely as if incorporated herein, and to the satisfaction of the Authority or its duly authorized representative who shall have at all times full opportunity to inspect the materials to be furnished and the work to be done under this Agreement.

This Contract is awarded on the basis of the official total Bid Amount based on the unit prices bid of _____ dollars and _____ Cents (\$ _____).

In consideration of the foregoing premise, the Authority agrees to pay the Contractor for all items of work performed and materials furnished at the amount of the unit prices bid therefore in the Bid submitted for this Contract, subject to any percentage reductions in the total Contract amount that may be named in the Bid corresponding to the basis of award stated in the above paragraph, and subject to the conditions set forth in the Specifications.

The Contractor agrees as follows:

- a. I/WE will not discriminate against any employee or applicant for employment because of race, religion, color, sex or national origin, except where religion, sex or national origin is a bona fide occupational qualification reasonably necessary to the normal operation of the Contractor.

- b. I/WE agree it is the policy of the Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color or national origin, age or disability. Such action shall include: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and on-the-job training.
- c. I/WE agree to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
- d. I/WE in any solicitations or advertising for employees placed by or on behalf of itself, will state that it is an equal opportunity employer.
- e. I/WE agree to adhere to all federal/state regulations including, but not limited to, American Disabilities Act, Equal Employment Opportunity, submitting certified payrolls, and participating in Contractor/Subcontractor labor standard reviews.
- f. Notices and advertisements and solicitations placed in accordance with applicable state and federal law, rule or regulation, shall be deemed sufficient for the purposes of meeting the requirements of this section.
- g. Contract Time - The contractor will have eighty-five (85) working days after the date stated in the written Full Notice-to-Proceed to Fully complete the project.
- h. Failure by Contractor to fulfill these requirements is a material breach of the Contract, which may result in the termination of this Contract, or such other remedy, as the Authority deems appropriate.

IN WITNESS WHEREOF, the parties hereto have duly executed this Agreement the day and year written above.

Sworn to and Subscribed

CENTRAL TEXAS REGIONAL MOBILITY
AUTHORITY

before me this _____
day of _____, 20____.

By: _____

James M. Bass

Executive Director

Notary Public

My commission expires:

CONTRACTOR:

Business Name

Address

Sworn to and subscribed
before me this _____
day of _____, 20____.

by: _____
Notary Public

Title

My commission expires:

(Affix Corporate Seal Here)

INFORMATION ABOUT PROPOSER ORGANIZATION

Proposer's business address:

(No.) (Street) (Floor or Suite)

(City) (State or Providence) (ZIP or Postal Code) (Country)

State or County of Incorporation/Formation/Organization: _____

Signature block for a corporation or limited liability company:

Company: _____

By: _____

Printed Name: _____

Title: _____

Additional Requirements:

- A. If the proposer is a corporation, enter state or country of incorporation in addition to the business address. If the proposer is a partnership, enter state or country of formation. If the proposer is a limited liability company, enter state or country of organization.
- B. Describe in detail the legal structure of the entity making the Bid. If the proposer is a partnership, attach full name and addresses of all partners and the equity ownership interest of each entity, provide the aforementioned incorporation, formation and organization information for each general partner and attach a letter from each general partner stating that the respective partner agrees to be held jointly and severally liable for any and all of the duties and obligations of the proposer under the Bid and under any contract arising therefrom. If the proposer is a limited liability entity, attach full names and addresses of all equity holders and other financially responsible entities and the equity ownership interest of each entity. If the proposer is a limited liability company, include an incumbency certificate executed by a Secretary thereof in the form set on the following page listing each officer with signing authority and its corresponding office. Attach evidence to the Bid and to each letter that the person signing has authority to do so.
- C. With respect to authorization of execution and delivery of the Bid and the Agreements and validity thereof, if any signature is provided pursuant to a power of attorney, a copy of the power of attorney shall be provided as well as a certified copy of corporate or other appropriate resolutions authorizing said power of attorney. If the Proposer is a corporation, it shall provide evidence of corporate authorization in the form of a resolution of its governing body certified by an appropriate officer of the corporation. If the Proposer is a limited liability company, evidence of authorization would be in the form of a limited company resolution and a managing member resolution providing such authorization, certified by an appropriate officer of the managing member. If the Proposer is a partnership, evidence of authorization shall be provided for the governing body of the Proposer and for the governing bodies of each of its general partners, at all tiers, and in all cases certified by an appropriate officer.
- D. The Proposer must also identify those persons authorized to enter discussions on its behalf with the Authority in connection with this Bid, the Project, and The Agreement. The Proposer shall submit with its Bid a power of attorney executed by the Proposer and each member, partner of the Proposer, appointing and designating one or more individuals to act for and bind the Proposer in all matters relating to the Bid.

INCUMBENCY CERTIFICATE

The undersigned hereby certifies to the Central Texas Regional Mobility Authority that he/she is the duly elected and acting _____ Secretary of _____ (the "Company"), and that, as such, he/she is authorized to execute this Incumbency Certificate on behalf of the Company, and further certifies that the persons named below are duly elected, qualified and acting officers of the Company, holding on the date hereof the offices set forth opposite their names.

NAME:

OFFICE:

IN WITNESS WHEREOF, the undersigned has executed this Incumbency Certificate this _____ day of _____.

Secretary

Central Texas Regional Mobility Authority

FY20-1
MAINTENANCE PROJECT

CONTRACT NO. 20VARI24601M

PERFORMANCE BOND

STATE OF TEXAS
COUNTY OF _____

KNOW ALL MEN BY THESE PRESENTS: That _____

_____ of the City of _____

County of _____, and State of _____, as principal,
and

_____ authorized under the laws of the State of Texas to act as surety on bonds for principals, are held and firmly bound unto the Central Texas Regional Mobility Authority (Authority), in the penal sum of

_____ Dollars

(\$ _____) for the payment whereof, the said Principal and Surety bind themselves, their heirs, administrators, executors, successors, jointly and severally, by these presents:

WHEREAS, the Principal has entered into a certain written contract with the Authority, dated the _____ day of _____, 20__ (the "Contract"), to which the said Contract, along with the Contract Documents referenced therein are hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall faithfully perform said Agreement and shall in all respects duly and faithfully observe and perform all and singular the covenants, conditions and agreements in and by the Contract agreed and covenanted by the Principal to be observed and performed, and according to the true intent and meaning of said Contract and the Contract Documents hereto annexed, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, HOWEVER, that this bond is executed pursuant to the provisions of Chapter 2253 of the Texas Government Code, as amended and all liabilities on this bond shall be determined in accordance with the provisions of said Chapter to the same extent as if it were copied at length herein.

SURETY, for value received, stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Agreement or to the work performed thereunder, or to the Contract Documents referenced therein, shall in anyway affect the obligations on this bond, and it does hereby waive notice of such change, extension of time, alteration or addition to the terms on the Agreement, or to the work to be performed thereunder.

IN WITNESS WHEREOF, the said Principal and Surety have signed and sealed this instrument this _____ day of _____, 20__.

PRINCIPAL

SURETY

SIGNATURE

SIGNATURE

NAME & TITLE

NAME & TITLE

ADDRESS

ADDRESS

(_____) _____
PHONE NUMBER

(_____) _____
PHONE NUMBER

The name and address of the Resident Agency of Surety is:

(_____) _____
PHONE NUMBER

SIGNATURE OF LICENSED LOCAL
RECORDING AGENT appointed to countersign
on behalf of Surety (Required by Art. 21.09 of the
Insurance Code)

I, _____, having executed Bonds
SIGNATURE

for _____ do hereby affirm I have
NAME OF SURETY

verified that said Surety is now certified with Authority from either: (a) the Secretary of the Treasury of the United States if the project funding includes Federal monies; or (b) the State of Texas if none of the project funding is from Federal sources; and further, said Surety is in no way limited or restricted from furnishing Bond in the State of Texas for the amount and under conditions stated herein.

Central Texas Regional Mobility Authority

FY20-1
MAINTENANCE PROJECT

CONTRACT NO. 20VARI24601M

PAYMENT BOND

STATE OF TEXAS
COUNTY OF _____

KNOW ALL MEN BY THESE PRESENTS: That _____

_____ of the City of _____

County of _____, and State of _____, as Principal
(hereinafter referred to as the "Principal"), and

_____ authorized under the laws of the State of Texas to act as Surety on bonds for principals (hereinafter referred to as the "Surety"), are held and firmly bound unto Central Texas Regional Mobility Authority, (hereinafter referred to as the "Authority"), in the penal sum of

_____ Dollars

(\$_____) for the payment whereof, the said Principal and Surety bind themselves, their heirs, administrators, executors, successors and assigns, jointly and severally, by these presents:

WHEREAS, the Principal has entered into a certain written contract with the Authority, dated the _____ day of _____, 20__ (the "Contract"), to which the said Contract, along with the Contract Documents referenced therein are hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall pay all claimants supplying labor and material to him or a subcontractor in the prosecution of the Work provided for in said Contract, then, this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, HOWEVER, that this bond is executed pursuant to the provisions of Chapter 2253 of the Texas Government Code, as amended and all liabilities on this bond shall be determined in accordance with the provisions of said Chapter to the same extent as if it were copied at length herein.

SURETY, for value received, stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the Work performed thereunder, or to the other Contract Documents accompanying the same, shall in anyway affect its obligation on this bond, and it does hereby waive notice of such change, extension of time, alteration or addition to the terms of the Contract, or to the work to be performed thereunder or to the other Contract Documents accompanying the same.

IN WITNESS WHEREOF, the said Principal and Surety have signed and sealed this instrument this _____ day of _____, 20__.

PRINCIPAL

SURETY

SIGNATURE

SIGNATURE

NAME & TITLE

NAME & TITLE

ADDRESS

ADDRESS

(_____) _____
PHONE NUMBER

(_____) _____
PHONE NUMBER

The name and address of the Resident Agency of Surety is:

(_____) _____
PHONE NUMBER

SIGNATURE OF LICENSED LOCAL
RECORDING AGENT appointed to countersign
on behalf of Surety (Required by Art. 21.09 of the
Insurance Code)

Central Texas Regional Mobility Authority

FY20-1
MAINTENANCE PROJECT

CONTRACT NO. 20VARI24601M

RECEIPT OF ADDENDA

Receipt of addendum, if issued, must be acknowledged electronically on the CivCast website.

Failure to confirm receipt of all addenda issued will result in the bid being deemed non-responsive.

Addendums Received and acknowledged

Addendum #1 dated May 6, 2021

Also acknowledged via CIVCAST

Keith [Signature]
VICE - President
6/8/2021

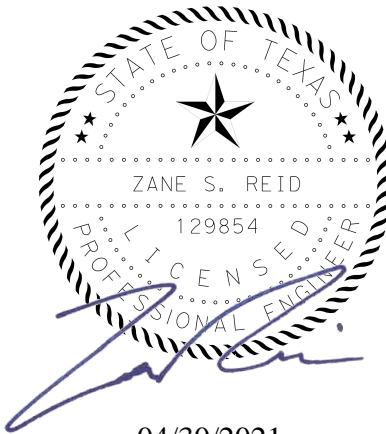
Central Texas Regional Mobility Authority

FY20-1
MAINTENANCE PROJECT

CONTRACT NO. 20VARI24601M

SEALS

The enclosed Specifications, Special Provisions, General Notes, and Specification Data in this document have been selected by me, or under my responsible supervision as being applicable to this project.



Atkins North America, Inc
Firm #474

Alteration of a sealed document without proper notification to the responsible engineer is an offence under the Texas Engineering Practice Act.

: GENERAL NOTES:

Basis of Estimate		
Item	Description	**Rate
347	Thin Surface Mixtures (TOM)	
	Asphalt	7.0 LB/SY/IN
	Aggregate (SAC A)	109.0LB/SY/IN
3084	Bonding Course	0.10 GAL/SY

** For Informational Purposes Only

GENERAL

The "Engineer" shall be the Central Texas Regional Mobility Authority's (Mobility Authority) consultant identified by the Mobility Authority at the Pre-Construction Meeting.

The contractor will be given written Notice to Proceed (NTP) to being work on this project. Work must begin within seven (7) days after such notification.

References to manufacturer's trade name or catalog numbers are for the purpose of identification only. Similar materials from other manufacturers are permitted if they are of equal quality, comply with the specifications for this project, and are approved by the Mobility Authority.

Perform work during good weather. If work is damaged by a weather event, the Contractor is responsible for all costs associated with replacing damaged work.

If work is performed at Contractor's option, when inclement weather is impending, and the work is damaged by subsequent precipitation, the Contractor is responsible for all costs associated with replacing the work, if required.

Remove and replace, at the Contractor's expense, and as directed, all defective work, which was caused by the Contractor's workforce, materials, or equipment.

The roadbed will be free of organic material prior to placing any section of the pavement structure.

Equip all construction equipment used in roadway work with highly visible omnidirectional flashing warning lights.

Contractor is responsible for verifying the location of all utilities (overhead and underground) and notifying the Engineer of any discrepancies before beginning construction. Contractor shall contact utility companies 48 hours prior to construction and take "caution" in areas where utilities are close together to avoid damaging the utilities.

Both TxDOT owned and CTRMA owned Intelligent Transportation Systems (ITS) Infrastructure may exist within the limits of this project and the system must remain operational throughout construction. The exact location of ITS Infrastructure is not known. Backbone and hub communication fiber links are critical and must be maintained during the duration of the project. Proposed and temporary ITS and toll systems shall operate as a coherent system. Short periods for switchovers must be scheduled with TxDOT and the Mobility Authority and should occur at night. Power and communications to ITS and toll devices must be maintained. Changeovers for both temporary and permanent ITS must be scheduled with TxDOT and the Mobility Authority and provide 30 calendar days advance written notice prior to modifying the ITS or toll system.

Use caution if working in these areas to avoid damaging or interfering with existing facilities and infrastructure. Repair any damage to the ITS, toll system, and infrastructure within 8 hours of occurrence at no cost to TxDOT/Mobility Authority. In the event of TxDOT system damage, notify TxDOT at (512) 974-0883 and the Toll Operations Division at (512) 874-9177 within one hour of occurrence. In the event of Mobility Authority system damage, notify the Mobility Authority Director of Operations at (512) 996-9778 within one hour of occurrence. Failure of the Contractor to repair damage within 8 hours of occurrence to any infrastructure that conveys any corridor information to TxDOT/Mobility Authority will result in the Contractor being billed for the full cost of emergency repairs performed by others. Upon completion of installation of permanent fiber optic duct bank and cable and switchover from temporary to permanent has been made, remove all temporary optic cable, timber poles, messenger cable and ground boxes. Temporary conduit to existing ground boxes shall be separated from existing ground boxes and access port to ground box shall be repaired. Provide notification to TxDOT and the Mobility Authority 48 hours in advance of changeovers for both temporary and permanent ITS and provide anticipated duration of down time.

Provide a smooth, clean sawcut along the existing pavement structure, as directed. Consider subsidiary to the pertinent Items.

Construct all manholes/valves to final pavement elevations prior to the placement of final surface. If the manholes/valves are going to be exposed to traffic, place temporary asphalt around the manhole/valve to provide a 50:1 taper. The asphalt taper is subsidiary to the ACP work.

Supply litter barrels in enough numbers at locations as directed to control litter within the project. Consider subsidiary to pertinent Items.

Use a self-contained vacuum broom to sweep the roadway and keep it free of sediment as directed. The contractor will be responsible for any sweeping above and beyond the normal maintenance required to keep fugitive sediment off the roadway as directed by the Engineer.

Damage to existing pipes and SET's due to Contractor operations will be repaired at Contractor's expense.

All locations used for storing construction equipment, materials, and stockpiles of any type, within the right of way, will be as directed. Use of right of way for these purposes will be restricted to those locations where driver sight distance to businesses and side street intersections is not obstructed and at other locations where an unsightly appearance will not exist. The Contractor will not have exclusive use of right of way but will cooperate in the use of the right of way with the city/county and various public utility companies as required.

Protect all areas of the right of way (ROW) that are not included in the actual limits of proposed construction areas. Exercise care to prevent damage of trees, vegetation and other natural surroundings. Areas not to be disturbed will be as directed by the Engineer. Restore any area disturbed by the Contractor's operations to a condition as good as, or better than, before the beginning of work.

During evacuation periods for Hurricane events the Contractor will cooperate with the Mobility Authority and TxDOT for the restricting of Lane Closures and arranging for Traffic Control to facilitate Coastal Evacuation Efforts.

Contractor is responsible for all toll charges incurred by Contractor vehicles.

Coordinate and obtain approval for all work over existing roadways.

Bridge Vertical Clearance and Traffic Handling

Notify the Engineer and the local TxDOT bridge engineer 10 business days prior to the following: change in vertical clearance, placing beams/girders over traffic, opening or removing traffic from a bridge or portion of a bridge, and completion of bridge work. This requirement includes bridge class culverts. Provide vertical clearance for all structures (including signal mast arms, span wires, and overhead sign bridge structures) within the project limit. Submit information and notices to local bridge engineer at AUS_BRG_Notify@txdot.gov.

ITEM 4 – SCOPE OF WORK

Final clean up will include the removal of excess material considered detrimental to vegetation growth along the front slope of the ditch. Materials, as specified by the Engineer, will be removed at the Contractor's expense.

ITEM 5 – CONTROL OF THE WORK

Provide a 48-hour advance email notice to AUS_Locate@txdot.gov to request illumination, traffic signal, ITS, or toll equipment utility locates on TxDOT's system. Provide a 48-hour advance notice to the Engineer to request locates on the Mobility Authority's system.

If this Agreement authorizes the Authority or its contractor to perform any work on State right of way, before beginning work the entity performing the work shall provide TxDOT with a fully executed copy of TxDOT's Form 1560 Certificate of Insurance verifying the existence of coverage in the amounts and types specified on the Certificate of Insurance for all persons and entities working on State right of way. This coverage shall be maintained until all work on TxDOT right of way is complete. If coverage is not maintained, all work on State right of way shall cease immediately, and TxDOT may recover damages and all costs of completing the work.

Electronic Shop Drawing Submittals:

Submit electronic shop drawing submittals using the Mobility Authority's Electronic Data Management System (EDMS), which will be established for the Project prior to commencing construction. Submittals will be addressed to the Construction, Engineering and Inspections (CE&I) Firm's Resident Engineer (RE) and additional staff, as appropriate.

ITEM 6 - CONTROL OF MATERIALS

Give a minimum of 5 business days' notice for materials, which require inspection at the Plant.

ITEM 7 – LEGAL RELATIONS AND RESPONSIBILITIES

Refer to the Environmental Permits, Issues and Commitments (EPIC) plan sheets for additional requirements and permits.

When any abandoned well is encountered, cease construction operations in this area and notify the Engineer who will coordinate the proper plugging procedures. A water well driller licensed in the State of Texas must be used to plug a well.

Erosion control and stabilization measures must be initiated immediately in portions of the site where construction activities have temporarily ceased and will not resume for a period exceeding 14 calendar days. Track all exposed soil, stockpiles, and slopes. Tracking consists of operating a tracked vehicle or equipment up and down the slope, leaving track marks perpendicular to the direction of the slope. Re-track slopes and stockpiles after each rain event or every 14 days, whichever occurs first. This work is subsidiary.

Do not park equipment where driver sight distance to businesses and side street intersections is obstructed, especially after work hours. If it is necessary to park where drivers' views are blocked, make every effort to flag traffic accordingly. Give the traveling public first priority.

Perform maintenance of vehicles or equipment at designated maintenance sites. Keep a spill kit on-site during fueling and maintenance. This work is subsidiary.

Maintain positive drainage for permanent and temporary work for the duration of the project. Be responsible for any items associated with the temporary or interim drainage and all related maintenance. This work is subsidiary.

Collect wastewater generated on-site by chemical toilets and transport off the recharge zone and dispose of properly.

Suspend all activities near any significant recharge features, such as sinkholes, caves, or any other subterranean openings that are discovered during construction or core sampling. Do not proceed until the designated Geologist or TCEQ representative is present to evaluate and approve remedial action.

Locate aboveground storage tanks kept on-site for construction purposes in a contained area as to not allow any exposure to soils. The containment will be sized to capture 150% of the total capacity of the storage tanks.

For projects with PSLs in Edwards Aquifer Recharge/Contributing Zone or in USACE Jurisdictional Area:

Project Specific Location (PSL) in Edwards Aquifer Recharge and Contributing Zone

Obtain written approval from the Engineer for all on or off right of way PSLs not specifically addressed in the plans. Provide a signed SW3P sketch of the location 30 business days prior to use of the PSL. Include a list of materials, equipment and portable facilities that will be stored at the PSL.

PSL in USACE Jurisdictional Area

Do not initiate activities in a PSL associated with a U.S. Army Corps of Engineers (USACE) jurisdictional area that have not been previously evaluated by the USACE as part of the permit review of this project. Such activities include, but are not limited to, haul roads, equipment staging areas, borrow and disposal sites. Associated defined here means materials are delivered to or from the PSL. The jurisdictional area includes all waters of the U.S. including wetlands or associated wetlands affected by activities associated with this project. Special restrictions may be required for such work. Consult with the USACE regarding activities, including PSLs that have not been previously evaluated by the USACE. Provide the Department with a copy of all USACE coordination and approvals before initiating activities.

Proceed with activities in PSLs that do not affect a USACE jurisdictional area if self-determination has been made that the PSL is non-jurisdictional or proper clearances have been obtained in USACE jurisdictional areas or have been previously evaluated by the USACE as part of the permit review of this project. Document any determinations that PSL activities do not affect a USACE jurisdictional area. Maintain copies of PSL determinations for review by the Department or any regulatory agency. The Contractor must document and coordinate with the USACE, if required,

before any excavation material hauled from or embankment material hauled into a USACE jurisdictional area by either (1) or (2) below.

1. **Restricted Use of Materials for the Previously Evaluated Permit Areas.** When an area within the project limits has been evaluated by the USACE as part of the permit process for this project:
 - a. suitable excavation of required material in the areas shown on the plans and cross sections as specified in Standard Specification Item 110, Excavation is used for permanent or temporary fill within a USACE jurisdictional area;
 - b. suitable embankment from within the USACE jurisdictional area is used as fill within a USACE evaluated area;
 - c. Unsuitable excavation or excess excavation that is disposed of at an approved location within a USACE evaluated area.

2. **Contractor Materials from Areas Other than Previously Evaluated Areas.** Provide the Department with a copy of all USACE coordination and approvals before initiating any activities in a jurisdictional area within the project limits that has not been evaluated by the USACE or for any off right of way locations used for the following, but not limited to, haul roads, equipment staging areas, borrow and disposal sites:
 - a. Standard Specification Item 132, Embankment is used for temporary or permanent fill within a USACE jurisdictional area;
 - b. Unsuitable excavation or excess excavation that is disposed of outside a USACE evaluated area.

Work over or near Bodies of Water (Lakes, Rivers, Ponds, Creeks, etc.).

Keep on site a universal spill kit adequate for the body of water and the work being performed. No debris is allowed to fall into a body of water. Debris that falls into the water must be removed at the end of each work day. Debris that falls into the floodway must be removed at the end of each work week or prior to a rain event. This work is subsidiary.

Migratory Birds and Bats.

Migratory birds and bats may be nesting within the project limits and concentrated on roadway structures such as bridges and culverts. Remove all old and unoccupied migratory bird nests from any structures, trees, etc. between September 16 and February 28. Prevent migratory birds from re-nesting between March 1 and September 15. All methods used for the removal of old nesting areas and the prevention of re-nesting must be submitted to the Mobility Authority 30 business days prior to begin work. This work is subsidiary.

If active nests are encountered on-site during construction, all construction activity within 50 ft. of the nest must cease immediately. Contact the Engineer to determine how to proceed.

No extension of time or compensation payment will be granted for a delay or suspension of work caused by migratory birds or bats. This work is subsidiary.

Law Enforcement Personnel.

Submit charge summary and invoices using Mobility Authority-provided forms.

Patrol vehicles must be clearly marked to correspond with the officer's agency and equipped with appropriate lights to identify them as law enforcement. For patrol vehicles not owned by a law enforcement agency, markings will be retroreflective and legible from 100 ft. from both sides and the rear of the vehicle. Lights will be high intensity and visible from all angles.

No payment will be made for law enforcement personnel needed for moving equipment or payment for drive time to/from the event site.

If the Contractor has a field office, provide an office location for a supervisory officer when event requires a supervising officer. This work is subsidiary.

A maximum combined rate of \$70 per hour for the law enforcement personnel and the patrol vehicle will be allowed. Any scheduling fee is subsidiary per Standard Specification 502.4.2.

Cancel law enforcement personnel when the event is canceled. Cancellation, minimums or "show up" fees will not be paid when cancellation is made 12 hours prior to beginning of the event. Failure to cancel within 12 hours will not be cause for payment for cancellation, minimums, or "show up" time. Payment of actual "show up" time to the event site due to cancellation will be on a case by case basis at a maximum of 2 hours per officer.

Alterations to the cancellation and maximum rate must be approved by the Engineer or pre-determined by official policy of the officers governing authority.

Back Up Alarm

For hours 9 P to 5 A, utilize a non-intrusive, self-adjusting noise level reverse signal alarm. This is not applicable to hot mix or seal coat operations. This is subsidiary.

ITEM 8 – PROSECUTION AND PROGRESS

Working days will be charged based on a Standard Workweek. Work is to be performed during the nighttime only.

The Contractor shall have 85 working days to Fully Complete All Work. Accrue contract time charges through the Contractor's completion of the final punch list.

Complete Milestone 1 prior to October 15th, 2021.

Milestone 1 work shall be considered complete when all flexible pavement repairs been completed, permanent (Type I) pavement markings have been installed matching the existing configuration, and traffic is returned to its original configuration.

The time charges for Milestone 1 will begin when the Contractor begins work following issuance of NTP and end upon completion of Milestone 1 or October 15th, 2021 whichever occurs earlier. For completion of Milestone 1 after October 15th, 2021, there will be disincentives assessed at \$1,000 per calendar day. Following the completion of Milestone 1, time charges may be suspended at the Contractor's request prior to the October 15th, 2021 mandatory work stoppage.

Time charges will be suspended October 15th, 2021, or when the Engineer determines unfavorable weather inconsistent with temperature placement specifications prevents the continuation of work. Time charges will resume beginning April 15th, 2022 or when the Engineer determines favorable weather consistent with temperature placement specifications allows the resumption of work, and end upon Full Completion of All Work. No work shall be performed during

the suspension of work as determined by the Engineer, and all signs and barricades shall be removed from the project during the time suspension.

Electronic versions of schedules will be saved in native format and delivered in both native and PDF formats.

Provide via email a 3-week look-ahead schedule in Gantt chart format. Submit weekly prior to the project meeting or by noon on Friday, whichever comes first. Designate each activity as night or day shift and include the name of the foreman or contractor. The chart shall have a specific section dedicated solely to lane closures and detours. Each lane closure and detour shall be an individual item on the schedule.

Lane Closure Liquidated Damages (LCLDs) will be assessed as shown in the **Table 1** below.

Any unauthorized lane closures will result in an assessment to the Contractor of \$1,000 per lane per hour or the assigned LCLD in the Table, whichever is the higher amount.

All Liquidated Damage assessments for the Contractor will be added or subtracted from the value of the Payment Application for that associated period.

Table 1 Lane Closure Liquidated Damages (LCLD) Rates

Late Charges (Per Lane)				
Lane Rental Period	183A / US 183		290E / US 290	
	Mainlanes and Frontage Roads		Mainlanes and Frontage Roads	
	Lane	Shoulder	Lane	Shoulder
0-15 Minutes	\$1,000	\$1,000	\$1,000	\$1,000
15-30 Minutes	\$2,000	\$2,000	\$2,000	\$2,000
30-45 Minutes	\$3,000	\$3,000	\$3,000	\$3,000
45-60 Minutes	\$4,000	\$4,000	\$4,000	\$4,000
Every Additional 15-Minute Interval after 1-Hour	\$2,000	\$2,000	\$2,000	\$2,000

For example: If the contractor has one southbound lane of traffic closed on US 183 until Monday at 5:32 a.m., the contractor is 32 minutes outside of the allowable lane closure period. Refer to Item 502 for Allowable Lane Closure Times. The late charges will be accrued as follows:

$$1 \text{ lane closed} \times [\$1,000 + \$1,000 + \$1,000] = \$3,000$$

Emergency lane closures are not subject to lane closure charge assessments. Emergency lane closures are defined as closures caused by circumstances other than those caused by the contractor and shall be approved by the authority.

ITEMS 104, 105, AND 354 – REMOVING CONCRETE; REMOVING BASE AND ASPHALT PAVEMENT; PLANING AND TEXTURING PAVEMENT

Saw or mill existing asphalt and concrete pavement along neat lines where portions are to be left in place temporarily or permanently.

Properly dispose of unsalvageable material.

ITEM 134 – BACKFILLING PAVEMENT EDGES

Place TY A backfill immediately following placement of the TOM surface.

For TY A backfill, furnish flexible base meeting the requirement for any type or grade, except for Grade 4, in accordance to Item 247. Compressive strengths for Item 247 flexible base are waived when supplied for this item. In lieu of flexible base, RAP may be supplied for TY A backfill. RAP must be 100% passing a 2.5 in. sieve in accordance to Tex-110-E. Compact using a light pneumatic roller. Install at a 3:1 slope (max) and tie into existing terrain. Apply SS-1 to front slope at a rate of 0.12 GAL/SY, after compaction is complete.

ITEM 300 – ASPHALTS, OILS, AND EMULSIONS

Asphalt season is May 1 thru September 15. Emulsified Asphalt season is April 1 thru October 15.

Apply tack coat at 0.06 GAL/SY (residual). Apply non-tracking tack coat using manufacturer recommend rates. In addition to tack allowed per the specification, an approved list of tack coats is maintained by the District Lab.

ITEM 320 - EQUIPMENT FOR ASPHALT CONCRETE PAVEMENT

Use of motor grader is allowed for placement of mixtures greater than 10 inches from the riding surface, when hot-mix is used in lieu of flex base, or as allowed.

ITEM 340 THRU 348 - HOT-MIX ASPHALT PAVEMENT

The Contractor must sample asphalt binder, in accordance to the applicable item. Label the sample can with the corresponding CSJ, lot, and subplot numbers. Samples must be stored in a common area where they are readily available to the TxDOT and/or Mobility Authority representative at the plant. The Contractor will be responsible for supplying storage for all samples. Retain all asphalt samples until hot mix production is complete or directed otherwise. Contractor is responsible for disposal of all asphalt binder samples, in accordance to Local, State, and Federal regulations.

Core holes may be filled with an Asphaltic patching material meeting the requirements of DMS-9203 or with SCM meeting requirements of DMS-9202.

Mill a transverse butt joint to transition from the new ACP to the existing surface. Make the transition a minimum of 50' H: 1" V. Saw cut the existing pavement at the transverse butt joint. Use a device to create a maximum 3H: 1V notched wedge joint on all longitudinal joints of 2" or greater. This work is subsidiary.

Prior to milling, core the existing pavement to verify thickness. This work is subsidiary.

Ensure placement sequence to avoid excess distance of longitudinal joint lap back not to exceed one day's production rates, or as directed by the engineer.

Submit any proposed adjustments or changes to a JMF before production of the new JMF.

Tack every layer. Do not dilute tack coat. Apply it evenly through a distributor spray bar.

Provide a minimum transition of 10' for intersections, 10' for commercial driveways, and 6' for residential driveways unless otherwise shown on the plans. Irregularities will require the replacement of a full lane width using an asphalt paver. Replace the entire subplot if the irregularities are greater than 40% of the subplot area.

Lime or an approved anti-stripping agent must be used when crushed gravel is utilized to meet a SAC "A" requirement.

When using RAP or RAS, include the management methods of processing, stockpiling, and testing the material in the QCP submitted for the project. If RAP and RAS are used in the same mix, the QCP must document that both of these materials have dedicated feeder bins for each recycled material. Blending of RAP and RAS in one feeder bin or in a stockpile is not permitted.

Use a maximum allowable amount of 50% RAP. Asphalt content and binder properties of RAP and RAS stockpiles must be documented when recycled asphalt content greater than 20% is utilized.

No RAS or RAP is allowed in surface courses.

Approved warm-mix additives is required for all surface mix application when RAP is used. Dosage rates will be approved during JMF approval.

The Hamburg Wheel Test will have a minimum rut depth of 3mm.

ITEM 340 & 341 - DENSE-GRADED HOT-MIX ASPHALT

Use the SGC for design and production testing of all mixtures.

When using substitute binders, mold specimens for mix design and production at the temperature required for the substitute binder used to produce the HMA.

The Hamburg Wheel minimum number of passes for PG 64 or lower is reduced to 7,000.

The Engineer may accept Hamburg Wheel test results for production and placement if no more than 1 of the 5 most recent tests is below the specified number of passes and the failing test is no more than 2,000 passes below the specified number of passes.

ITEM 346 - STONE MATIX ASPHALT (SMA)

For SAC A, blending SAC B aggregate with an RSSM greater than the SAC A rating or 10, whichever is greater, is prohibited.

The use of RAP is prohibited.

The minimum rut depth at 20,000 passes of the Hamburg Wheel test is 3mm.

ITEM 347 - THIN OVERLAY MIXTURES (TOM)

For SAC A, blending SAC B aggregate with an RSSM greater than the SAC A rating or 10, whichever is greater, is prohibited.

When using a Thermal Imaging System follow the Weather Condition requirements for When Not Using a Thermal Imaging System.

Produce mixture with a Department approved WMA additive or process to facilitate compaction when the haul distance is greater than 40 miles or when the air temperature is 70°F and falling. WMA processes such as water or foaming processes are not allowed under these circumstances.

Water flow rate will exceed 120 seconds when tested using Tex-246-F. Perform water flow rate testing once per lot.

Operate pickup equipment so that when hot-mix is placed on the roadbed, 100% of the mixture deposited on the roadbed is picked up and loaded into the paver.

ITEM 351 – FLEXIBLE PAVEMENT STRUCTURE REPAIR

For 8" Flexible pavement structure repairs use 6.5" of D-GR HMA TY-B PG64-22 placed in two equal lifts, topped with 1.5" of SMA-D SAC-A PG76-22.

For 6" Flexible pavement structure repairs use 4.5" of D-GR HMA TY-B PG64-22, topped with 1.5" of SMA-D SAC-A PG76-22.

For 2" Flexible pavement structure repairs use 2" of SMA-D SAC-A PG76-22.

Work to be performed at locations as directed by the Engineer. Repair areas will be marked in the field by the Engineer. Notify the Engineer five (5) business days prior to beginning work.

Additional repairs may become necessary throughout the life of the project. If additional repairs are necessary, repairs will be paid in accordance with the bid items included in plans with adjustments for depth in accordance with Item 351, as directed by the Engineer.

ITEM 354 - PLANING AND TEXTURING PAVEMENT

Contractor retains ownership of materials. Remove the loose material before opening to traffic.

Taper permanent transverse faces 50 ft. per 1 in. Taper temporary transverse faces 25 ft. per 1 in. Taper permanent longitudinal faces 6 ft. per 1 in. HMA may be used as temporary tapers. Provide minimum 1 in. butt joints at bridge ends and paving ends. This work is subsidiary.

Prior to commencement of the work, construct a test section that is 1000 ft in length.

Edge Milling

In addition to standard planing machine requirements, use planing machines that are:

- capable of removing pavement to an accuracy of 1/16 in. with a maximum tool spacing of 0.20 in.

Edge mill 6 ft. width 0"-1" depth along existing curb and gutter to match proposed pavement surface elevation to the existing lip of gutter elevation.

Edge mill 6 ft. width 0"-1" depth along metal beam guard fence mow strips to match the proposed pavement surface elevation to the existing mow strip elevation.

Edge mill 6 ft. width 0"-1" depth along concrete traffic barrier to match the proposed pavement surface elevation to the existing pavement elevation at the face of barrier.

ITEM 502 - BARRICADES, SIGNS, AND TRAFFIC HANDLING

Table 2 (Allowable Lane Closure Times)

<u>Roadway</u>	<u>Limits</u>	<u>Allowable Closure Time</u>
US 183	SH 29 to FM 1327	9 P to 5 A
183A	SH 29 to SH 45	9 P to 5 A
US 290 E	IH 35 to SH 95	9 P to 5 A
RM 1431	Lohmans Ford Rd to IH 35	9 P to 5 A
All	Within 200' of a signalized intersection	9 P to 5 A
All	All (Full Closure, see allowable work below)	11 P to 4 A

Table 3 (Mobile Operations)

<u>Roadway</u>	<u>Allowable Sun Night thru Fri Noon</u>	<u>Allowable Sat thru Sun Morn</u>
Within Austin City Limits	9 P to 5 A	7 P to 10 A
Outside Austin City Limits	9 P to 5 A	6 P to 11 A

For roadways without defined allowable closure times, nighttime lane closures will be allowed from 8 P to 5 A. Unless stated, daytime or Friday night lane closures will not be allowed and one lane in each direction will remain open at all times for all roadways.

Full closures only allowed Sunday Night thru Friday morning for bridge beam installation, bridge demolition, or OSB truss removal/installation. Full closures only allowed for roadways with frontage roads or if a designated detour route is provided in the plans.

No closures will be allowed on the weekends adjacent to, working day prior, and working day after the National Holidays defined in the Standard Specifications and Easter weekend. Closures the Sunday of the Super Bowl will not be allowed from 1 P to 11 P. No closures will be allowed on Friday and the weekends for Formula 1 at Circuit of the Americas, Austin City Limits Fest, South by Southwest, Republic of Texas Rally, UT home football games, Rodeo Austin, State of Texas sales tax holiday, or other special events that could be impacted by the construction. All lanes will be open by noon of the day before these special events.

For any events at the Cedar Park Events Center on 183A Toll, lane closures from the event center to 2 miles south of the event center are not permitted 2 hours preceding the start time of an event, and 2 hours following the end time of an event. Event dates for which this restriction will be warranted will be determined on a monthly basis, as the event calendar is available.

To account for directional traffic volumes, begin and end times of closures may be shifted equally by the Engineer. The closure duration will remain. Added compensation is not allowed.

Submit an emailed request for a lane closure (LCN) to the Mobility Authority/TxDOT. The email will be submitted in the format provided by the Mobility Authority. Receive concurrence prior to

implementation. Submit a cancellation of lane closures a minimum of 18 hours prior to implementation. Blanket requests for extended periods are not allowed. Max duration of a request is 2 weeks prior to requiring resubmittal. Provide 2-hour notice prior to implementation and immediately upon removal of the closure.

For roadways listed in Table 2: Submit the request 96 hours prior to implementation.

For roadways not listed in Table 2: Submit the request a minimum of 48 hours prior to the closure and by the following deadline immediately prior to the closure: 11A on Tuesday or 11A on Friday.

For all roadways: Submit request for traffic detours and full roadway closures 168 hours prior to implementation. Submit request for nighttime work 96 hours to implementation date.

Maintain a minimum of 1 through lane in each direction, unless otherwise directed in plans.

Cancellations of accepted closures (not applicable to full closures or detours) due to weather will not require resubmission in accordance with the above restrictions if the work is completed during the next allowable closure time.

In the case of an unauthorized lane closure, all approved LCNs will be revoked until a meeting is held between the contractor and the Engineer. No lane closure notices will be approved until the meeting is concluded.

Coordinate Main Lane closures with adjacent projects including those projects owned by other agencies and departments. Closures that conflict with adjacent contractor will be prioritized according to critical path work per latest schedule. Conflicting critical path or non-critical work will be approved for first LCN submitted. Denial of a closure due to prioritization or other reasons will not be reason for time suspension, delay, overhead, etc.

Cover, relocate or remove existing signs that conflict with traffic control. Install all permanent signs, delineation, and object markers required for the operation of the roadway before opening to traffic. Use of temporary mounts is allowed or may be required until the permanent mounts are installed or not impacted by construction. Maintain the temporary mounts. This work is subsidiary.

Shadow Vehicle with TMA is required as shown in the TCP sheets and for setup/removal of traffic control devices.

Meet with the Engineer prior to lane closures to ensure that sufficient equipment, materials, devices, and workers will be used. Take immediate action to modify traffic control, if at any time the queue becomes greater than 20 minutes. Have a contingency plan of how modification will occur. Consider inclement weather prior to implementing the lane closures. Do not set up traffic control when the pavement is wet.

Place a 28-inch cone, meeting requirements of BC (10), on top of foundations that have protruding studs. This work is subsidiary.

Incorporate and maintain a 3H: 1V safety wedge into the proposed construction for any roadway edge of 2 inches or greater adjacent to a roadway under traffic. Installation and removal of a safety wedge is subsidiary.

To determine a speed limit or an advisory speed limit, submit a request to TxDOT 60 business days prior to manufacture of the sign. Furnish advisory speed signs in enough numbers as directed.

Do not set up traffic control when the pavement is wet.

Maintain access to all streets and driveways at all times, unless otherwise approved. Considered subsidiary to the pertinent Items.

Notify property owners a minimum of 48 hr. in advance of beginning work on their driveway. Provide a list of each notification and contact prior to each closure.

ITEM 506 - TEMPORARY EROSION, SEDIMENTATION, AND ENV CONTROLS

Install, maintain, remove erosion, sedimentation, and environmental control measures in areas of the right of way utilized by the contractor that are outside the limits of disturbance required for construction. Permanently stabilize the area. This work is subsidiary.

ITEM 585 - RIDE QUALITY FOR PAVEMENT SURFACES

Use Surface Test Type B pay adjustment schedule 3 to evaluate ride quality of the travel lanes in accordance with Item 585, "Ride Quality for Pavement Surfaces."

ITEM 600s – LIGHTING, SIGNING, MARKINGS, AND SIGNALS

Use materials from Material Producer List as shown on the TxDOT website (TxDOT.gov > Business > Resources). Furnish new material as required per Standard Specification.

Meet the requirements of the NEC, Texas MUTCD, TxDOT standards, and TxDOT Standard Specifications. If existing elements shown to remain do not meet the codes or specifications, provide notice to the Engineer.

ITEM 662, 666, & 672 - PAVEMENT MARKINGS & MARKERS

Notify the Engineer at least 24 hours in advance of removing existing striping and placing pavement markings & markers.

Apply markings during good weather unless otherwise directed. If markings are placed at Contractor's option, when inclement weather is impending, and the markings are damaged by subsequent precipitation, the Contractor is responsible for all costs associated with replacing the markings.

Unless the striping design differs from the existing striping location, place the new striping to match the existing striping. Reference and record the type and positioning of existing pavement markings that will be obliterated by the proposed pavement resurfacing work. Use the recordings to aid in positioning replacement markings. This work is subsidiary to the various bid items.

Reference the following As-Built Plans for additional information on striping layouts:

- 183A Phase I: CSJ 0151-04-054 & 0151-05-080
- 183A Phase II: CTRMA Contract No. 10183A24601C
- US 183: CSJ 0151-04-063 & 0151-04-064
- 290E Phase II: CSJ 0114-02-053.

Proposed crosswalk markings shall be the High-Visibility Longitudinal Crosswalk pattern in accordance with TxDOT Standard PM(4)-20.

ITEM 662 - WORK ZONE PAVEMENT MARKINGS

Notify the Engineer at least 24 hours in advance of work for this item.

Maintain removable and short-term markings daily. Remove work zone pavement markings within 48 hours after permanent striping has been completed.

Foil backed pavement markings will not be allowed.

Work zone pavement markings shall be replaced at the Contractor's expense in the event that 14 days has expired since the application of the surface treatment or permanent pavement markings.

Item 668 is not allowed for use as Item 662.

ITEM 666 - RETROREFLECTORIZED PAVEMENT MARKINGS

Notify the Engineer at least 24 hours in advance of work for this item.

Place longitudinal markings nightly for roadways with ADT greater than 100,000. Replace missing or damaged tabs nightly. If using tabs, place longitudinal markings weekly by 5 AM Friday for all weekday work and by 5 AM Monday for all weekend work. Failure to maintain tabs or place longitudinal markings by deadline will require nightly placement of pavement markings.

Place longitudinal markings no later than 7 calendar days after placement of the surface for roadways with AADT greater than 20,000. Place longitudinal markings within 10 calendar days of placing surface for roadways with ADT greater than 5,000.

Pavement Sealer will cure 48 hours prior to placing TY I markings. Roadway surface will cure 72 hours prior to placing TY I.

When the raised portion of a profile marking is placed as a separate operation from the pavement marking, the raised portion must be placed first then covered with TY I.

When using black shadow to cover existing stripe apply a non-retroreflective angular abrasive bead drop. The marking color shall be adjusted to resemble the pavement color. If Item 677 is not used prior to placement of black shadow, scrape the top of the marking with a blade or large piece of equipment unless surface is a seal coat. The scraping of the marking is subsidiary.

ITEM 677 - ELIMINATING EXISTING PAVEMENT MARKINGS AND MARKERS

Notify the Engineer at least 24 hours in advance of work for this item.

Remove and dispose of off the ROW any existing raised pavement markers and pavement markings before beginning surfacing operations. Remove the existing traffic buttons and pavement markers, daily, as work progresses and as directed. This work is subsidiary.

Elimination using a pavement marking will not be allowed in lieu of methods listed in specification.

Remove pavement markings on concrete surfaces by a blasting method. Flail milling will be allowed when total quantity of removal on concrete surfaces is less than 1000 ft.

Strip seal is only method allowed on seal coat surface unless project includes placement of a new surface. If total quantity of removal on a seal coat surface is less than 2000 ft., elimination using a pavement marking is allowed if a test section is approved by the Engineer. Test section shall demonstrate the thermo marking color matches the existing pavement color.

Remove pavement markings outside the limits of the new surface by a blasting method.

Use a TRAIL or a non-retroreflective paint to cover stripe remnants that remain after elimination. The test requirements for these materials are waived. The paint color shall be adjusted to resemble the existing pavement color. Installation and maintenance are subsidiary.

ITEM 3084 – BONDING COURSE

The minimum application rates are listed in Table BC. The Engineer may adjust the application rate taking into consideration the existing pavement surface conditions.

Table BC

Material	Minimum Application Rate (gal. per square yard)
Tracking-Resistant Asphalt Interlayer	0.06
Spray Applied Underseal Membrane	0.10

ITEM 6001 – PORTABLE CHANGEABLE MESSAGE SIGN

Provide 2 “Electronic” Portable Changeable Message Sign(s) (EPCMS) as part of the traffic control operations and provide another one that is available to utilize when a backup is needed. Consider the one designated for backup as subsidiary to the various Items of the project. All EPCMS will be exclusive to this project, unless otherwise approved. Placement location and message as directed.

Place appropriate number of “Electronic” Portable Changeable Message Signs (EPCMS) at locations requiring lane closures for one-week prior to the closures, or as directed. Obtain approval for the actual message that will appear on the boards. If more than two phases of a message are required per board, provide additional EPCMS’s to meet the two-phases-per-board requirement. Provide a replacement within 12 hours. EPCMS will be available for traffic control, event notices, roadway conditions, service announcements, etc.

ITEM 6185 – TRUCK MOUNTED ATTENUATOR AND TRAILER ATTENUATOR

A TMA/TA shall be used when installing and removing a TCP setup. The same TMA/TA used for the TCP installation/removal shall be used and paid in the same manner as the TCP setup.

The contractor will be responsible for determining if one or more operations will be ongoing at the same time to determine the total number of TMA/TA required for the project.

TMA/TA used to protect damaged attenuators will be paid by the day using the force account item for the repair.

Shadow Vehicle with TMA is required for setup/removal of traffic control devices.

Central Texas Regional Mobility Authority

FY20-1
MAINTENANCE PROJECT

CONTRACT NO. 20VARI24601M

SPECIFICATION LIST

PREFACE:

The "Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges" of the Texas Department of Transportation, 2014, as amended and augmented by the Supplemental Specifications following, shall govern the performance of the Contract. These specifications hereby are made a part of the Contract as fully and with the same effect as if set forth at length herein.

Attention is directed to the fact that any other documents printed by the Texas Department of Transportation modifying or supplementing said "Standard Specifications", such as Standard Supplemental Specifications, Special Provisions (by the Department), Notice to Bidders, etc., do not form a part of this Contract nor govern its performance, unless specifically so-stated in the Supplemental Specifications herein contained.

Attention is directed to the use of "Proposal" in standard TxDOT documents included in this contract (Standard Specifications, Special Provisions, & Special Specifications) is equivalent to "Bid" in the Mobility Authority's documents. This shall be accounted for when working contract documents prepared by the Mobility Authority with those standards prepared by TxDOT.

Attention is directed to the use of "Department" in standard TxDOT documents included in this contract (Standard Specifications, Special Provisions, & Special Specifications) is equivalent to "Mobility Authority" in the Mobility Authority's documents.

References made to specific section numbers in these Special Provisions, or in any of the various documents which constitute the complete Contract Documents, shall, unless otherwise denoted, be construed as referenced to the corresponding section of the "Standard Specifications" issued by the Texas Department of Transportation in 2014.

CENTRAL TEXAS REGIONAL MOBILITY AUTHORITY
GOVERNING SPECIFICATIONS AND SPECIAL PROVISIONS

(STANDARD SPECIFICATIONS, SPECIAL PROVISIONS, AND SPECIAL SPECIFICATIONS)

WHERE DISCREPANCIES OCCUR BETWEEN THE TECHNICAL SPECIFICATIONS, THE FOLLOWING DESCENDING ORDER OF PRIORITY SHALL GOVERN: (1) SPECIAL CONDITIONS, (2) SPECIAL PROVISIONS TO SPECIAL SPECIFICATIONS, (3) SPECIAL SPECIFICATIONS, (4) SPECIAL PROVISIONS, AND (5) STANDARD SPECIFICATIONS.

ALL SPECIFICATIONS AND SPECIAL PROVISIONS APPLICABLE TO THIS PROJECT ARE IDENTIFIED AS FOLLOWS:

STANDARD SPECIFICATIONS: ADOPTED BY THE TEXAS DEPARTMENT OF TRANSPORTATION NOVEMBER 1, 2014. STANDARD SPECIFICATIONS ARE INCORPORATED INTO THE CONTRACT BY REFERENCE.

- ITEMS 1-9 GENERAL REQUIREMENTS AND COVENANTS
- ITEM 134 BACKFILLING PAVEMENT EDGES (162)(166)(168)(300)(314)
- ITEM 300 ASPHALTS, OILS, AND EMULSIONS
- ITEM 320 EQUIPMENT FOR ASPHALT CONCRETE PAVEMENT (210)(504)(520)
- ITEM 347 THIN OVERLAY MIXTURES (TOM) (300)(301)(320)(520)(585)
- ITEM 351 FLEXIBLE PAVEMENT STRUCTURE REPAIR (132)(204)(247)(260)(263)(275)(276)(292)
(310)(316)(330)(334)(340)
- ITEM 354 PLANING AND TEXTURING PAVEMENT
- ITEM 500 MOBILIZATION
- ITEM 502 BARRICADES, SIGNS, AND TRAFFIC HANDLING
- ITEM 506 TEMPORARY EROSION, SEDIMENTATION, AND ENV CONTROLS (161)(432)(556)
- ITEM 585 RIDE QUALITY FOR PAVEMENT SURFACES
- ITEM 662 WORK ZONE PAVEMENT MARKINGS (666)(668)(672)(677)
- ITEM 666 RETROREFLECTORIZED PAVEMENT MARKINGS (316)(502)(662)(677)(678)
- ITEM 672 RAISED PAVEMENT MARKERS (677)(678)

ITEM 677 ELIMINATING EXISTING PAVEMENT MARKINGS AND MARKERS (300)(302)(316)

SPECIAL PROVISIONS: SPECIAL PROVISIONS WILL GOVERN AND TAKE PRECEDENCE OVER THE SPECIFICATIONS ENUMERATED HEREON WHEREVER IN CONFLICT THEREWITH.

SPECIAL PROVISION TO ITEM 000 (000---001---RMA)

SPECIAL PROVISION TO ITEM 000 (000---002---RMA)

SPECIAL PROVISION TO ITEM 000 (000---003)

SPECIAL PROVISION TO ITEM 000 (000---004)

SPECIAL PROVISION TO ITEM 000 (000---005)

SPECIAL PROVISION TO ITEM 000 (000---006)

SPECIAL PROVISION TO ITEM 000 (000---011---RMA)

SPECIAL PROVISION TO ITEM 000 (000---659)

SPECIAL PROVISION TO ITEM 000 (000---954---RMA)

SPECIAL PROVISION TO ITEM 001 (001---001---RMA)

SPECIAL PROVISION TO ITEM 002 (002---005---RMA)

SPECIAL PROVISION TO ITEM 002 (002---011)

SPECIAL PROVISION TO ITEM 003 (003---005---RMA)

SPECIAL PROVISION TO ITEM 003 (003---011)

SPECIAL PROVISION TO ITEM 004 (004---001---RMA)

SPECIAL PROVISION TO ITEM 005 (005---001---RMA)

SPECIAL PROVISION TO ITEM 005 (005---002)

SPECIAL PROVISION TO ITEM 005 (005---003)

SPECIAL PROVISION TO ITEM 006 (006---001---RMA)

SPECIAL PROVISION TO ITEM 007 (007---003---RMA)

SPECIAL PROVISION TO ITEM 007 (007---004)

SPECIAL PROVISION TO ITEM 007 (007---008)
SPECIAL PROVISION TO ITEM 007 (007---011)
SPECIAL PROVISION TO ITEM 008 (008---002---RMA)
SPECIAL PROVISION TO ITEM 008 (008---009---RMA)
SPECIAL PROVISION TO ITEM 008 (008---030)
SPECIAL PROVISION TO ITEM 008 (008---033)
SPECIAL PROVISION TO ITEM 009 (009---001---RMA)
SPECIAL PROVISION TO ITEM 300 (300---017)
SPECIAL PROVISION TO ITEM 314 (314---001)
SPECIAL PROVISION TO ITEM 340 (340---003)
SPECIAL PROVISION TO ITEM 346 (346---003)
SPECIAL PROVISION TO ITEM 347 (347---002---RMA)
SPECIAL PROVISION TO ITEM 502 (502---008)
SPECIAL PROVISION TO ITEM 506 (506---002)
SPECIAL PROVISION TO ITEM 520 (520---002)
SPECIAL PROVISION TO ITEM 666 (666---007)
SPECIAL PROVISION TO ITEM 6185 (6185---002)

SPECIAL SPECIFICATIONS:

ITEM 3076 DENSE-GRADED HOT MIX ASPHALT
ITEM 3084 BONDING COURSE
ITEM 6001 PORTABLE CHANGEABLE MESSAGE SIGN
ITEM 6185 TRUCK MOUNTED ATTENUATOR (TMA) AND TRAILER ATTENUATOR (TA)

GENERAL:

THE ABOVE-LISTED SPECIFICATION ITEMS ARE THOSE UNDER WHICH PAYMENT IS TO BE MADE. THESE, TOGETHER WITH SUCH OTHER PERTINENT ITEMS, IF ANY, AS MAY BE REFERRED TO IN THE ABOVE-LISTED SPECIFICATION ITEMS, AND INCLUDING THE SPECIAL PROVISIONS LISTED ABOVE, CONSTITUTE THE COMPLETE SPECIFICATIONS FOR THIS PROJECT.

Special Provision to Item 000

Schedule of Liquidated Damages

Full Completion of all Work in the amount of \$4,000 per day will be assessed for each calendar day that Full completion of all work is not met per contractual requirements for Full Completion of all Work.

Special Provision to Item 000

Nondiscrimination

1. DESCRIPTION

The Contractor agrees, during the performance of the service under this Agreement, that the Contractor shall provide all services and activities required in a manner that complies with the Civil Rights Act of 1964, as amended, the Rehabilitation Act of 1973, Public Law 93-1122, Section 504, the provisions of the Americans with Disabilities Act of 1990, Public Law 101-336 (S.933), and all other federal and state laws, rules, regulations, and orders pertain to equal opportunity in employment, as if the Contractor were an entity bound to comply with these laws. The Contractor shall not discriminate against any employee or applicant for employment based on race, religion, color, sex, national origin, age or handicapped condition.

2. DEFINITION OF TERMS

Where the term "Contractor" appears in the following six nondiscrimination clauses, the term "Contractor" is understood to include all parties to Contracts or agreements with the Texas Department of Transportation.

3. NONDISCRIMINATION PROVISIONS

During the performance of this Contract, the Contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "Contractor") agrees as follows:

- 3.1. **Compliance with Regulations.** The Contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Nondiscrimination in Federally-assisted programs of the U.S. Department of Transportation, the Federal Highway Administration, as they may be amended from time to time, which are herein incorporated by reference and made a part of this Contract.
- 3.2. **Nondiscrimination.** The Contractor, with regard to the work performed by it during the Contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the Contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.
- 3.3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the Contractor of the Contractor's obligations under this Contract and the Acts and the Regulations relative to Nondiscrimination on the grounds of race, color, or national origin.
- 3.4. **Information and Reports:** The Contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the Federal Highway Administration to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a Contractor is in the exclusive possession of another who fails or refuses to furnish the information, the Contractor will so certify to the Recipient or the Federal Highway Administration, as appropriate, and will set forth what efforts it has made to obtain the information.
- 3.5. **Sanctions for Noncompliance.** In the event of a Contractor's noncompliance with the Nondiscrimination provisions of this Contract, the Recipient will impose such Contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:

- withholding payments to the Contractor under the Contract until the Contractor complies, and/or
- cancelling, terminating, or suspending a Contract, in whole or in part.

3.6. **Incorporation of Provisions.** The Contractor will include the provisions of paragraphs (3.1) through (3.6) in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations, and directives issued pursuant thereto. The Contractor will take action with respect to any subcontract or procurement as the Recipient or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the Contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the Contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

4. PERTINENT NONDISCRIMINATION AUTHORITIES:

During the performance of this Contract, the Contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "Contractor") agrees to comply with the following nondiscrimination statutes and authorities; including but not limited to:

- 4.1. Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.
- 4.2. The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- 4.3. Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), (prohibits discrimination on the basis of sex);
- 4.4. Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- 4.5. The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);
- 4.6. Airport and Airway Improvement Act of 1982, (49 U.S.C. § 4 71, Section 4 7123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- 4.7. The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, subrecipients and Contractors, whether such programs or activities are Federally funded or not);
- 4.8. Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- 4.9. The Federal Aviation Administration's Nondiscrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- 4.10. Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures discrimination against minority populations by discouraging programs,

policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;

- 4.11. Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- 4.12. Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U .S.C. 1681 et seq).

Special Provision to Item 000

Certification of Nondiscrimination in Employment



1. GENERAL

By signing this proposal, the Bidder certifies that he has participated in a previous contract or subcontract subject to the equal opportunity clause, as required by Executive Orders 10925, 11114, or 11246, or if he has not participated in a previous contract of this type, or if he has had previous contract or subcontracts and has not filed, he will file with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance, a Federal Government contracting or administering agency, or the former President's Committee on Equal Employment Opportunity, all reports due under the applicable filing requirements.

Note—The above certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor (41 CFR 60-1.7(b)(1)), and must be submitted by Bidders and proposed subcontractors only in connection with contracts and subcontracts which are subject to the equal opportunity clause. Contracts and subcontracts which are exempt from the equal opportunity clause are set forth in 41 CFR 60-1.5. (Generally only contracts or subcontracts of \$10,000 or under are exempt.)

Currently, Standard Form 100 (EEO-1) is the only report required by the Executive Orders or their implementing regulations.

Proposed prime contractors and subcontractors who have participated in a previous contract or subcontract subject to the Executive Orders and have not filed the required reports should note that 41 CFR 60-1.7(b)(1) prevents the award of contracts and subcontracts unless such contractor submits a report covering the delinquent period or such other period specified by the Federal Highway Administration or by the Director, Office of Federal Contract Compliance, U.S. Department of Labor.

Special Provision to Item 000

Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246)



1. GENERAL

In addition to the affirmative action requirements of the Special Provision titled “Standard Federal Equal Employment Opportunity Construction Contract Specifications” as set forth elsewhere in this proposal, the Bidder’s attention is directed to the specific requirements for utilization of minorities and females as set forth below.

2. GOALS

2.1. Goals for minority and female participation are hereby established in accordance with 41 CFR 60-4.

2.2. The goals for minority and female participation expressed in percentage terms for the Contractor’s aggregate work force in each trade on all construction work in the covered area are as follows:

Goals for minority participation in each trade, %	Goals for female participation in each trade, %
See Table 1	6.9

2.3. These goals are applicable to all the Contractor’s construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, it will apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the Contractor also is subject to the goals for both its federally involved and non-federally involved construction. The Contractor’s compliance with the Executive Order and the regulations in 41 CFR Part 60-4 will be based on its implementation of the Standard Federal Equal Employment Opportunity Construction Contract Specifications Special Provision and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the Contract, and in each trade, and the Contractor must make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority and female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor’s goals will be a violation of the Contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

2.4. A Contractor or subcontractor will be considered in compliance with these provisions by participation in the Texas Highway-Heavy Branch, AGC, Statewide Training and Affirmative Action Plan. Provided that each Contractor or subcontractor participating in this plan must individually comply with the equal opportunity clause set forth in 41 CFR 60-1.4 and must make a good faith effort to achieve the goals set forth for each participating trade in the plan in which it has employees. The overall good performance of other Contractors and subcontractors toward a goal in an approved plan does not excuse any covered Contractor’s or subcontractor’s failure to make good faith efforts to achieve the goals contained in these provisions. Contractors or subcontractors participating in the plan must be able to demonstrate their participation and document their compliance with the provisions of this Plan.

3. SUBCONTRACTING

The Contractor must provide written notification to the Department within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the Contract resulting from this solicitation pending concurrence of the Department in the award. The notification will list the names,

address and telephone number of the subcontractor; employer identification number; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the Contract is to be performed.

4. COVERED AREA

As used in this special provision, and in the Contract resulting from this solicitation, the geographical area covered by these goals for female participation is the State of Texas. The geographical area covered by these goals for other minorities are the counties in the State of Texas as indicated in Table 1.

5. REPORTS

The Contractor is hereby notified that he may be subject to the Office of Federal Contract Compliance Programs (OFCCP) reporting and record keeping requirements as provided for under Executive Order 11246 as amended. OFCCP will provide direct notice to the Contractor as to the specific reporting requirements that he will be expected to fulfill.

Table 1
Goals for Minority Participation

County	Participation, %	County	Participation, %
Anderson	22.5	Chambers	27.4
Andrews	18.9	Cherokee	22.5
Angelina	22.5	Childress	11.0
Aransas	44.2	Clay	12.4
Archer	11.0	Cochran	19.5
Armstrong	11.0	Coke	20.0
Atascosa	49.4	Coleman	10.9
Austin	27.4	Collin	18.2
Bailey	19.5	Collingsworth	11.0
Bandera	49.4	Colorado	27.4
Bastrop	24.2	Comal	47.8
Baylor	11.0	Comanche	10.9
Bee	44.2	Concho	20.0
Bell	16.4	Cooke	17.2
Bexar	47.8	Coryell	16.4
Blanco	24.2	Cottle	11.0
Borden	19.5	Crane	18.9
Bosque	18.6	Crockett	20.0
Bowie	19.7	Crosby	19.5
Brazoria	27.3	Culberson	49.0
Brazos	23.7	Dallam	11.0
Brewster	49.0	Dallas	18.2
Briscoe	11.0	Dawson	19.5
Brooks	44.2	Deaf Smith	11.0
Brown	10.9	Delta	17.2
Burleson	27.4	Denton	18.2
Burnet	24.2	DeWitt	27.4
Caldwell	24.2	Dickens	19.5
Calhoun	27.4	Dimmit	49.4
Callahan	11.6	Donley	11.0
Cameron	71.0	Duval	44.2
Camp	20.2	Eastland	10.9
Carson	11.0	Ector	15.1
Cass	20.2	Edwards	49.4
Castro	11.0	Ellis	18.2

County	Participation, %	County	Participation, %
El Paso	57.8	Kenedy	44.2
Erath	17.2	Kent	10.9
Falls	18.6	Kerr	49.4
Fannin	17.2	Kimble	20.0
Fayette	27.4	King	19.5
Fisher	10.9	Kinney	49.4
Floyd	19.5	Kleberg	44.2
Foard	11.0	Knox	10.9
Fort Bend	27.3	Lamar	20.2
Franklin	17.2	Lamb	19.5
Freestone	18.6	Lampasas	18.6
Frio	49.4	LaSalle	49.4
Gaines	19.5	Lavaca	27.4
Galveston	28.9	Lee	24.2
Garza	19.5	Leon	27.4
Gillespie	49.4	Liberty	27.3
Glasscock	18.9	Limestone	18.6
Goliad	27.4	Lipscomb	11.0
Gonzales	49.4	Live Oak	44.2
Gray	11.0	Llano	24.2
Grayson	9.4	Loving	18.9
Gregg	22.8	Lubbock	19.6
Grimes	27.4	Lynn	19.5
Guadalupe	47.8	Madison	27.4
Hale	19.5	Marion	22.5
Hall	11.0	Martin	18.9
Hamilton	18.6	Mason	20.0
Hansford	11.0	Matagorda	27.4
Hardeman	11.0	Maverick	49.4
Hardin	22.6	McCulloch	20.0
Harris	27.3	McLennan	20.7
Harrison	22.8	McMullen	49.4
Hartley	11.0	Medina	49.4
Haskell	10.9	Menard	20.0
Hays	24.1	Midland	19.1
Hemphill	11.0	Milam	18.6
Henderson	22.5	Mills	18.6
Hidalgo	72.8	Mitchell	10.9
Hill	18.6	Montague	17.2
Hockley	19.5	Montgomery	27.3
Hood	18.2	Moore	11.0
Hopkins	17.2	Morris	20.2
Houston	22.5	Motley	19.5
Howard	18.9	Nacogdoches	22.5
Hudspeth	49.0	Navarro	17.2
Hunt	17.2	Newton	22.6
Hutchinson	11.0	Nolan	10.9
Irion	20.0	Nueces	41.7
Jack	17.2	Ochiltree	11.0
Jackson	27.4	Oldham	11.0
Jasper	22.6	Orange	22.6
Jeff Davis	49.0	Palo Pinto	17.2
Jefferson	22.6	Panola	22.5
Jim Hogg	49.4	Parker	18.2
Jim Wells	44.2	Parmer	11.0
Johnson	18.2	Pecos	18.9
Jones	11.6	Polk	27.4
Karnes	49.4	Potter	9.3
Kaufman	18.2	Presidio	49.0
Kendall	49.4	Randall	9.3

County	Participation, %	County	Participation, %
Rains	17.2	Reagan	20.0
Real	49.4	Throckmorton	10.9
Red River	20.2	Titus	20.2
Reeves	18.9	Tom Green	19.2
Refugio	44.2	Travis	24.1
Roberts	11.0	Trinity	27.4
Robertson	27.4	Tyler	22.6
Rockwall	18.2	Upshur	22.5
Runnels	20.0	Upton	18.9
Rusk	22.5	Uvalde	49.4
Sabine	22.6	Val Verde	49.4
San Augustine	22.5	Van Zandt	17.2
San Jacinto	27.4	Victoria	27.4
San Patricio	41.7	Walker	27.4
San Saba	20.0	Waller	27.3
Schleicher	20.0	Ward	18.9
Scurry	10.9	Washington	27.4
Shackelford	10.9	Webb	87.3
Shelby	22.5	Wharton	27.4
Sherman	11.0	Wheeler	11.0
Smith	23.5	Wichita	12.4
Somervell	17.2	Wilbarger	11.0
Starr	72.9	Willacy	72.9
Stephens	10.9	Williamson	24.1
Sterling	20.0	Wilson	49.4
Stonewall	10.9	Winkler	18.9
Sutton	20.0	Wise	18.2
Swisher	11.0	Wood	22.5
Tarrant	18.2	Yoakum	19.5
Taylor	11.6	Young	11.0
Terrell	20.0	Zapata	49.4
Terry	19.5	Zavala	49.4

Special Provision to Item 000

Standard Federal Equal Employment Opportunity Construction Contract Specifications (Executive Order 11246)



1. GENERAL

1.1. As used in these specifications:

- “Covered area” means the geographical area described in the solicitation from which this Contract resulted;
- “Director” means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;
- “Employer identification number” means the Federal Social Security number used on the Employer’s Quarterly Federal Tax Return, U.S. Treasury Department Form 941.
- “Minority” includes:
 - Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
 - Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
 - Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
 - American Indian or Alaskan Native (all persons having origins in any of the original peoples of North American and maintaining identifiable tribal affiliations through membership and participation or community identification).

1.2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it will physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this Contract resulted.

1.3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U. S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) will be in accordance with that plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the equal employment opportunity (EEO) clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor’s or Subcontractor’s failure to take good faith efforts to achieve the Plan goals and timetables.

1.4. The Contractor will implement the specific affirmative action standards provided in Section 1.7.1. through Section 1.7.16. of these specifications. The goals set forth in the solicitation from which this Contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered construction Contractors performing Contracts in geographical areas where they do not have a Federal or federally assisted construction Contract will apply the minority and female goals established for the geographical area where the Contract is being performed. Goals are published periodically in the Federal Register in notice form and such notices may be obtained from any Office of Federal Contract Compliance Programs office or any Federal procurement contracting officer. The

Contractor is expected to make substantially uniform progress toward its goals in each craft during the period specified.

- 1.5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women will excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.
- 1.6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U. S. Department of Labor.
- 1.7. The Contractor will take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications will be based upon its effort to achieve maximum results from its actions. The Contractor will document these efforts fully, and will implement affirmative action steps at least as extensive as the following:
 - 1.7.1. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor will specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.
 - 1.7.2. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.
 - 1.7.3. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this will be documented in the file with the reason therefor, along with whatever additional actions the Contractor may have taken.
 - 1.7.4. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral Process has impeded the Contractor's efforts to meet its obligations.
 - 1.7.5. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor will provide notice of these programs to the sources compiled under 7b above.
 - 1.7.6. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and Collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
 - 1.7.7. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other

employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, General Foremen, etc., before the initiation of construction work at any job site. A written record must be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

- 1.7.8. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.
- 1.7.9. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month before the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor will send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.
- 1.7.10. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's workforce.
- 1.7.11. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
- 1.7.12. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
- 1.7.13. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment-related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.
- 1.7.14. Ensure that all facilities and company activities are non-segregated except that separate or single-user toilet and necessary changing facilities will be provided to assure privacy between the sexes.
- 1.7.15. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.
- 1.7.16. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.
- 1.8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (Section 7.1. through Section 7.16.). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the Contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under Section 7.1. through Section 7.16. of these Specifications provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation will not be a defense for the Contractor's noncompliance.
- 1.9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor

may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).

- 1.10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.
- 1.11. The Contractor will not enter into any Subcontract with any person or firm debarred from Government Contracts pursuant to Executive Order 11246.
- 1.12. The Contractor will carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties will be in violation of these specifications and Executive Order 11246, as amended.
- 1.13. The Contractor, in fulfilling its obligations under these specifications, will implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director will proceed in accordance with 41 CFR 60-4.8.
- 1.14. The Contractor will designate a responsible official to monitor all employment-related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records must at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records must be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, Contractors shall not be required to maintain separate records.
- 1.15. Nothing herein provided will be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).
- 1.16. In addition to the reporting requirements set forth elsewhere in this Contract, the Contractor and the subcontractors holding subcontracts, not including material suppliers, of \$10,000 or more, will submit for every month of July during which work is performed, employment data as contained under Form PR 1391 (Appendix C to 23 CFR, Part 230), and in accordance with the included instructions.

Special Provision to Item 000

On-the-Job Training Program



1. DESCRIPTION

The primary objective of this Special Provision is the training and advancement of minorities, women and economically disadvantaged persons toward journeyworker status. Accordingly, make every effort to enroll minority, women and economically disadvantaged persons to the extent that such persons are available within a reasonable area of recruitment. This training commitment is not intended, and will not be used to discriminate against any applicant for training, whether or not he/she is a member of a minority group.

2. TRAINEE ASSIGNMENT

Training assignments are based on the past volume of state-let highway construction contracts awarded with the Department. Contractors meeting the selection criteria will be notified of their training assignment at the beginning of the reporting year by the Department's Office of Civil Rights.

3. PROGRAM REQUIREMENTS

Fulfill all of the requirements of the On-the-Job Training Program including the maintenance of records and submittal of periodic reports documenting program performance. Trainees will be paid at least 60% of the appropriate minimum journeyworker's rate specified in the Contract for the first half of the training period, 75% for the third quarter, and 90% for the last quarter, respectively.

4. REIMBURSEMENT

If requested, Contractors may be reimbursed \$0.80 per training hour at no additional cost to the Department. Training may occur on this project, all other Department contracts, or local-administered federal-aid projects with concurrence of the local government entity. However, reimbursement for training is not available on projects to the extent that such projects that do not contain federal funds.

5. COMPLIANCE

The Contractor will have fulfilled the contractual responsibilities by having provided acceptable training to the number of trainees specified in their goal assignment. Noncompliance may be cause for corrective and appropriate measures pursuant to Article 8.7., "Abandonment of Work or Default of Contract," which may be used to comply with the sanctions for noncompliance pursuant to 23 CFR Part 230.

Special Provision to Item 000

Buy America

Steel and iron products to be incorporated into the project must be of domestic origin. All manufacturing processes for steel and iron products to be incorporated into the project must take place domestically, including donated material.

Reminders:

Depending on the Steel/iron item received at the project, described below are the requirements for acceptance.

1. Steel and Iron Items Inspected and Tested by CSTIM&P

- The project engineer receives CST/M&P Structural Test Reports as proof of compliance with the requirements of the specification.
- CST/M&P obtains from the supplier a completed Form 1818 (D-9-USA-1), "Material Statement" with attached MTRs, certifications, galvanizing reports, etc.

2. Steel and Iron Items Received and Sampled by the Project Engineer for Testing by CSTIM&P

- The project engineer submits samples with the required documentation obtained from the supplier (completed Form 1818 (D-9-USA-1) with attached MTRs, certifications, galvanizing reports, etc.) to CST/M&P for testing.
- CSTM&P issues a CST/M&P General Test Report for all passing material (proof of compliance with the requirements of the specifications).

3. Steel and Iron Items Received, Inspected, and Accepted by the Project Engineer

- The project engineer obtains from the supplier the completed Form 1818 (D-9-USA-1) with attached MTRs, certifications, galvanizing reports, etc.
- CST/M&P assists the project engineer when requested.

4. Steel and Iron Items Received from Regional or District Warehouse (Prestested) Stock

- The project engineer obtains documentation verifying the material was obtained from a regional or district warehouse.
- CSTM&P, when requested to inspect and test, obtains from the supplier the completed Form 1818 (D-9-USA-1) with attached MTRs, etc.

Special Provision 000

Notice of Contractor Performance Evaluations



1. GENERAL

In accordance with Texas Transportation Code §223.012, the Engineer will evaluate Contractor performance based on quality, safety, and timeliness of the project.

2. DEFINITIONS

- 2.1. **Project Recovery Plan (PRP)**—a formal, enforceable plan developed by the Contractor, in consultation with the District, that documents the cause of noted quality, safety, and timeliness issues and specifies how the Contractor proposes to correct project-specific performance deficiencies.

In accordance with Title 43, Texas Administrative Code (TAC), §9.23, the District will request a PRP if the Contractor's performance on a project is below the Department's acceptable standards and will monitor the Contractor's compliance with the established plan.

- 2.2. **Corrective Action Plan (CAP)**—a formal, enforceable plan developed by the Contractor, and proposed for adoption by the Construction or Maintenance Division, that documents the cause of noted quality, safety, and timeliness issues and specifies how the Contractor proposes to correct statewide performance deficiencies.

In accordance with 43 TAC §9.23, the Division will request a CAP if the average of the Contractor's statewide final evaluation scores falls below the Department's acceptable standards for the review period and will monitor the Contractor's compliance with the established plan.

3. CONTRACTOR EVALUATIONS

In accordance with Title 43, Texas Administrative Code (TAC) §9.23, the Engineer will schedule evaluations at the following intervals, at minimum:

- Interim evaluations—at or within 30 days after the anniversary of the notice to proceed, for Contracts extending beyond 1 yr., and
- Final evaluation—upon project closeout.

In case of a takeover agreement, neither the Surety nor its performing Contractor will be evaluated.

In addition to regularly scheduled evaluations, the Engineer may schedule an interim evaluation at any time to formally communicate issues with quality, safety, or timeliness. Upon request, work with the Engineer to develop a PRP to document expectations for correcting deficiencies.

Comply with the PRP as directed. Failure to comply with the PRP may result in additional remedial actions available to the Engineer under Item 5, "Control of the Work." Failure to meet a PRP to the Engineer's satisfaction may result in immediate referral to the Performance Review Committee for consideration of further action against the Contractor.

The Engineer will consider and document any events outside the Contractor's control that contributed to the failure to meet performance standards or comply with a PRP, including consideration of sufficient time.

Follow the escalation ladder if there is a disagreement regarding an evaluation or disposition of a PRP. The Contractor may submit additional documentation pertaining to the dispute. The District Engineer's decision

on a Contractor's evaluation score and recommendation of action required in a PRP or follow up for non-compliance is final.

4. DIVISION OVERSIGHT

Upon request of the Construction or Maintenance Division, develop and submit for Division approval a proposed CAP to document expectations for correcting deficiencies in the performance of projects statewide.

Comply with the CAP as directed. The CAP may be modified at any time up to completion or resolution after written approval of the premise of change from the Division. Failure to meet an adopted or revised adopted CAP to the Division's satisfaction within 120 days will result in immediate referral to the Performance Review Committee for consideration of further action against the Contractor.

The Division will consider and document any events outside the Contractor's control that contributed to the failure to meet performance standards or comply with a CAP, including consideration of sufficient time and associated costs as appropriate.

5. PERFORMANCE REVIEW COMMITTEE

The Performance Review Committee, in accordance with 43 TAC §9.24, will review at minimum all final evaluations, history of compliance with PRPs, any adopted CAPs including agreed modifications, any information about events outside a Contractor's control contributing to the Contractor's performance, and any documentation submitted by the Contractor and may recommend one or more of the following actions:

- take no action,
- reduce the Contractor's bidding capacity,
- prohibit the Contractor from bidding on one or more projects,
- immediately suspend the Contractor from bidding for a specified period of time, by reducing the Contractor's bidding capacity to zero, or
- prohibit the Contractor from being awarded a Contract on which they are the apparent low bidder.

The Deputy Executive Director will determine any further action against the Contractor.

6. APPEALS PROCESS

In accordance with 43 TAC §9.25, the Contractor may appeal remedial actions determined by the Deputy Executive Director.

Special Provision 000

Certificate of Interested Parties (Form 1295)

Submit a Form 1295, "Certificate of Interested Parties," in the following instances:

- at contract execution for contracts awarded by the Mobility Authority (if requested);
- at any time there is an increase of \$300,000 or more to an existing contract (change orders, extensions, and renewals); or
- at any time there is a change to the information in Form 1295, when the form was filed for an existing contract.

Form 1295 and instructions on completing and filing the form are available on the Texas Ethics Commission website.

Special Provision to Item 1

Abbreviations and Responsibilities

Item 1, "Abbreviations and Definitions," of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Article 1. is supplemented with the following:

1.0. General Statement:

For this Contract, the Standard Specifications for Construction and Maintenance of Highways, Streets and Bridges, November 1, 2014 (the "Texas Standard Specifications"), all documents referenced therein, and all manuals, bulletins, supplements, specifications, and similar materials issued by the Texas Department of Transportation ("TxDOT"), or any predecessor or successor thereto, which are applicable to this Contract, are hereby modified with respect to the terms cited below and no others are changed hereby.

The term "State", "State of Texas", "State Highway Agency", "State Highway Department Of Texas", "State Department of Highways and Public Transportation", "Texas State Department Of Highways and Public Transportation", "Texas Department of Transportation", "Department", "Texas Turnpike Authority", "State Department of Highways and Public Transportation Commission", "Texas Department of Transportation Commission", "Texas Transportation Commission", or "State Highway Commission", shall, in the use of The Texas Standard Specifications, Special Provisions and Special Specifications and General Notes and Specification Data pertaining thereto, and required contract provisions for Federal-Aid construction contracts, for all work in connection with Central Texas Regional Mobility Authority, projects and all extensions enlargements, expansions, improvements, and rehabilitations thereto, be deemed to mean Central Texas Regional Mobility Authority, unless the context clearly indicates a contrary meaning.

Article 2, "Abbreviations," is supplemented with the following:

CTRMA Central Texas Regional Mobility Authority

Article 3.28., "Commission", is voided and replaced by the following:

3.28. Commission. The Central Texas Regional Mobility Authority Board or authorized representative.

Article 3.32., "Construction Contract", is voided and replaced by the following:

3.32. Construction Contract. The agreement between the Central Texas Regional Mobility Authority and the Contractor establishing the obligations of the parties for furnishing of materials and performance of the work prescribed in the Contract Documents.

Article 3.45., "Debar (Debarment)", is voided and replaced by the following:

3.45. Debar (Debarment). Action taken by the Mobility Authority, federal government or state government pursuant to regulation that prohibits a person or company from entering into a Contract, or from participating as a subcontractor, or supplier of materials or equipment used in a highway improvement Contract as defined in Transportation Code, Chapter 223, Subchapter A.

Article 3.47., "Department", is voided and replaced by the following:

3.47. Department. Central Texas Regional Mobility Authority, unless the context clearly indicates a contrary intent and meaning.

Article 3.48., "Departmental Material Specifications", is voided and replaced by the following:

3.48. Departmental Material Specifications (DMS). Reference specifications for various materials published by the Texas Department of Transportation Construction Division.

Article 3.54., "Engineer", is hereby deleted and replaced by the following:

3.54 Engineer. The Central Texas Regional Mobility Authority Coordinator or their duly authorized representative.

Article 3.73., "Letting Official", is hereby deleted and replaced by the following:

3.73. Letting Official. An employee of the Central Texas Regional Mobility Authority empowered by the Central Texas Regional Mobility Authority to officially receive bids and close the receipt of bids at a letting.

Article 3.79., "Manual of Testing Procedures", is voided and replaced by the following:

3.79. Manual of Testing Procedures. Texas Department of Transportation manual outlining test methods and procedures maintained by the Materials and Pavements Section of the Construction Division.

Article 3.102., "Proposal Form", is voided and replaced by the following:

3.012. Proposal Form. The document issued by the Central Texas Regional Mobility Authority for a proposed Contract that includes:

- the specific locations (except for non-site-specific work) and description of the proposed work;
- an estimate of the various quantities and kinds of work to be performed or materials to be furnished;
- a schedule of items for which unit prices are requested;
- the number of working days within which the work is to be completed (or reference to the requirements); and
- the special provisions and special specifications applicable to the proposed Contract.

Article 3.108., "Referee Tests", is voided and replaced by the following:

3.108. Referee Tests. Tests requested to resolve differences between Contractor and Engineer test results. The referee laboratory is the Texas Department of Transportation Construction Division Materials and Pavement Section, or mutually agreed to 3rd party commercial laboratory.

Article 3.129., "State", is voided and replaced by the following:

3.129. State. Central Texas Regional Mobility Authority.

3.156. Mobility Authority. The Central Texas Regional Mobility Authority, an agency created under Texas Transportation Code Chapter 370 and approved by the Texas Transportation Commission, together with its members, partners, employees, agents officers, directors, shareholders, representatives, consultants, successors, and assigns. The Mobility Authority's principal office is presently located at 3300 N. I-35, Suite 300, Austin, Texas 78705.

3.157. Bid Form. The form provided by the Mobility Authority used by the bidder to submit a bid. Electronic bid forms for the project shall be submitted via the project's CivCast website.

3.158. Full Completion of all Work (or to Fully Complete all Work). The completion of all work specified under this Contract as evidenced by the Formal Acceptance thereof by the Mobility Authority.

3.159. Standards. Whenever the Plans and/or Specifications refer to "Standard Sheets" or "Design Details" such reference shall be construed to mean the set of drawings issued by the Design Divisions, Texas Department of Transportation, and entitled "Standard Sheets". Only those standards or standard drawings specifically referred to by number on the Plans or in the various Contract Documents are applicable to work on this Contract.

Whenever in the various Contract Documents term, "Department" or "State" appears, it shall be replaced by the term, "Central Texas Regional Mobility Authority." Similarly, the term, "Executive Director" shall be replaced by the term, "Central Texas Regional Mobility Authority Coordinator".

Whenever in the Texas Department of Transportation Specifications and Standard Drawings the term, "Department" or "Texas Department of Transportation" appears, it shall be replaced by the term, "Central Texas Regional Mobility Authority," except in references to said Texas Department of Transportation as being the author of certain Specifications and Standard Drawings, and in reference to said Department as the agency prequalifying prospective Bidders.

Whenever in the Texas Department of Transportation Specifications and Standard Drawing the term, "District Engineer" appears, it shall be replaced by the term, "Central Texas Regional Mobility Authority Coordinator.

Special Provision to Item 2

Instructions to Bidders

Item 2, "Instructions to Bidders" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 2.3., "Issuing Proposal Forms," first two sentences are replaced with the following:

Mobility Authority will issue an Official Bid Form to a prequalified Bidders. The online bid form will be made available to the prequalified bidders on the CivcastUSA website: <https://www.civcastusa.com/project/605de3f70654de047d3d58d8/summary>

Prequalification requirements:

- Be registered with State of Texas,
- Be fully prequalified by Texas Department of Transportation (TxDOT),
- Have a bidding capacity per TxDOT prequalification system of \$6,000,000,
- Email a valid Non-Collusion Affidavit, Debarment Affidavit, and Child Support Statement to Marco.Castro@atkinsglobal.com and Zane.Reid@atkinsglobal.com include a phone number, email address and physical address for point of contact.

Article 2.3., "Issuing Proposal Forms," is supplemented by the following:

The Department may not issue a proposal form if one or more of the following apply:

- The Contractor has been defaulted in accordance with Article 8.7., "Default of Contract" (a default for performance) on a previous Contract with the Department within the last 3 years
- The Contractor is not in compliance with Texas Government Code Sections 2155.089 and 2262.055.

Special Provision to Item 2

Instructions to Bidders



Item 2, "Instructions to Bidders," of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 2.3., "Issuing Proposal Forms," is supplemented by the following:

- the Bidder or affiliate of the Bidder that was originally determined as the apparent low Bidder on a project, but was deemed nonresponsive for failure to register or participate in the Department of Homeland Security's (DHS) E-Verify system as specified in Article 2.15., "Department of Homeland Security (DHS) E-Verify System," is prohibited from rebidding that specific project.

Article 2.7., "Nonresponsive Bid," is supplemented by the following:

- the Bidder failed to participate in the Department of Homeland Security's (DHS) as specified in Article 2.15., "Department of Homeland Security (DHS) E-Verify System."

Article 2.15., "Department of Homeland Security (DHS) E-Verify System," is added.

The Department will not award a Contract to a Contractor that is not registered in the DHS E-Verify system. Remain active in E-Verify throughout the life of the contract. In addition, in accordance with paragraph six of Article 8.2, "Subcontracting," include this requirement in all subcontracts and require that subcontractors remain active in E-Verify until their work is completed.

If the apparent low Bidder does not appear on the DHS E-Verify system prior to award, the Department will notify the Contractor that they must submit documentation showing that they are compliant within 5-business days after the date the notification was sent. A Contractor who fails to comply or respond within the deadline will be declared non-responsive and the Department will execute the proposal guaranty. The proposal guaranty will become the property of the State, not as a penalty, but as liquidated damages. The Bidder forfeiting the proposal guaranty will not be considered in future proposals for the same work unless there has been a substantial change in the scope of the work.

The Department may recommend that the Commission:

- reject all bids, or
- award the Contract to the new apparent low Bidder, if the Department is able to verify the Bidder's participation in the DHS E-verify system. For the Bidder who is not registered in E-Verify, the Department will allow for one business day after notification to provide proof of registration.

If the Department is unable to verify the new apparent low Bidder's participation in the DHS E-Verify system within one calendar day:

- the new apparent low Bidder will not be deemed nonresponsive,
- the new apparent low Bidder's guaranty will not be forfeited,
- the Department will reject all bids, and
- the new apparent low Bidder will remain eligible to receive future proposals for the same project.

Special Provision to Item 3

Award and Execution of Contract

Item 3, "Award and Execution of Contract" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 1, "Award of Contract," is deleted in its entirety and replaced with the following:

The Mobility Authority will award or reject the Contract within 60 calendar days after the opening of the proposal at the sole discretion of the Mobility Authority.

Article 4.3., "Insurance," is supplemented by the following:

The Contractor shall be the named insured, and the following entities shall be additional insureds on a primary and non-contributory basis: Central Texas Regional Mobility Authority, Texas Department of Transportation.

These entities shall be additional insureds to this policy with respect to liability arising out of the acts, errors, and omissions of any member of the Contractor and Subcontractors whether occurring on or off of the site, notwithstanding any other provisions of the Contract Documents, the project policy shall not be canceled, except for non-payment of premium, fraud, material misrepresentation, or noncompliance with reasonable loss control recommendations.

The Authority Board, the Authority, Texas Department of Transportation, the State of Texas, the Commission and their respective successors, assigns, officeholders, officers, directors, commissioners, consultants and employees shall be listed as "additional insureds" with respect to any insurance for which the contractor must obtain an "additional insured" rider or amendment.

Table 2 is deleted in its entirety and replaced with the following:

Type of Insurance	Amount of Coverage
Commercial General Liability Insurance	Including products/completed operations liability and contractual liability , in the amount of \$1,000,000 per occurrence for bodily injury and property damage
Business Automobile Policy	In the amount of \$1,000,000 per occurrence for bodily injury and property damage
Workers' Compensation	Providing statutory benefits, and Employers Liability with limits of \$1,000,000
Excess Liability Insurance	In the amount of \$5,000,000 per occurrence and aggregate

Special Provision to Item 3 Award and Execution Contract



Item 3, Award and Execution of Contract," of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Section 4.3, "Insurance." The first sentence is voided and replaced by the following:

For construction and building Contracts, submit a certificate of insurance showing coverages in accordance with Contract requirements. For routine maintenance Contracts, refer to Article 8, "Beginning of Work."

Article 8, "Beginning of Work." The first sentence is supplemented by the following:

For a routine maintenance Contract, do not begin work until a certificate of insurance showing coverages in accordance with the Contract requirements is provided and accepted.

Special Provision to Item 4

Scope of Work

Item 4, "Scope of Work," of the Standard Specifications, is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 4.4., "Changes in the Work," Delete the following paragraph:

"If the changes in quantities or the alternations do not significantly change the character of the work under the Contract, the altered work will be paid for at the Contract unit price. If the changes in quantities or the alterations significantly change the character of the work, the Contract will be amended by a change order. If no unit price exists, this will be considered extra work and the Contract will be amended by a change order. Provide cost justification as requested, in an acceptable format. Payment will not be made for anticipated profits on work that is eliminated."

and replace with the following:

"The Engineer may require deviations to the Work through a written directive. Payment for the deviations and quantity overruns will be made through the Contingency Allowance. Deviations and quantity overruns will be paid for at the unit prices submitted at the bidding stage. Deviations requiring new unit prices will be negotiated and made through the Contingency Allowance. Costs exceeding the Contingency Allowance will be addressed using the change order process.

Upon completion of the Work, the total contract value will be adjusted to provide for the difference, if any, between the total amount of expenditures from the Contingency Allowance and the original amount of the Contingency Allowance. The Contractor is not entitled to all or any part of an unexpended balance of the Contingency Allowance.

When changes are made that do not fall under the Contingency Allowance, the Contract will be amended by a Change Order. Provide cost justification as requested, in an acceptable format. Payment will not be made for anticipated profits on work that is eliminated."

Article 4.6., "Requests for Additional Compensation and Damages," is supplemented by the following:

"Contractor shall not be eligible for Change Order(s) for additional compensation for additional costs, including costs for developing and executing a Recovery Schedule(s), and delay and disruption damages, or additional Days incurred directly or indirectly from the virus known as severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and the disease known as COVID-19, including any disruptions to, and delays or interruptions in, construction of the Project in accordance with the Contract and any approved Baseline Schedule."

Special Provision to Item 5

Control of the Work

Item 5, "Control of the Work," of the Standard Specifications, is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 5.12., "Final Acceptance," is supplemented by the following:

Contractor warrants all materials and workmanship and that the work is in conformance with the Bid Documents and Plans included in this Contract for a period of one year from the date of the Certificate of Final Acceptance of the entire project. Said warranty binds Contractor to correct any work that does not conform with such Bid Documents and Plans or defects in workmanship or materials furnished under this Contract which may be discovered within said one year period. Contractor must, at its own expense, correct any such defect within 30 days after receiving written notice of such defect from Mobility Authority by repairing the same to the condition called for in the Contract. Should Contractor fail or refuse to repair such defect within said 30-day period or to provide acceptable assurances that such repair work will be completed within a reasonable time thereafter, Mobility Authority may repair or cause to be repaired any such defect by calling the Contractor's Warranty Bond.

Special Provision to Item 5

Control of the Work



Item 5, "Control of the Work," of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 5.1, "Authority of Engineer," is voided and replaced by the following.

The Engineer has the authority to observe, test, inspect, approve, and accept the work. The Engineer decides all questions about the quality and acceptability of materials, work performed, work progress, Contract interpretations, and acceptable Contract fulfillment. The Engineer has the authority to enforce and make effective these decisions.

The Engineer acts as a referee in all questions arising under the terms of the Contract. The Engineer's decisions will be final and binding.

The Engineer will pursue and document actions against the Contractor as warranted to address Contract performance issues. Contract remedies include, but are not limited to, the following:

- conducting interim performance evaluations requiring a Project Recovery Plan, in accordance with Title 43, Texas Administrative Code (TAC) §9.23,
- requiring the Contractor to remove and replace defective work, or reducing payment for defective work,
- removing an individual from the project,
- suspending the work without suspending working day charges,
- assessing standard liquidated damages to recover the Department's administrative costs, including additional project-specific liquidated damages when specified in the Contract in accordance with 43 TAC §9.22,
- withholding estimates,
- declaring the Contractor to be in default of the Contract, and
- in case of a Contractor's failure to meet a Project Recovery Plan, referring the issue directly to the Performance Review Committee for consideration of further action against the Contractor in accordance with 43 TAC §9.24.

The Engineer will consider and document any events outside the Contractor's control that contributed to the failure to meet performance standards, including consideration of sufficient time.

Follow the issue escalation ladder if there is disagreement regarding the application of Contract remedies.

Special Provision to Item 5

Control of the Work



Item 5, "Control of the Work" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 5.4, "Coordination of Plans, Specifications, and Special Provisions," the last sentence of the last paragraph is replaced by the following:

Failure to promptly notify the Engineer will constitute a waiver of all contract claims against the Department for misunderstandings or ambiguities that result from the errors, omissions, or discrepancies.

Special Provision to Item 6

Control of Materials

For this project, Item 6, "Control of Materials," of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Article 1., "Source Control," is supplemented by the following:

The use of convict-produced materials is prohibited per 23 CFR 635.417.

There shall be no local preference for the purchasing of materials.

Article 4., "Sampling, Testing, and Inspection," is supplemented by the following:

Quality Control testing of all materials, construction items, or products incorporated in the work shall be performed by the Contractor according to the contract specifications at the Contractor's expense.

Quality Assurance sampling and testing for acceptance will be performed by the Mobility Authority's Construction Representative/Observer in accordance with the Quality Control (QC) / Quality Assurance (QA) program outlined in the Quality Assurance Plan (QAP). The cost of such tests will be incurred by the Mobility Authority and coordinated by the Mobility Authority's Construction Representative/Observer through funds made available to the Construction Representative/Observer under his/her agreement with the Mobility Authority for the professional services related to construction engineering and inspection on the Project.

Special Provision to Item 7

Legal Relations and Responsibilities

Item 7, "Legal Relations and Responsibilities" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 7.3., "Laws To Be Observed", Article 7.5., "Patented Devices", Article 7.12., "Responsibility For Hazardous Materials", and Article 7.15., "Responsibility For Damage Claims", "State" is voided and replaced by "Central Texas Regional Mobility Authority and TxDOT".

Article 7.3., "Laws To Be Observed," is supplemented by the following:

By entering into Contract, the Contractor agrees to provide or make available to the Department records, including electronic records related to the Contract for a period of 3 years after the final payment. No person or entity other than TxDOT may claim third -party beneficiary status under this Contract or any of its provisions, nor may any non-party sue for personal injuries or property damage under this Contract.

Article 7.15., "Responsibility For Damage Claims," the last paragraph is deleted and not replaced.

Special Provision to Item 7

Legal Relations and Responsibilities



Item 7, "Legal Relations and Responsibilities," of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Section 7.7.2., "Texas Pollutant Discharge Elimination System (TPDES) Permits and Storm Water Pollution Prevention Plans (SWP3)," is voided and replaced by the following:

7.2. Texas Pollution Discharge Elimination System (TPDES) Permits and Storm Water Pollution Prevention Plans (SWP3).

7.2.1. Projects with less than one acre of soil disturbance including required associated project specific locations (PSL's) per TPDES GP TXR 150000.

No posting or filing will be required for soil disturbances within the right of way. Adhere to the requirements of the SWP3.

7.2.2. Projects with one acre but less than five acres of soil disturbance including required associated PSL's per TPDES GP TXR 150000.

The Department will be considered a primary operator for Operational Control Over Plans and Specifications as defined in TPDES GP TXR 150000 for construction activity in the right of way. The Department will post a small site notice along with other requirements as defined in TPDES GP TXR 150000 as the entity of having operational control over plans and specifications for work shown on the plans in the right of way.

The Contractor will be considered a Primary Operator for Day-to-Day Operational Control as defined in TPDES GP TXR 150000 for construction activity in the right of way. In addition to the Department's actions, the Contractor will post a small site notice along with other requirements as defined in TPDES GP TXR 150000 as the entity of having day-to-day operational control of the work shown on the plans in the right of way. This is in addition to the Contractor being responsible for TPDES GP TXR 150000 requirements for on- right of way and off- right of way PSL's. Adhere to all requirements of the SWP3 as shown on the plans. The Contractor will be responsible for Implement the SWP3 for the project site in accordance with the plans and specifications, TPDES General Permit TXR150000, and as directed.

7.2.3. Projects with 5 acres or more of soil disturbance including required associated PSL's per TPDES GP TXR 150000.

The Department will be considered a primary operator for Operational Control Over Plans and Specifications as defined in TPDES GP TXR 150000 for construction activities in the right of way. The Department will post a large site notice, file a notice of intent (NOI), notice of change (NOC), if applicable, and a notice of termination (NOT) along with other requirements per TPDES GP TXR 150000 as the entity having operational control over plans and specifications for work shown on the plans in the right of way.

The Contractor will be considered a primary operator for Day-to-Day Operational Control as defined in TPDES GP TXR 150000 for construction activities in the right of way. In addition to the Department's actions, the Contractor shall file a NOI, NOC, if applicable, and NOT and post a large site notice along with other requirements as the entity of having day-to-day operational control of the work shown on the plans in the right of way. This is in addition to the Contractor

being responsible for TPDES GP TXR 150000 requirements for on- right of way and off- right of way PSL's. Adhere to all requirements of the SWP3 as shown on the plans.

Special Provision to Item 7

Legal Relations and Responsibilities



Item 7, "Legal Relations and Responsibilities" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Section 19.1., Minimum Wage Requirements for Federally Funded Contracts. The second paragraph is voided and replaced by the following:

Submit electronic payroll records to the Engineer using the Department's payroll system.

Section 19.2., Minimum Wage Requirements for State Funded Contracts. The second paragraph is voided and replaced by the following:

Submit electronic payroll records to the Engineer using the Department's payroll system.

Special Provision to Item 007

Legal Relations and Responsibilities



Item 7, "Legal Relations and Responsibilities," of the Standard Specifications is amended with respect to the clauses cited below.

Section 2.6., "Barricades, Signs, and Traffic Handling," the first paragraph is voided and replaced by the following:

- 2.6. **Barricades, Signs, and Traffic Handling.** Comply with the requirements of Item 502 "Barricades, Signs, and Traffic Handling," and as directed. Provide traffic control devices that conform to the details shown on the plans, the TMUTCD, and the Department's Compliant Work Zone Traffic Control Device List maintained by the Traffic Safety Division. When authorized or directed, provide additional signs or traffic control devices not required by the plans.

Section 2.6.1., "Contractor Responsible Person and Alternative," is voided and replaced by the following:

- 2.6.1. **Contractor Responsible Person and Alternative.** Designate in writing, a Contractor's Responsible Person (CRP) and an alternate to be the representative of the Contractor who is responsible for taking or directing corrective measures regarding the traffic control. The CRP or alternate must be accessible by phone 24 hr. per day and able to respond when notified. The CRP and alternate must comply with the requirements of Section 2.6.5., "Training."

Section 2.6.2, "Flaggers," the first paragraph is voided and replaced by the following:

- 2.6.2. **Flaggers.** Designate in writing, a flagger instructor who will serve as a flagging supervisor and is responsible for training and assuring that all flaggers are qualified to perform flagging duties. Certify to the Engineer that all flaggers will be trained and make available upon request a list of flaggers trained to perform flagging duties.

Section 2.6.5, "Training," is voided and replaced by the following:

- 2.6.5. **Training.** Train workers involved with the traffic control using Department-approved training as shown on the "Traffic Control Training" Material Producer List.

Coordinate enrollment, pay associated fees, and successfully complete Department-approved training or Contractor-developed training. Training is valid for the period prescribed by the provider. Except for law enforcement personnel training, refresher training is required every 4 yr. from the date of completion unless otherwise specified by the course provider. The Engineer may require training at a frequency instead of the period prescribed based on the Department's needs. Training and associated fees will not be measured or paid for directly but are considered subsidiary to pertinent Items.

Certify to the Engineer that workers involved in traffic control and other work zone personnel have been trained and make available upon request a copy of the certification of completion to the Engineer. Ensure the following is included in the certification of completion:

- name of provider and course title,
- name of participant,
- date of completion, and
- date of expiration.

Where Contractor-developed training or a Department-approved training course does not produce a certification, maintain a log of attendees. Make the log available upon request. Ensure the log is legible and includes the following:

- printed name and signature of participant,
- name and title of trainer, and
- date of training.

2.6.5.1. **Contractor-developed Training.** Develop and deliver Contractor-developed training meeting the minimum requirements established by the Department. The outline for this training must be submitted to the Engineer for approval at the preconstruction meeting. The CRP or designated alternate may deliver the training instead of the Department-approved training. The work performed and materials furnished to develop and deliver the training will not be measured or paid for directly but will be considered subsidiary to pertinent Items.

2.6.5.1.1. **Flagger Training Minimum Requirements.** A Contractor's certified flagging instructor is permitted to train other flaggers.

2.6.5.1.2. **Optional Contractor-developed Training for Other Work Zone Personnel.** For other work zone personnel, the Contractor may provide training meeting the curriculum shown below instead of Department-approved training.

Minimum curriculum for Contractor-provided training is as follows:

Contractor-developed training must provide information on the use of personnel protection equipment, occupational hazards and health risks, and other pertinent topics related to traffic management. The type and amount of training will depend on the job duties and responsibilities. Develop training applicable to the work being performed. Develop training to include the following topics.

- The Life You Save May Be Your Own (or other similar company safety motto).
- Purpose of the training.
 - It's the Law.
 - To make work zones safer for workers and motorist.
 - To understand what is needed for traffic control.
 - To save lives including your own.
- Personal and Co-Worker Safety.
 - **High Visibility Safety Apparel.** Discuss compliant requirements; inspect regularly for fading and reduced reflective properties; if night operations are required, discuss the additional and appropriate required apparel in addition to special night work risks; if moving operations are underway, discuss appropriate safety measures specific to the situation and traffic control plan.
 - **Blind Areas.** A blind area is the area around a vehicle or piece of construction equipment not visible to the operators, either by line of sight or indirectly by mirrors. Discuss the "Circle of Safety" around equipment and vehicles; use of spotters; maintain eye contact with equipment operators; and use of hand signals.
 - **Runovers and Backovers.** Remain alert at all times; keep a safe distance from traffic; avoid turning your back to traffic and if you must then use a spotter; and stay behind protective barriers, whenever possible. Note: It is not safe to sit on or lean against a concrete barrier, these barriers can deflect four plus feet when struck by a vehicle.
 - Look out for each other, warn co-workers.
 - Be courteous to motorists.
 - Do not run across active roadways.
 - Workers must obey traffic laws and drive courteously while operating vehicles in the work zones.
 - Workers must be made aware of company distracted driving policies.
- **Night Time Operations.** Focus should be placed on projects with a nighttime element.

- **Traffic Control Training.** Basics of Traffic Control.
 - Identify work zone traffic control supervisor and other appropriate persons to report issues to when they arise.
 - Emphasize that work zone traffic control devices must be in clean and in undamaged condition. If devices have been hit but not damaged, put back in their correct place and report to traffic control supervisor. If devices have been damaged, replace with new one and report to traffic control supervisor. If devices are dirty, faded or have missing or damaged reflective tape clean or replace and report to traffic control supervisor. Show examples of non-acceptable device conditions. Discuss various types of traffic control devices to be used and where spacing requirements can be found.
 - **Channelizing Devices and Barricades with Slanted Stripes.** Stripes are to slant in the direction you want traffic to stay or move to; demonstrate this with a device.
 - **Traffic Queuing.** Workers must be made aware of traffic queuing and the dangers created by it. Workers must be instructed to immediately notify the traffic control supervisor and other supervisory personnel if traffic is queuing beyond advance warning sign and devices or construction limits.
 - **Signs.** Signs must be straight and not leaning. Report problems to the traffic control supervisor or other as designated for immediate repair. Covered signs must be fully covered. If covers are damaged or out of place, report to traffic control supervisor or other as designated.

Special Provision to Item 8

Prosecution and Progress

Item 8, "Prosecution and Progress," of the Standard Specifications, is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 8.5., "Project Schedules" is supplemented by the following

The progress schedule required for this project is the critical path method schedule (CPM schedule) as described herein. The Contractor shall prepare and submit for review and acceptance a cost loaded schedule of proposed working progress for the entire contract duration. The Engineer will provide a template with milestones from other contracts and non-construction activities for the Contractor to use in the development of their schedule. The Engineer shall also provide a Work Breakdown Structure (WBS) as well as the required report layouts for the Contractor to use to develop the progress schedule for this Contract.

Immediately after receipt of notice of award, the Division Engineer and the Contractor will establish a mutually agreeable date on which the preconstruction meeting will be held. The Contractor's project superintendent and other individuals representing the Contractor who are knowledgeable of the Contractor's proposed progress schedule or who will be in charge of major items of the work shall attend the preconstruction conference.

After work on the project has begun, construction conferences will be held periodically. The construction conferences are to be scheduled at times that are mutually agreeable to both the project superintendent and the Resident Engineer. It shall be the superintendent's responsibility to attend the conferences.

Section 8.5.2 "Progress Schedule" is supplemented by the following:

The Contractor shall provide a schedule that shows the various activities of Work in sufficient detail to demonstrate a reasonable and workable plan to complete the Project by the Original Contract Completion Date and any interdependent milestones identified by the Engineer or required by Contract. Show the order and interdependence of activities and the sequence for accomplishing the Work. Describe all activities in sufficient detail so that the Engineer can readily identify the Work and measure the progress of each activity.

Section 8.5.3 "Schedule Format" is supplemented by the following:

The Contractor shall use a compatible version of Oracle Primavera P6 or comparable scheduling software to generate the CPM schedule. It is the Contractor's responsibility to verify with the Engineer the software and version being used for this project and shall maintain the required version for the entire contract duration. The use of Microsoft Project and Primavera Project Planner (P3) and other scheduling software is prohibited.

The progress schedule shall contain the following Administrative Identifier Information:

- (1) Project Name
- (2) Contract Number
- (3) Date of Contract
- (4) Construction Completion Date
- (5) Contractor's Name
- (6) Contractor's Contact Information

The CPM schedule must reflect the scope of work and include the following:

- (1) Clear identification of tasks to be completed based on Section or Special Provisions included in the Project Manual and as listed in Pay Items, including subcontractor work activities.
- (2) Include calculations of resources required (Cost, Labor, Equipment) for constructing all facilities within the Contract duration. Specific calculations shall be provided to show quantities, manpower / crews, and equipment to support the critical path. The Contractor shall be capable of calculating the maximum crew size anticipated if any activities become critical, so the Contractor is prepared when a critical path changes or a new path occurs.
- (3) Float for each Activity.
- (4) Activities for submittals (shop drawings).
- (5) Punchlist activities with sufficient duration for the Engineer's inspection and acceptance before the final completion date
- (6) Activities for submittal review time by the Engineer, including time range showing start and end dates.
- (7) Working and shop drawing preparation, submittal, and review for acceptance.
- (8) Material and equipment procurement, fabrication and delivery; identify any long lead items as separate activities.
- (9) Owner furnished and/or installed materials and equipment shall be identified as separate activities.
- (10) NTP / Start of construction
- (11) Required phasing
- (12) Maintenance of traffic requirements as required by the contract (if any)
- (13) Intermediate completion dates (if any)
- (14) Identified interdependent milestones (if any)
- (15) Seasonal limitation/observation periods/moratoriums
- (16) Beginning and end of each traffic control work area and road openings
- (17) Other similar activities and project milestones established in the Contract Documents.
- (18) Substantial Completion Date
- (19) Final Acceptance Date
- (20) All required Reports layouts as requested by the Engineer

Section 8.5.4 "Activity Format" is supplemented by the following:

Activity requirements are discussed in further detail as follows:

- (1) Activity Identification (ID) - Assign each activity a unique identification number. The format for the identification number will be provided by the Engineer. All activities must begin with the same activity ID prefix as provided by the Engineer.
- (2) Activity Description - Assign each activity an unambiguous descriptive word or phrase. For example, use "Excavate Area A," not "Start Excavation."
- (3) Activity Codes – The Engineer will provide the activity code dictionary in the template. The Contractor will assign the appropriate codes to each activity.
- (4) Activity Original Duration - Assign a planned duration in working days for each activity. Do not exceed a duration of 10 working days for any activity unless accepted by the Engineer. Each activity shall have a minimum duration of 1 working day. Do not represent the maintenance of traffic, erosion control, and other similar items as single activities extending to the Completion Date. Break these Contract Items into component activities in order to meet the duration requirements of this paragraph.
- (5) Finish-to-Start Relationships - Unless allowed in writing by the Engineer, use only finish-to-start relationships with no leads or lags to link activities. All activities, except the first activity, shall have a predecessor(s). All activities, except the final activity, shall have a successor(s).
- (6) Calendars – The Engineer will provide pre-defined calendars as part of the template. The Contractor shall assign these pre-defined calendars to the appropriate activities. The Contractor may create new projectspecific

- calendars to represent their standard work schedule using the pre-defined calendars as a basis. The Contractor may not edit pre-defined calendars.
- (7) Constraints – Unless allowed in writing by the Engineer, do not use constraints in the schedule.
 - (8) Resources – Manpower and equipment shall be reflected for all activities. Incidental costs to construction shall be equally spread out across all activities. Front loaded schedules are not allowed.
 - (9) The schedule shall show the total cost of performing each activity and shall include the total labor, material, equipment and general conditions.
 - (10) The sum of cost for all activities shall equal the total Contract.
 - (11) The summed value of that portion of the activities allocated to each Contract bid item shall equal the total value of the corresponding Contract bid item.
 - (12) The Contractor shall allocate a value for unit price or lump sum contract bid items to each activity in the schedule. No Lump sum amounts should exceed \$100,000.

Section 8.5.5.2 “Critical Path Method” The first paragraph is voided and replaced by the following:

The Contractor shall submit the baseline CPM schedule in a bar chart format showing the critical path in red, using both hard copy and in electronic formats. Electronic formats shall be compatible with the Engineer’s computer systems. Also, submit the following information:

- (1) Written narrative – Explains the sequence of work, the controlling operations, intermediate completion dates, milestones, project phasing, anticipated work schedule and estimated resources. In addition, explain how permit requirements, submittal tracking and coordination with subcontractors, utility companies, railroads and other third party entities will be performed. The narrative shall itemize and describe the critical path (i.e. access limitations, constraints, shift work), and compare early and late date or Contract Milestone activities, and describe any critical resources.
- (2) CPM Schedule in a Bar Chart Format – Include the Administrative Identifier Information discussed above on the first page of the schedule. For each activity on the chart, indicate the Activity ID, Activity Description, Original Duration, Remaining Duration, Changes to Duration, Total Float, Early Start Date, Early Finish Date, and Calendar Name. Use arrows to show the relationships among activities.
- (3) Identify the critical path of the project on the bar chart. The critical path is defined as; 1) the sequence of activities that must be completed “on time” to ensure that the project finished on time. 2) the longest path of activities in the project that determines the project finish date.
- (4) No more than 10% of activities may be critical or near critical. Critical Activities will have a total float equal to zero. “Near critical” is defined as float in the range of 1 to 10 working days.
- (5) Six Week Look Ahead CPM Schedule in a Bar Chart Format – This schedule will have all the same requirements of the CPM schedule in bar chart format except that it shall be limited to those activities that have an early start or early finish within a six-week period of the data date.
- (6) Logic Diagram – Submit a diagram in PERT chart format showing the logic of the CPM schedule.
- (7) Activity ID Sort – Submit a listing of all activities included in the CPM schedule sorted by ascending Activity Identification Number.
- (8) Total Float Sort – Submit a listing of all activities included in the CPM schedule sorted by increasing total float and by early start date.
- (9) All float belongs to the Project and is a shared commodity between the Contractor and the Mobility Authority and is not for the exclusive use or benefit of either party. The Contractor shall notify the Engineer in writing for acceptance before using any float.
- (10) Detailed Predecessor/Successor Sort – Submit a listing of all activities included in the CPM schedule indicating the activities that immediately precede and immediately succeed that activity in the schedule logic.
- (11) Scheduling Statistics Report – Submit a report of CPM schedule statistics, including number of activities, number of activities on the longest path, number of started activities, number of completed activities, number of relationships, percent complete, and number and type of constraints.

- (12) A resource curves / Metric tracking reports (EVM) corresponding to the milestones and work activities established above.

Section 8.5.5.2.2 "Baseline Schedule" The second paragraph is voided and replaced by the following:

The Contractor shall submit a progress schedule for the entire duration of the Contract to the Engineer 30 calendar days following the contract award date. After review of the schedule the Engineer shall schedule a Baseline CPM Schedule meeting with the Contractor to review the schedule and identify any changes or corrections. Within 7 calendar days of the CPM Schedule meeting, the Contractor shall make any necessary adjustments to address all review comments and resubmit network diagrams and reports for the Engineer's review. The complete baseline schedule shall be submitted and accepted no later than (45) forty-five days after contract award date. The complete progress schedule shall be accepted by the Engineer before any payments will be processed for the project.

Section 8.5.5.2.3 "Progress Schedule" is supplemented by the following

The Engineer may withhold pay estimates if the updated CPM schedule is not submitted as required by this section. For each updated CPM schedule, identify the actual start and finish dates for all completed activities, the actual start date and remaining duration for all activities in progress, the difference in duration of all activities since the last update and any exceptional reports associated with the update. Only accepted changes will be incorporated into the monthly progress schedule update. The schedule should represent the actual work performed and should be progressed with actuals for all the schedule activities. The final schedule will be utilized as the project actual "As Built" schedule.

Provide a written narrative that identifies any changes or shifts in the critical path and submit reasons for the changes or shifts in the critical path. Identify any changes in logic for the updated CPM schedule and submit reasons for changes to the schedule logic. In addition to the written narrative, submit the following with each updated CPM schedule:

- (1) CPM Schedule in Bar Chart Format
- (2) Four Week Look Ahead CPM Schedule in Bar Chart Format
- (3) Logic Diagram
- (4) Activity ID Sort
- (5) Total Float Sort
- (6) Detailed Predecessor/Successor Sort
- (7) Schedule Metrics and Earned Value (Schedule, Cost, Labor) Reports

The Contractor must submit a statement that there were no changes in the schedule logic, activity durations, or calendars since the previous update in lieu of submission of items (3), (5), and (6). Acceptance of schedule updates by the Engineer does not revise the Contract Documents.

A monthly schedule update meeting shall be held each month following Notice to Proceed to review monthly schedule update submittals, critical path items and recovery schedules. The Contractor shall be represented in the meeting by the Contractor's scheduler, project manager and general superintendent. As necessary the Contractor may be also asked to attend a coordination meeting to discuss the schedule impacts to other contractors.

If the Project completion date changes or if the project schedule overrun is anticipated to exceed 5%, the Contractor shall submit a revised progress schedule to the Engineer for review and acceptance. If plan revisions are anticipated to change the sequence of construction in such a manner as will affect the progress, but not the completion date, then the Contractor may submit a revised progress schedule for review and acceptance. The Project completion date shall remain unchanged.

Section 8.5.5.3 "Notice of Potential Time Impact" is supplemented by the following

"Contractor shall not be eligible for Change Order(s) for additional compensation for additional costs, including costs for developing and executing a Recovery Schedule(s), and delay and disruption damages, or additional Days incurred directly or indirectly from the virus known as severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and the disease known as COVID-19, including any disruptions to, and delays or interruptions in, construction of the Project in accordance with the Contract and any approved Baseline Schedule."

Section 8.5.5 "Schedule Types" is supplemented by the following:

Section 8.5.5.5 Recovery Schedule

If the progress schedule projects a finish date for the Project beyond the original Completion Date, the Contractor shall submit a revised schedule showing a plan to finish by the original Completion Date. The Mobility Authority will withhold Pay Estimates until the Engineer accepts the revised schedule. No additional compensation for developing and executing a recovery schedule(s) shall be reimbursed to the Contractor. The Engineer will use the schedule to evaluate time extensions and associated costs requested by the Contractor.

- (1) In the event Work or related construction activities shown on the Contractor's Progress Schedule fall behind schedule to the extent that dates established as contractual Completion Dates are in jeopardy, the Contractor shall prepare and submit to the Engineer, at no additional cost or time to the Mobility Authority, a Recovery Schedule showing intent to remedy delays and to regain originally scheduled time of completion of Work within a timely manner. This includes delays due to unforeseen conditions.
- (2) Recovery Schedule shall be submitted in such form and detail appropriate to the delay or delays, explaining and displaying how the Contractor intends to reschedule those activities and reestablish compliance with the accepted baseline Construction Progress Schedule during the immediate subsequent pay period or as permitted by Engineer. This shall include a schedule diagram comparing the original and the revised sequence of activities, identifying all affected activities.
- (3) Upon determining the requirement for a Recovery Schedule:
 - a. Within five (5) calendar days, the Contractor shall present to Engineer a proposed Recovery Schedule. The Recovery Schedule shall represent the Contractor's best judgment as to how to best reorganize the Work and achieve progress to comply with the accepted Construction Progress Schedule.
 - b. Changes to Contractor's means and methods, such as increased labor force, working hours, overtime, additional equipment and other means shall not constitute the basis for changes to the Contract Sum or Contract Time.
 - c. Recovery Schedule shall show remedies to bring Work back on schedule up-to-date within the immediate subsequent pay period.
 - d. The Recovery Schedule shall be prepared to a similar level of detail as the Construction Progress Schedule.
 - e. Five (5) calendar days prior to the expiration of the Recovery Schedule, Contractor shall document to the Engineer that the Work schedule has regained, or is on-track to regain, compliance with the Construction Progress Schedule.
- (4) Failure to submit Recovery Schedule in a timely manner may result in Termination of the Contract for Cause as determined by the Engineer.
- (5) Failure to achieve compliance with the accepted Construction Progress Schedule despite implementing Recovery Schedule may result in Termination of the Contract for Cause as determined by the Engineer.
- (6) Termination of Contract For Cause: In the event Contractor defaults on the terms of the Contract, including failure to maintain the Construction Progress Schedule, Engineer will assess the level of completion of the Work achieved by the Contractor and compare amount of available funds against anticipated costs required for the Mobility Authority to complete the Work, including anticipated Liquidated Damages resulting from delay, if any. Engineer will determine amount of payment due to Contractor for Work completed prior to date of Termination of Contract for Cause, if any. In the event available funds are not sufficient for the Mobility Authority to complete the Work, the Mobility Authority will withhold such funds from the amount due the Contractor.
- (7) If, in the opinion of the Engineer, the Contractor has sufficiently regained compliance with the Construction Progress Schedule, the use of the Construction Progress Schedule will be resumed. Contractor shall update and submit the Construction Progress Schedule clearly identifying Work to date and how the Contractor intends to achieve timely completion for the remainder of the Work in accordance with the Construction Documents.

Special Provision to Item 8

Prosecution and Progress

Item 8, "Prosecution and Progress," of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 8.1, "Prosecution of Work." The first sentence of the first paragraph is voided and replaced by the following:

Begin work within 7 calendar days of Notice to Proceed. Notice to Proceed may be deferred up to 20 days from CTRMA Board award of the contract. Do not begin work before this period unless authorized in writing by the Engineer.

Time charges will be suspended October 15th, 2021. No work shall be performed between October 15th, 2021 and April 15th, 2022. Time charges will resume April 15th, 2022.

Following the completion of Milestone 1, time charges may be suspended at the Contactor's request prior to the October 15th, 2021 mandatory work stoppage.

Special Provision to Item 8 Prosecution and Progress



Item 8, "Prosecution and Progress" of the Standard Specification is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 8.2., "Subcontracting," is supplemented by the following paragraph, which is added as paragraph six to this article:

The Contractor certifies by signing the Contract that the Contractor will not enter into any subcontract with a subcontractor that is not registered in the Department of Homeland Security's (DHS) E-Verify system. Require that all subcontractors working on the project register and require that all subcontractors remain active in the DHS E-Verify system until their work is complete on the project.

Special Provision to Item 8 Prosecution and Progress



Item 8, "Prosecution and Progress" of the Standard Specifications is amended with respect to the clause cited below. No other clauses or requirements of this Item are waived or changed.

Article 8.7.2., "Wrongful Default," is revised and replaced by the following:

If it is determined after the Contractor is declared in default, that the Contractor was not in default, the rights and obligations of all parties will be the same as if termination had been issued for the convenience of the public as provided in Article 8.8 "Termination of Contract."

Special Provision to Item 9

Measurement and Payment

Item 9, "Measurement and Payment," of the Standard Specifications, is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 9.5., "Progress Payments," Delete this section of the Specifications in its entirety and substitute with the following:

Partial payments will be made once each month covering work performed and materials complete-in-place in accordance with the Contract. The invoice form to be submitted each month will be provided to the Contractor in Microsoft Excel format. The Contractor must be able to use Microsoft Excel to complete the invoice form. Partial payments will be made on the value of work performed based on approximate estimates prepared by the Engineer, provided, however, that no estimate shall be certified or payment made where the net amount receivable by the Contractor is less than Five-hundred Dollars (\$500.00).

The Engineer will review the partial payment estimate with the Contractor's representative prior to each partial payment.

Total Contract value shall be considered to mean the original amount of the Contract, except when the Contract is increased or decreased by a supplemental agreement in which case the adjusted total shall be used.

The Mobility Authority reserves the right to withhold the payment of any partial or final estimate voucher or any sum or sums thereof from such vouchers in the event of the failure of the Contractor to promptly make payment to all persons supplying equipment, tools or materials, or for any labor used by the Contractor in the prosecution of the work provided for in the Contract, and for any other cause as determined by the Mobility Authority in its sole discretion, including overpayment on previous partial payments.

Article 9.8., "Retainage," is supplemented with the following:

The Mobility Authority shall not withhold funds from payments to be made to Contractor for the Work until such time as 95% of the Adjusted Contract Price has been paid to the Contractor. Following completion of and payment for 95% of the Adjusted Contract Price, the Mobility Authority shall withhold, the remaining 5% of the Adjusted Contract Price pursuant to the terms described below.

The remaining 5% for the Work, subject to reduction as specified below, shall be held by the Mobility Authority until Final Acceptance. At such time, and provided the Contractor is not in breach or default hereunder, the Mobility Authority shall release to Contractor all withheld in connection with the Work other than amounts applied to the payment of Losses or which the Mobility Authority deems advisable, in its sole discretion, to retain to cover any existing or threatened claims. The Contractor must further warrant, to the satisfaction of the Mobility Authority, that there are no outstanding claims or liens by any subcontractors or other parties with respect to the Work.

The prime contractor shall make full payment of amounts due to subcontractors within 10 calendar days following the satisfactory completion of the subcontractor's work. Satisfactory completion of the subcontractor's work shall be defined as approval, acceptance, and payment for the subcontractor's work by the Mobility Authority including the submittal and acceptance of all information, deliverables or other documents required by the contract.

Prior to the release of the remaining 5% by the Mobility Authority pursuant to the terms hereof, such amounts shall be held by the Mobility Authority. Upon the release of the remaining 5%, the Contractor shall not be entitled to any interest income that has accrued upon the amounts of the remaining 5% released to Contractor.

Article 9.9., "Payment Provisions for Subcontractors," is supplemented with the following:

The Mobility Authority may pursue actions against the Contractor, including withholding of estimates and suspending the work, for noncompliance with the subcontract requirements of this Section upon receipt of written notice with sufficient details showing the subcontractor has complied with contractual obligations as described in this Article.

These requirements apply to all tiers of subcontractors. Incorporate the provisions of this Article into all subcontract or material purchase agreements.

Special Provision to Item 300

Asphalts, Oils, and Emulsions



Item 300, "Asphalts, Oils, and Emulsions," of the Standard Specifications, is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Section 300.2., "Materials." The first paragraph is voided and replaced by the following.

Provide asphalt materials that meet the stated requirements when tested in accordance with the referenced Department, AASHTO, and ASTM test methods. Use asphalt containing recycled materials only if the recycled components meet the requirements of Article 6.9, "Recycled Materials." Provide asphalt materials that the Department has preapproved for use in accordance with Tex-545-C, "Asphalt Binder Quality Program."

Inform the Department of all additives or modifiers included in the asphalt binder as part of the facility quality plan, as required by Tex-545-C, "Asphalt Binder Quality Program," and provide that information to Department personnel. The Department reserves the right to prohibit the use of any asphalt additive or modifier.

Limit the use of polyphosphoric acid to no more than 0.5% by weight of the asphalt binder.

The use of re-refined engine oil bottoms is prohibited.

Section 300.2.2., "Polymer-Modified Asphalt Cement," **Table 3 is supplemented by the following:**

Table 3A
Polymer-Modified Asphalt Cement Non-Tracking Tack Coat – Hot Applied

Property	Test Procedure	NT-HA	
		Min	Max
Viscosity, 275°F, cP	T 316	-	4000
Penetration, 77°F, 100 g, 5 sec.	T 49	-	25
Softening Point, °F	T 53	170	-
Dynamic shear, $G^*/\sin \delta$, 82°C, 10 rad/s, kPa	T 315	1.0	-
Flash Point, C.O.C., °F	T 48	425	-

Section 300.2.4., "Emulsified Asphalt," Table 10 is voided and replaced by the following:

Table 10
Polymer-Modified Cationic Emulsified Asphalt

Property	Test Procedure	Type-Grade												
		Rapid-Setting						Medium-Setting				Slow-Setting		
		CRS-2P		CHFRS-2P		CRS-2TR		CMS-1P ³		CMS-2P ³		CSS-1P		
		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	
Viscosity, Saybolt Furol 77°F, sec. 122°F, sec.	T 72													
Sieve test, %	T 59													
Demulsibility, 35 ml of 0.8% sodium dioctyl sulfosuccinate, %	T 59													
Storage stability, 1 day, %	T 59													
Breaking index, g	Tex-542-C													
Particle charge	T 59													
Distillation test ¹ :	T 59													
Residue by distillation, % by weight														
Oil distillate, % by volume of emulsion														
Tests on residue from distillation:														
Polymer content, wt. % (solids basis)	Tex-533-C													
Penetration, 77°F, 100 g, 5 sec.	T 49													
Viscosity, 140°F, poise	T 202													
Solubility in trichloroethylene, %	T 44													
Softening point, °F	T 53													
Ductility, 77°F, 5 cm/min., cm	T 51													
Float test, 140°F, sec.	T 50													
Ductility, ² 39.2°F, 5 cm/min., cm	T 51													
Elastic recovery, ² 50°F, %	Tex-539-C													
Tests on residue from evaporative recovery:	R 78, Procedure B													
Nonrecoverable creep compliance of residue, 3.2 kPa, 52°C, kPa ⁻¹	T 350													
Tests on rejuvenating agent:														
Viscosity, 140°F, cSt	T 201													
Flash point, C.O.C., °F	T 48													
Saturates, % by weight	D 2007													
Solubility in n-pentane, % by weight	D 2007													
Tests on rejuvenating agent after TFO or RTFO:	T 240 or T 179													
Weight Change, %														
Viscosity Ratio														
Tests on latex ⁴ :														
Tensile strength, die C dumbbell, psi	D 412 ⁵													
Change in mass after immersion in rejuvenating agent, %	D 471													

1. Exception to T 59: Bring the temperature on the lower thermometer slowly to 350°F (±0°F). Maintain at this temperature for 20 min. Complete total distillation in 60 min. (±5 min.) from the first application of heat.
2. CRS-2P must meet one of either the ductility or elastic recovery requirements.
3. With all precertification samples of CMS-1P or CMS-2P, submit certified test reports showing that the rejuvenating agent and latex meet the stated requirements. Submit samples of these raw materials if requested by the Engineer.
4. Preparation of latex specimens: use any substrate and recovery method which produces specimens of uniform dimensions and which delivers enough material to achieve desired residual thickness.
5. Cut samples for tensile strength determination using a crosshead speed of 20 in. per minute.
6. Specimen must remain intact after exposure and removal of excess rejuvenating agent.
7. Modifier type is tire rubber.

Section 300.2.4., “Emulsified Asphalt”, is supplemented by the following:

Emulsified Asphalt. Provide emulsified asphalt that is homogeneous, does not separate after thorough mixing, and meets the requirements for the specified type and grade in Tables 7, 8, 9, 10 and 10A.

Table 10A
Non-Tracking Tack Coat Emulsion

Property	Test Procedure	Hard Residue NT-HRE		Regular Residue NT-RRE	
		Min	Max	Min	Max
Viscosity, Saybolt Furol, 77° F,sec	T 72	15	--	15	--
Storage stability, 1 Day, %	T 59	--	1	--	1
Settlement, 5-day, %	T 59	2	5	2	5
Sieve test, %	T 59	--	0.30	--	0.30
Distillation test: ¹	T 59				
Residue by distillation, % by wt.		50	--	50	--
Oil distillate, by volume of emulsion		--	1.0	--	1.0
Test on residue from distillation:					
Penetration, 77°F, 100 g, 5 sec.	T 49	--	20	20	60
Solubility in trichloroethylene, %	T 44	97.5	--	97.5	--
Softening point, °F	T 53	150	--	150	--
Dynamic shear, G*/sin(δ), 82°C, 10 rad/s, kPa	T 315	1.0	--	1.0	--

1. Exception to AASHTO T-59: Bring the temperature on the lower thermometer slowly to 350°F ± 10°F. Maintain at this temperature for 20 min. Complete total distillation in 60 ± 5 min. from first application of heat.

Section 300.2.5., “Specialty Emulsions.” The first sentence is voided and replaced with the following:

Specialty emulsions may be either asphalt-based or resin-based and must meet the requirements of Table 11 or Table 11A.

Section 300.2.5., “Specialty Emulsions,” is supplemented by the following:

**Table 11A
Hard Residue Surface Sealant**

Property	Test Procedure	Min	Max
Viscosity, Krebs unit, 77°F, Krebs units	D 562	45	75
Softening point, °F	T 53 ¹	250	--
Uniformity	D 2939		Pass ²
Resistance to heat	D 2939		Pass ³
Resistance to water	D 2939		Pass ⁴
Wet flow, mm	D 2939	--	0
Resistance to Kerosene (optional) ⁵	D 2939		Pass ⁶
Ultraviolet exposure, UVA-340, 0.77 W/m ² , 50°C chamber, 8 hours UV lamp, 5 min spray, 3 hours 55 minutes condensation, 1000 hr total exposure ⁷	G 154		Pass ⁸
Abrasion loss, 1.6 mm thickness, liquid only, %	ISSA TB-100	--	1.0
Residue by evaporation, % by weight	D 2939	33	--
Tests on residue from evaporation:			
Penetration, 77°F, 100 g, 5 sec.	T 49	15	30
Flash point, Cleveland open cup, °F	T 48	500	
Tests on base asphalt before emulsification			
Solubility in trichloroethylene, %	T 44	98	--

1. Cure the emulsion in the softening point ring in a 200°F ± 5°F oven for 2 hr.
2. Product must be homogenous and show no separation or coagulation that cannot be overcome by moderate stirring.
3. No sagging or slippage of film beyond the initial reference line.
4. No blistering or re-emulsification.
5. Recommended for airport applications or where fuel resistance is desired.
6. No absorption of Kerosene into the clay tile past the sealer film. Note sealer surface condition and loss of adhesion.
7. Other exposure cycles with similar levels of irradiation and conditions may be used with Department approval.
8. No cracking, chipping, surface distortion, or loss of adhesion. No color fading or lightening.

Section 300.2.10., "Performance-Graded Binders," Table 17 is voided and replaced by the following:

Table 17
Performance-Graded Binders

Property and Test Method	Performance Grade																	
	PG 58			PG 64			PG 70			PG 76			PG 82					
	-22	-28	-34	-16	-22	-28	-34	-16	-22	-28	-34	-16	-22	-28	-34	-16	-22	-28
Average 7-day max pavement design temperature, °C ¹	58			64			70			76			82					
Min pavement design temperature, °C ¹	-22	-28	-34	-16	-22	-28	-34	-16	-22	-28	-34	-16	-22	-28	-34	-16	-22	-28
Original Binder																		
Flash point, T 48, Min, °C	230																	
Viscosity, T 316 ^{2, 3} : Max, 3.0 Pa-s, test temperature, °C	135																	
Dynamic shear, T 315 ⁴ : G*/sin(δ), Min, 1.00 kPa, Max, 2.00 kPa ⁷ , Test temperature @ 10 rad/sec., °C	58			64			70			76			82					
Elastic recovery, D6084, 50°F, % Min ⁸	-	-	30	-	-	30	50	-	30	50	60	30	50	60	70	50	60	70
Rolling Thin-Film Oven (Tex-541-C)																		
Mass loss, Tex-541-C, Max, %	1.0																	
Dynamic shear, T 315: G*/sin(δ), Min, 2.20 kPa, Max, 5.00 kPa ⁷ , Test temperature @ 10 rad/sec., °C	58			64			70			76			82					
MSCR, T350, Recovery, 0.1 kPa, High Temperature, % Min ⁸	-	-	20	-	-	20	30	-	20	30	40	20	30	40	50	30	40	50
Pressure Aging Vessel (PAV) Residue (R 28)																		
PAV aging temperature, °C	100																	
Dynamic shear, T 315: G*/sin(δ), Max, 5000 kPa Test temperature @ 10 rad/sec., °C	25	22	19	28	25	22	19	28	25	22	19	28	25	22	19	28	25	22
Creep stiffness, T 313 ^{5, 6} : S, max, 300 MPa, m-value, min, 0.300 Test temperature @ 60 sec., °C	-12	-18	-24	-6	-12	-18	-24	-6	-12	-18	-24	-6	-12	-18	-24	-6	-12	-18
Direct tension, T 314 ⁶ : Failure strain, min, 1.0% Test temperature @ 1.0 mm/min., °C	-12	-18	-24	-6	-12	-18	-24	-6	-12	-18	-24	-6	-12	-18	-24	-6	-12	-18

- Pavement temperatures are estimated from air temperatures using an algorithm contained in a Department-supplied computer program, may be provided by the Department, or by following the procedures outlined in AASHTO MP 2 and PP 28.
- This requirement may be waived at the Department's discretion if the supplier warrants that the asphalt binder can be adequately pumped, mixed, and compacted at temperatures that meet all applicable safety, environmental, and constructability requirements. At test temperatures where the binder is a Newtonian fluid, any suitable standard means of viscosity measurement may be used, including capillary (T 201 or T 202) or rotational viscometry (T 316).
- Viscosity at 135°C is an indicator of mixing and compaction temperatures that can be expected in the lab and field. High values may indicate high mixing and compaction temperatures. Additionally, significant variation can occur from batch to batch. Contractors should be aware that variation could significantly impact their mixing and compaction operations. Contractors are therefore responsible for addressing any constructability issues that may arise.
- For quality control of unmodified asphalt binder production, measurement of the viscosity of the original asphalt binder may be substituted for dynamic shear measurements of G*/sin(δ) at test temperatures where the asphalt is a Newtonian fluid. Any suitable standard means of viscosity measurement may be used, including capillary (T 201 or T 202) or rotational viscometry (T 316).
- Silicone beam molds, as described in AASHTO TP 1-93, are acceptable for use.
- If creep stiffness is below 300 MPa, direct tension test is not required. If creep stiffness is between 300 and 600 MPa, the direct tension failure strain requirement can be used instead of the creep stiffness requirement. The m-value requirement must be satisfied in both cases.
- Maximum values for unaged and RTFO aged dynamic shear apply only to materials used as substitute binders, as described in specification items, 340, 341, and 344.
- Elastic Recovery (ASTM D6084) is not required unless MSCR (ASTM 315) is less than the minimum % recovery. Elastic Recovery shall be used for the acceptance criteria in this instance.

Special Provision to Item 314

Emulsified Asphalt Treatment



Item 314, "Emulsified Asphalt Treatment" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Articles 1 through 6 are voided and replaced by the following:

1. DESCRIPTION

Apply a mixture of water and asphalt emulsion as a base or subgrade treatment; for erosion control, including dust prevention; or as a prime coat.

2. MATERIALS

Furnish materials of the type and grade shown on the plans in accordance with the following:

- 2.1. **Emulsion.** Furnish emulsified asphalt meeting the requirements of Item 300, "Asphalt, Oils, and Emulsions."
- 2.2. **Emulsion and Water Mixture.** Dilute the emulsion by adding water to create a mixture containing a proportion of emulsion, expressed as a percentage of total volume, in accordance with the percentage shown on the plans or as directed.

3. EQUIPMENT

Provide a self-propelled sprinkler in accordance with Article 204.3., "Equipment." Provide current calibration documentation for the tank used for distribution.

4. CONSTRUCTION

Agitate the emulsion and water mixture to produce a uniform blend. Evenly distribute at the rate selected by the Engineer to locations shown on the plans or as directed.

- 4.1. **Base or Subgrade Treatment.** Treat the base or subgrade to the depth and width shown on the plans or as directed.

Regulate the percentage of emulsion in the mixture and distribute successive applications to achieve the specified rate. Maintain the proper moisture content of the treated material. Mix the treated material, then shape and compact as required by the specification for the course. Finish the course to the line, grade, and typical section shown on the plans. Maintain the surface with light applications of the mixture while curing the course, as directed.
- 4.2. **Erosion Control.** Apply the mixture as shown on the plans or as directed.
- 4.3. **Prime Coat.** Regulate the percentage of emulsion in the mixture and distribute successive applications to achieve the specified rate.

5. MEASUREMENT

The treatment will be measured by the gallon of emulsion used in the emulsion and water mixture.

6. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Emulsified Asphalt (Base or Subgrade Treatment)," "Emulsified Asphalt (Erosion Control)," or "Emulsified Asphalt (Prime Coat)," of the type and grade specified. This price is full compensation for materials, including emulsion and water, and for equipment, labor, tools, and incidentals.

Special Provision to Item 340

Dense-Graded Hot-Mix Asphalt (Small Quantity)



For this project, Item 340, "Dense-Graded Hot-Mix Asphalt (Small Quantity)," of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Section 340.2.5., "Tack Coat." The first paragraph is voided and replaced by the following.

Furnish CSS-1H, SS-1H, or a PG binder with a minimum high-temperature grade of PG 58 for tack coat binder in accordance with Item 300, "Asphalts, Oils, and Emulsions." Specialized tack coat materials listed on the Department's MPL are allowed or required when shown on the plans. Do not dilute emulsified asphalts at the terminal, in the field, or at any other location before use.

Section 340.4.1., "Certification." The paragraph is voided and replaced by the following.

Certification. Personnel certified by the Department-approved hot-mix asphalt certification program must conduct all mixture designs, sampling, and testing in accordance with Table 6. Supply the Engineer with a list of certified personnel and copies of their current certificates before beginning production and when personnel changes are made. Provide a mixture design developed and signed by a Level 2 certified specialist. Provide Level 1A certified specialists at the plant during production operations. Provide Level 1B certified specialists to conduct placement tests. Provide Level AGG101 certified specialists for aggregate testing.

Table 6, "Test Methods, Test Responsibility, and Minimum Certification Levels" is voided and replaced by the following.

Table 6
Test Methods, Test Responsibility, and Minimum Certification Levels

Test Description	Test Method	Contractor	Engineer	Level ¹
1. Aggregate and Recycled Material Testing				
Sampling	Tex-221-F	✓	✓	1A/AGG101
Dry sieve	Tex-200-F, Part I	✓	✓	1A/AGG101
Washed sieve	Tex-200-F, Part II	✓	✓	1A/AGG101
Deleterious material	Tex-217-F, Parts I & III	✓	✓	AGG101
Decantation	Tex-217-F, Part II	✓	✓	AGG101
Los Angeles abrasion	Tex-410-A		✓	TxDOT
Magnesium sulfate soundness	Tex-411-A		✓	TxDOT
Micro-Deval abrasion	Tex-461-A		✓	AGG101
Crushed face count	Tex-460-A	✓	✓	AGG101
Flat and elongated particles	Tex-280-F	✓	✓	AGG101
Linear shrinkage	Tex-107-E	✓	✓	AGG101
Sand equivalent	Tex-203-F	✓	✓	AGG101
Organic impurities	Tex-408-A	✓	✓	AGG101
2. Asphalt Binder & Tack Coat Sampling				
Asphalt binder sampling	Tex-500-C, Part II	✓	✓	1A/1B
Tack coat sampling	Tex-500-C, Part III	✓	✓	1A/1B
3. Mix Design & Verification				
Design and JMF changes	Tex-204-F	✓	✓	2
Mixing	Tex-205-F	✓	✓	2
Molding (TGC)	Tex-206-F	✓	✓	1A
Molding (SGC)	Tex-241-F	✓	✓	1A
Laboratory-molded density	Tex-207-F, Parts I & VI	✓	✓	1A
Rice gravity	Tex-227-F, Part II	✓	✓	1A
Ignition oven correction factors ²	Tex-236-F, Part II	✓	✓	2
Indirect tensile strength	Tex-226-F	✓	✓	1A
Hamburg Wheel test	Tex-242-F	✓	✓	1A
Boil test	Tex-530-C	✓	✓	1A
4. Production Testing				
Mixture sampling	Tex-222-F	✓	✓	1A/1B
Molding (TGC)	Tex-206-F		✓	1A
Molding (SGC)	Tex-241-F		✓	1A
Laboratory-molded density	Tex-207-F, Parts I & VI		✓	1A
Rice gravity	Tex-227-F, Part II		✓	1A
Gradation & asphalt binder content ²	Tex-236-F, Part I		✓	1A
Moisture content	Tex-212-F, Part II		✓	1A/AGG101
Hamburg Wheel test	Tex-242-F		✓	1A
Boil test	Tex-530-C		✓	1A
5. Placement Testing				
In-place air voids	Tex-207-F, Parts I & VI		✓	1A
In-place density (nuclear method)	Tex-207-F, Part III	✓		1B
Establish rolling pattern	Tex-207-F, Part IV	✓		1B
Ride quality measurement	Tex-1001-S	✓	✓	Note 3

- Level 1A, 1B, AGG101, and 2 are certification levels provided by the Hot Mix Asphalt Center certification program.
- Refer to Section 340.4.8.3., "Production Testing," for exceptions to using an ignition oven.
- Profiler and operator are required to be certified at the Texas A&M Transportation Institute facility when Surface Test Type B is specified.

Section 340.4.4.2., Mixing and Discharge of Materials. The first paragraph is voided and replaced by the following.

Notify the Engineer of the target discharge temperature and produce the mixture within 25°F of the target. Monitor the temperature of the material in the truck before shipping to ensure that it does not exceed 350°F (or 275°F for WMA). The Department will not pay for or allow placement of any mixture produced above 350°F.

Section 340.4.6.2., "Tack Coat." The paragraph is voided and replaced by the following.

4.6.2.1 **Application.** Clean the surface before placing the tack coat. The Engineer will set the rate between 0.04 and 0.10 gal. of residual asphalt per square yard of surface area. Apply a uniform tack coat at the specified rate unless otherwise directed. Apply the tack coat in a uniform manner to avoid streaks and other irregular patterns. Apply the tack coat to all surfaces the will come in contact with the subsequent HMA placement, unless otherwise directed. Allow adequate time for emulsion to break completely before placing any material. Prevent splattering of tack coat when placed adjacent to curb, gutter, and structures. Do not dilute emulsified asphalts at the terminal, in the field, or at any other location before use.

4.6.2.2 **Sampling.** The Engineer will obtain at least one sample of the tack coat binder per project in accordance with Tex-500-C, Part III, and test it to verify compliance with Item 300, "Asphalts, Oils, and Emulsions." The Engineer will obtain the sample from the asphalt distributor immediately before use.

For emulsions, the Engineer may test as often as necessary to ensure the residual of the emulsion is greater than or equal to the specification requirement in Item 300, "Asphalts, Oils, and Emulsions."

Section 340.5., "Measurement," is voided and replaced by the following.

5.1 **Dense Graded Hot-Mix Asphalt (SQ).** Hot mix will be measured by the ton of composite hot-mix, which includes asphalt, aggregate, and additives. Measure the weight on scales in accordance with Item 520, "Weighing and Measuring Equipment."

5.2 **Tack Coat.** Tack coat will be measured at the applied temperature by strapping the tank before and after road application and determining the net volume in gallons from the calibrated distributor. The Engineer will witness all strapping operations for volume determination. All tack, including emulsions, will be measured by the gallon applied.

The Engineer may allow the use of a metering device to determine asphalt volume used and application rate if the device is accurate within 1.5% of the strapped volume.

Section 340.6., "Payment," the first paragraph is voided and replaced with the following.

The work performed and materials furnished in accordance with this Item and measured as provided under Article 340.5.1, "Measurement," will be paid for at the unit bid price for "Dense Graded Hot-Mix Asphalt (SQ)" of the mixture type, SAC, and binder specified. These prices are full compensation for surface preparation, materials, placement, equipment, labor, tools, and incidentals.

Section 340.6., "Payment," is supplemented by the following.

The work performed and materials furnished in accordance with this Item and measured as provided under Section 340.5.2, "Measurement," will be paid for at the unit bid price for "Tack Coat" of the tack coat provided. These prices are full compensation for materials, placement, equipment, labor, tools, and incidentals.

Special Provision to Item 346

Stone-Matrix Asphalt



For this project, Item 346, "Stone-Matrix Asphalt," of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Section 346.2.5. Tack Coat. The first paragraph is voided and replaced by the following.

Furnish CSS-1H, SS-1H, or a PG binder with a minimum high-temperature grade of PG 58 for tack coat binder in accordance with Item 300, "Asphalts, Oils, and Emulsions." Specialized tack coat materials listed on the Department's MPL are allowed or required when shown on the plans. Do not dilute emulsified asphalts at the terminal, in the field, or at any other location before use.

Section 346.4.1., "Certification." The paragraph is voided and replaced by the following.

Certification. Personnel certified by the Department-approved hot-mix asphalt certification program must conduct all mixture designs, sampling, and testing in accordance with Table 5. Supply the Engineer with a list of certified personnel and copies of their current certificates before beginning production and when personnel changes are made. Provide a mixture design developed and signed by a Level 2 certified specialist. Provide Level 1A certified specialists at the plant during production operations. Provide Level 1B certified specialists to conduct placement tests. Provide Level AGG101 certified specialists for aggregate testing.

Table 5, "Test Methods, Test Responsibility, and Minimum Certification Levels" is voided and replaced by the following.

Table 5
Test Methods, Test Responsibility, and Minimum Certification Levels

Test Description	Test Method	Contractor	Engineer	Level ¹
1. Aggregate and Recycled Material Testing				
Sampling	Tex-221-F	✓	✓	1A/AGG101
Dry sieve	Tex-200-F , Part I	✓	✓	1A/AGG101
Washed sieve	Tex-200-F , Part II	✓	✓	1A/AGG101
Deleterious material	Tex-217-F , Parts I & III	✓	✓	AGG101
Decantation	Tex-217-F , Part II	✓	✓	AGG101
Los Angeles abrasion	Tex-410-A		✓	TxDOT
Magnesium sulfate soundness	Tex-411-A		✓	TxDOT
Micro-Deval abrasion	Tex-461-A		✓	AGG101
Crushed face count	Tex-460-A	✓	✓	AGG101
Flat and elongated particles	Tex-280-F	✓	✓	AGG101
Linear shrinkage	Tex-107-E	✓	✓	AGG101
Sand equivalent	Tex-203-F	✓	✓	AGG101
Organic impurities	Tex-408-A	✓	✓	AGG101
2. Asphalt Binder & Tack Coat Sampling				
Asphalt binder sampling	Tex-500-C , Part II	✓	✓	1A/1B
Tack coat sampling	Tex-500-C , Part III	✓	✓	1A/1B
3. Mix Design & Verification				
Design and JMF changes	Tex-204-F	✓	✓	2
Mixing	Tex-205-F	✓	✓	2
Molding (SGC)	Tex-241-F	✓	✓	1A
Laboratory-molded density	Tex-207-F , Parts I & VI	✓	✓	1A
Rice gravity	Tex-227-F , Part II	✓	✓	1A
Ignition oven correction factors ²	Tex-236-F , Part II	✓	✓	2
Drain-down	Tex-235-F	✓	✓	1A
Hamburg Wheel test	Tex-242-F	✓	✓	1A
Overlay test	Tex-248-F		✓	TxDOT
Boil test	Tex-530-C	✓	✓	1A
4. Production Testing				
Selecting production random numbers	Tex-225-F , Part I		✓	1A
Mixture sampling	Tex-222-F	✓	✓	1A/1B
Molding (SGC)	Tex-241-F	✓	✓	1A
Laboratory-molded density	Tex-207-F , Parts I & VI	✓	✓	1A
Rice gravity	Tex-227-F , Part II	✓	✓	1A
Gradation & asphalt binder content ²	Tex-236-F , Part I	✓	✓	1A
Control charts	Tex-233-F	✓	✓	1A
Moisture content	Tex-212-F , Part II	✓	✓	1A/AGG101
Hamburg Wheel test	Tex-242-F	✓	✓	1A
Micro-Deval abrasion	Tex-461-A		✓	AGG101
Drain-down	Tex-235-F	✓	✓	1A
Boil test	Tex-530-C	✓	✓	1A
Abson recovery	Tex-211-F		✓	TxDOT
Overlay test	Tex-248-F		✓	TxDOT
5. Placement Testing				
Selecting placement random numbers	Tex-225-F , Part II		✓	1B
In-place air voids	Tex-207-F , Parts I & VI	✓	✓	1A
In-place density (nuclear method)	Tex-207-F , Part III	✓		1B
Establish rolling pattern	Tex-207-F , Part IV	✓	✓	1B
Control charts	Tex-233-F	✓	✓	1A
Ride quality measurement	Tex-1001-S	✓	✓	Note 3
Segregation (density profile)	Tex-207-F , Part V	✓	✓	1B
Longitudinal joint density	Tex-207-F , Part VII	✓	✓	1B
Thermal profile	Tex-244-F	✓	✓	1B

- Level 1A, 1B, AGG101, and 2 are certification levels provided by the Hot Mix Asphalt Center certification program.
- Refer to Section 346.4.9.2.3., "Production Testing," for exceptions to using an ignition oven.
- Profiler and operator are required to be certified at the Texas A&M Transportation Institute facility when Surface Test Type B is specified.

Section 346.4.5.2., “Mixing and Discharge of Materials.” The first paragraph is voided and replaced by the following.

Notify the Engineer of the target discharge temperature and produce the mixture within 25°F of the target. Monitor the temperature of the material in the truck before shipping to ensure that it does not exceed 350°F (or 275°F for WMA). The Department will not pay for or allow placement of any mixture produced above 350°F.

Section 346.4.7.2., “Tack Coat.” The paragraph is voided and replaced by the following.

4.7.2.1. Application. Clean the surface before placing the tack coat. The Engineer will set the rate between 0.04 and 0.10 gal. of residual asphalt per square yard of surface area. Apply a uniform tack coat at the specified rate unless otherwise directed. Apply the tack coat in a uniform manner to avoid streaks and other irregular patterns. Apply the tack coat to all surfaces the will come in contact with the subsequent HMA placement, unless otherwise directed. Allow adequate time for emulsion to break completely before placing any material. Prevent splattering of tack coat when placed adjacent to curb, gutter, and structures. Do not dilute emulsified asphalts at the terminal, in the field, or at any other location before use.

4.7.2.2. Sampling. The Engineer will obtain at least one sample of the tack coat binder per project in accordance with Tex-500-C, Part III, and test it to verify compliance with Item 300, “Asphalts, Oils, and Emulsions.” The Engineer will obtain the sample from the asphalt distributor immediately before use.

For emulsions, the Engineer may test as often as necessary to ensure the residual of the emulsion is greater than or equal to the specification requirement in Item 300, “Asphalts, Oils, and Emulsions.”

Section 346.4.7.3.1.3., “Thermal Camera,” is voided and replaced by the following.

Take immediate corrective action to eliminate recurring moderate thermal segregation when a hand-held thermal camera is used. Evaluate areas with moderate thermal segregation by performing density profiles in accordance with Section 346.4.9.3.3.2., “Segregation (Density Profile).” Provide the Engineer with the thermal profile of every subplot within one working day of the completion of each lot. When requested by the Engineer, provide the electronic files generated using the thermal images taken with the thermal camera. Report the results of each thermal profile in accordance with Section 346.4.2., “Reporting and Responsibilities.” The Engineer will use a hand-held thermal camera to obtain a thermal profile at least once per project. No production or placement payment adjustments greater than 1.000 will be paid for any subplot that contains severe thermal segregation. Suspend operations and take immediate corrective action to eliminate severe thermal segregation unless otherwise directed. Resume operations when the Engineer determines that subsequent production will meet the requirements of this Section. Evaluate areas with severe thermal segregation by performing density profiles in accordance with Section 346.4.9.3.3.2. Remove and replace the material in any areas that have both severe thermal segregation and a failing result for Segregation (Density Profile) unless otherwise directed. The subplot in question may receive a production and placement payment adjustment greater than 1.000, if applicable, when the defective material is successfully removed and replaced.

Table 10. “Compacted Lift Thickness and Required Core Height,” is voided and replaced by the following.

Table 10
Compacted Lift Thickness and Required Core Height

Mixture Type	Compacted Lift Thickness Guidelines		Minimum Untrimmed Core Height (in.) Eligible for Testing
	Minimum (in.)	Maximum (in.)	
SMA-C	2.25	4.00	2.00
SMA-D	1.50	3.00	1.25
SMA-F	1.25	2.00	1.25
SMAR-C	2.00	4.00	1.75
SMAR-F	1.50	3.00	1.25

Table 11, “Production and Placement Testing Frequency,” is voided and replaced by the following.

Table 11
Production and Placement Testing Frequency

Description	Test Method	Minimum Contractor Testing Frequency	Minimum Engineer Testing Frequency
Individual % retained for #8 sieve and larger	Tex-200-F or Tex-236-F	1 per subplot	1 per 12 sublots ¹
Individual % retained for sieves smaller than #8 and larger than #200			
% passing the #200 sieve			
Laboratory-molded density	Tex-207-F	N/A	1 per subplot ¹
Laboratory-molded bulk specific gravity			
In-place air voids			
VMA	Tex-204-F		
Segregation (density profile) ²	Tex-207-F , Part V	1 per subplot	1 per project
Longitudinal joint density	Tex-207-F , Part VII		
Moisture content	Tex-212-F , Part II	When directed	
Theoretical maximum specific (Rice) gravity	Tex-227-F	N/A	1 per subplot ¹
Drain-down	Tex-235-F	1 per subplot	1 per 12 ¹ sublots
Asphalt binder content	Tex-236-F	1 per subplot	1 per lot ¹
Hamburg Wheel test	Tex-242-F	N/A	
Recycled Asphalt Shingles (RAS) ³	Tex-217-F , Part III	N/A	1 per project
Thermal profile ²	Tex-244-F	1 per subplot	
Asphalt binder sampling and testing	Tex-500-C , Part II	1 per lot (sample only)	
Tack coat sampling and testing	Tex-500-C , Part III	N/A	
Boil test ⁴	Tex-530-C	1 per lot	

1. For production defined in Section 346.4.9.4., “Exempt Production,” the Engineer will test one per day if 100 tons or more are produced. For Exempt Production, no testing is required when less than 100 tons are produced.
2. Not required when a thermal imaging system is used.
3. Testing performed by the Construction Division or designated laboratory.
4. The Engineer may reduce or waive the sampling and testing requirements based on a satisfactory test history.

Section 346.4.9.2.2.2., “Informational Cantabro Testing,” is voided and is not replaced.

Section 346.4.9.3.3.2., “Segregation (Density Profile).” The second paragraph is voided and replaced by the following.

Perform a minimum of one density profile per subplot. Perform additional density profiles when any of the following conditions occur, unless otherwise approved:

- the paver stops for more than 60 sec.;
- either the Contractor or the Engineer identifies areas with thermal segregation; and
- any visibly segregated areas exist.

Section 346.4.9.4., “Exempt Production.” The second paragraph is voided and replaced by the following.

For exempt production, the Contractor is relieved of all production and placement sampling and testing requirements, except for coring, and the production and placement pay factors are 1.000. All other specification requirements apply and the Engineer will perform acceptance tests for production and placement listed in Table 14 when 100 tons or more per day are produced.

Section 346.5., “Measurement,” is voided and replaced by the following.

- 5.1 Stone Matrix Asphalt.** Hot mix will be measured by the ton of composite hot-mix. The composite hot-mix is the asphalt, aggregate, and additives. Measure the weight on scales in accordance with Item 520, “Weighing and Measuring Equipment.” Provide the Engineer with a daily summary of the asphalt mass flow meter readings for SMAR mixtures unless otherwise directed.
- 5.2 Tack Coat.** Tack coat will be measured at the applied temperature by strapping the tank before and after road application and determining the net volume in gallons from the calibrated distributor. The Engineer will witness all strapping operations for volume determination. All tack, including emulsions, will be measured by the gallon applied.

The Engineer may allow the use of a metering device to determine asphalt volume used and application rate if the device is accurate within 1.5% of the strapped volume.

Section 346.6., “Payment,” the first paragraph is voided and replaced with the following.

The work performed and materials furnished in accordance with this Item and measured as provided under Article 346.5.1, “Measurement,” will be paid for at the unit bid price for “Stone Matrix Asphalt” of the mixture type, SAC, and binder specified. These prices are full compensation for surface preparation, materials, placement, equipment, labor, tools, and incidentals.

Section 346.6., “Payment,” is supplemented by the following.

The work performed and materials furnished in accordance with this Item and measured as provided under Section 346.5.2, “Measurement,” will be paid for at the unit bid price for “Tack Coat” of the tack coat provided. These prices are full compensation for materials, placement, equipment, labor, tools, and incidentals.

Section 346.6.2.2., “Placement Sublots Subject to Removal and Replacement.” The first paragraph is voided and replaced by the following.

If after referee testing, the placement payment adjustment factor for any subplot results in a “remove and replace” condition as listed in Table 14, the Engineer will choose the location of 2 cores to be taken within 3 ft. of the original failing core location. The Contractor will obtain the cores in the presence of the Engineer. The Engineer will take immediate possession of the untrimmed cores and submit the untrimmed cores to the Construction Division, where they will be trimmed if necessary and tested for bulk specific gravity within 10 working days of receipt.

The bulk specific gravity of each core will be divided by the Engineer’s average maximum theoretical specific gravity for that lot to determine the new payment adjustment factor of the subplot in question. If the new payment adjustment factor is 0.700 or greater, the new payment adjustment factor will apply to that subplot. If the new payment adjustment factor is less than 0.700, no payment will be made for the subplot. Remove and replace the failing subplot, or the Engineer may allow the subplot to be left in place without payment. The Engineer may also accept the subplot in accordance with Section 5.3.1., “Acceptance of Defective or Unauthorized Work.” Replacement material meeting the requirements of this Item will be paid for in accordance with this Section.

Special Provision to Item 347

Thin Overlay Mixtures



For this project, Item 347, "Thin Overlay Mixtures," of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Section 347.2.5. "Tack Coat." The first paragraph is voided and replaced by the following.

Unless otherwise shown on the plans, furnish CSS-1H, SS-1H, or a PG binder with a minimum high-temperature grade of PG 58 for tack coat binder in accordance with Item 300, "Asphalts, Oils, and Emulsions." Specialized tack coat materials listed on the Department's MPL are allowed or required when shown on the plans. Do not dilute emulsified asphalts at the terminal, in the field, or at any other location before use.

Section 347.2.6.2., "Warm Mix Asphalt (WMA)," is voided and replaced by the following.

Warm Mix Additive. Warm mix additives are allowed for use on all projects and are required when shown on the plans to facilitate mixing and compaction. When a warm mix additive is required, no reduction in temperature for the PG grade of the binder will be permitted. Department-approved warm mix additives may be used to facilitate mixing and compaction of HMA produced at target discharge temperatures greater than 275°F.

Section 347.4.1., "Certification." The paragraph is voided and replaced by the following.

Certification. Personnel certified by the Department-approved hot-mix asphalt certification program must conduct all mixture designs, sampling, and testing in accordance with Table 4. Supply the Engineer with a list of certified personnel and copies of their current certificates before beginning production and when personnel changes are made. Provide a mixture design developed and signed by a Level 2 certified specialist. Provide Level 1A certified specialists at the plant during production operations. Provide Level 1B certified specialists to conduct placement tests. Provide Level AGG101 certified specialists for aggregate testing.

Table 4, "Test Methods, Test Responsibility, and Minimum Certification Levels" is voided and replaced by the following.

Table 4
Test Methods, Test Responsibility, and Minimum Certification Levels

Test Description	Test Method	Contractor	Engineer	Level ¹
1. Aggregate Testing				
Sampling	Tex-221-F	✓	✓	1A/AGG101
Dry sieve	Tex-200-F, Part I	✓	✓	1A/AGG101
Washed sieve	Tex-200-F, Part II	✓	✓	1A/AGG101
Deleterious material	Tex-217-F, Part I	✓	✓	AGG101
Decantation	Tex-217-F, Part II	✓	✓	AGG101
Los Angeles abrasion	Tex-410-A		✓	TxDOT
Magnesium sulfate soundness	Tex-411-A		✓	TxDOT
Micro-Deval abrasion	Tex-461-A		✓	AGG101
Crushed face count	Tex-460-A	✓	✓	AGG101
Flat and elongated particles	Tex-280-F	✓	✓	AGG101
Linear shrinkage	Tex-107-E	✓	✓	AGG101
Sand equivalent	Tex-203-F	✓	✓	AGG101
Organic impurities	Tex-408-A	✓	✓	AGG101
2. Asphalt Binder & Tack Coat Sampling				
Asphalt binder sampling	Tex-500-C, Part II	✓	✓	1A/1B
Tack coat sampling	Tex-500-C, Part III	✓	✓	1A/1B
3. Mix Design & Verification				
Design and JMF changes	Tex-204-F	✓	✓	2
Mixing	Tex-205-F	✓	✓	2
Molding (TGC)	Tex-206-F	✓	✓	1A
Molding (SGC)	Tex-241-F	✓	✓	1A
Laboratory-molded density	Tex-207-F, Parts I & VI	✓	✓	1A
Rice gravity	Tex-227-F, Part II	✓	✓	1A
Drain-down	Tex-235-F	✓	✓	1A
Ignition oven correction factors ²	Tex-236-F, Part II	✓	✓	2
Indirect tensile strength	Tex-226-F	✓	✓	1A
Overlay test	Tex-248-F		✓	TxDOT
Hamburg Wheel test	Tex-242-F	✓	✓	1A
Boil test	Tex-530-C	✓	✓	1A
4. Production Testing				
Selecting production random numbers	Tex-225-F, Part I		✓	1A
Mixture sampling	Tex-222-F	✓	✓	1A/1B
Molding (TGC)	Tex-206-F	✓	✓	1A
Molding (SGC)	Tex-241-F	✓	✓	1A
Laboratory-molded density	Tex-207-F, Parts I & VI	✓	✓	1A
Rice gravity	Tex-227-F, Part II	✓	✓	1A
Gradation & asphalt binder content ²	Tex-236-F, Part I	✓	✓	1A
Drain-down	Tex-235-F	✓	✓	1A
Control charts	Tex-233-F	✓	✓	1A
Moisture content	Tex-212-F, Part II	✓	✓	1A/AGG101
Hamburg Wheel test	Tex-242-F	✓	✓	1A
Overlay test	Tex-248-F	✓	✓	TxDOT
Micro-Deval abrasion	Tex-461-A		✓	AGG101
Boil test	Tex-530-C	✓	✓	1A
Abson recovery	Tex-211-F		✓	TxDOT
5. Placement Testing				
Establish rolling pattern	Tex-207-F, Part IV	✓		1B
In-place density (nuclear method)	Tex-207-F, Part III	✓		1B
Control charts	Tex-233-F	✓	✓	1A
Ride quality measurement	Tex-1001-S	✓	✓	Note 3
Thermal profile	Tex-244-F	✓	✓	1B
Permeability	Tex-246-F	✓	✓	1B

- Level 1A, 1B, AGG101, and 2 are certification levels provided by the Hot Mix Asphalt Center certification program.
- Refer to Section 347.4.9.2.3., "Production Testing" for exceptions to using an ignition oven.
- Profiler and operator are required to be certified at the Texas A&M Transportation Institute facility when Surface Test Type B is specified.

Table 7, “Laboratory Mixture Design Properties,” is voided and replaced by the following.

Table 7
Laboratory Mixture Design Properties

Mixture Property	Test Method	Requirement
Target laboratory-molded density, % (TGC)	Tex-207-F	97.5 ¹
Design gyrations (N _{design} for SGC)	Tex-241-F	50 ²
Hamburg Wheel test, passes at 12.5 mm rut depth for PG 70 mixtures	Tex-242-F	15,000 Min
Hamburg Wheel test, passes at 12.5 mm rut depth for PG 76 mixtures	Tex-242-F	20,000 Min
Drain-down, %	Tex-235-F	0.20 Max

1. Unless otherwise shown on the plans or approved by the Engineer.
2. May be adjusted within the range of 35–100 gyrations when shown on the plans or specification or when mutually agreed between the Engineer and Contractor.

Table 7A
Overlay Test Requirements

Mixture Property	Test Method	TOM-C	TOM-F
Crack Progression Rate ¹	Tex-248-F	0.45 Max	0.45 Max
Critical Fracture Energy, lb.-in/sq. in ¹		1.0 Min	1.5 Min

1. If the requirement is not meet, the Engineer may approve the mix if the average number of cycles is ≥ 300 cycles.

Section 347.4.4.2.1.13., “Trial Batch Testing,” is voided and replaced by the following.

Test the trial batch to ensure the mixture produced using the proposed JMF1 meets the mixture requirements in Table 8. Ensure the trial batch mixture is also in compliance with the Hamburg Wheel test, Overlay test, and drain-down requirements listed in Tables 7 and 7A. Use a Department-approved laboratory listed on the MPL to perform the Hamburg Wheel test on the trial batch mixture or request that the Department perform the Hamburg Wheel test. Obtain and provide approximately 50 lb. of trial batch mixture in sealed containers, boxes, or bags labeled with the CSJ, mixture type, lot, and subplot number in accordance with [Tex-222-F](#) for the Overlay test. The Engineer will be allowed 10 working days to provide the Contractor with Hamburg Wheel test and Overlay test results on the trial batch. Provide the Engineer with a copy of the trial batch test results.

Section 347.4.4.2.1.14., “Development of JMF2,” is voided and replaced by the following.

Evaluate the trial batch test results after the Engineer grants full approval of JMF1 based on results from the trial batch, determine the optimum mixture proportions, and submit as JMF2. Adjust the asphalt binder content or gradation to achieve the specified target laboratory-molded density. The asphalt binder content established for JMF2 is not required to be within any tolerance of the optimum asphalt binder content established for JMF1; however, mixture produced using JMF2 must meet the voids in mineral aggregates (VMA) requirements for production shown in Table 6. If the optimum asphalt binder content for JMF2 is more than 0.5% lower than the optimum asphalt binder content for JMF1, the Engineer may perform the Overlay test in accordance with [Tex-248-F](#) on Lot 1 production to verify compliance with the Overlay test requirements in Table 7A.

Table 8, “Operational Tolerances,” is voided and replaced by the following.

Table 8
Operational Tolerances

Description	Test Method	Allowable Difference between Trial Batch and JMF1 Target	Allowable Difference from Current JMF Target	Allowable Difference between Contractor and Engineer ¹
Individual % retained for #8 sieve and larger	Tex-200-F or Tex-236-F	Must be Within Master Grading Limits in Table 6	±3.0 ^{2,3}	±5.0
Individual % retained for sieves smaller than #8 and larger than #200			±3.0 ^{2,3}	±3.0
% passing the #200 sieve			±2.0 ^{2,3}	±1.6
Asphalt binder content, % ⁴	Tex-236-F	±0.3	±0.3 ³	±0.3
Laboratory-molded density, %	Tex-207-F	±1.0	±1.0	±1.0
Laboratory-molded bulk specific gravity		N/A	N/A	±0.020
VMA, % Min	Tex-204-F	Note 5	Note 5	N/A
Theoretical maximum specific (Rice) gravity	Tex-227-F	N/A	N/A	±0.020
Drain-down, %	Tex-235-F	Note 6	Note 6	N/A

- Contractor may request referee testing only when values exceed these tolerances.
- When within these tolerances, mixture production gradations may fall outside the master grading limits; however, the % passing the #200 will be considered out of tolerance when outside the master grading limits.
- Only applies to mixture produced for Lot 1 and higher.
- Binder content is not allowed to be below the limits shown in Table 6. May be obtained from asphalt meter readouts.
- Verify that Table 6 requirements are met.
- Test and verify that Table 7 requirements are met.

Section 347.4.4.2.2.3., “Hamburg Wheel and Overlay Testing of JMF1,” is voided and replaced by the following.

If the Contractor requests the option to have the Department perform the Hamburg Wheel test on the laboratory mixture, the Engineer will mold samples in accordance with [Tex-242-F](#) to verify compliance with the Hamburg Wheel test requirement in Table 7. The Engineer will perform the Overlay test and mold samples in accordance with [Tex-248-F](#) to verify compliance with the Overlay test requirements in Table 7A.

Section 347.4.4.2.2.5., “Testing the Trial Batch,” is voided and replaced by the following.

Within 1 full working day, the Engineer will sample and test the trial batch to ensure that the mixture meets the requirements in Table 8. The Engineer will mold samples in accordance with [Tex-242-F](#) if the Contractor requests the option to have the Department perform the Hamburg Wheel test on the trial batch mixture to verify compliance with Hamburg Wheel test requirements in Table 7. The Engineer will mold samples for the Overlay test in accordance with [Tex-248-F](#) to verify compliance with the Overlay test requirement in Table 7A.

The Engineer will have the option to perform the following tests on the trial batch:

- [Tex-248-F](#), to confirm the mixture meets the Overlay test requirement shown in Table 7A; and
- [Tex-530-C](#), to retain and use for comparison purposes during production.

Section 347.4.4.2.2.6., “Full Approval of JMF1,” is voided and replaced by the following.

The Engineer will grant full approval of JMF1 and authorize the Contractor to proceed with developing JMF2 if the Engineer’s results for the trial batch meet the requirements in Tables 7 and 7A. The Engineer will notify the Contractor that an additional trial batch is required if the trial batch does not meet these requirements.

Section 347.4.4.2.2.7., “Approval of JMF2,” is voided and replaced by the following.

The Engineer will approve JMF2 within one working day if the gradation meets the master grading limits shown in Table 6 and is within the operational tolerances of JMF1 listed in Table 8. The asphalt binder content established for JMF2 is not required to be within any tolerance of the optimum asphalt binder content established for JMF1; however, mixture produced using JMF2 must meet the VMA requirements shown in Table 6. The Engineer may perform [Tex-248-F](#) on Lot 1 to confirm the mixture meets the Overlay test requirement shown in Table 7 if the optimum asphalt binder content for JMF2 is more than 0.5% lower than the optimum asphalt binder content for JMF1.

Section 347.4.4.2.2.9., “Approval of JMF3 and Subsequent JMF Changes,” is voided and replaced by the following.

JMF3 and subsequent JMF changes are approved if they meet the master grading limits shown in Table 6, mixture requirements shown in Tables 7 and 7A, and are within the operational tolerances of JMF2 shown in Table 8.

Section 347.4.5.2., “Mixing and Discharge of Materials,” is voided and replaced by the following.

Notify the Engineer of the target discharge temperature and produce the mixture within 25°F of the target. Monitor the temperature of the material in the truck before shipping to ensure that it does not exceed 350°F and is not lower than 275°F. The Department will not pay for or allow placement of any mixture produced above 350°F.

Control the mixing time and temperature so that substantially all moisture is removed from the mixture before discharging from the plant. Determine the moisture content, if requested, by oven-drying in accordance with [Tex-212-F](#), Part II, and verify that the mixture contains no more than 0.2% of moisture by weight. Obtain the sample immediately after discharging the mixture into the truck, and perform the test promptly.

Table 9, “Compacted Lift Thickness,” is voided and replaced by the following.

**Table 9
Compacted Lift Thickness**

Mixture Type	Compacted Lift Thickness ¹	
	Minimum (in.)	Maximum (in.)
TOM-C	0.75	1.25
TOM-F	0.5	1.00

1. Compacted target lift thickness will be specified on the plans.

Section 347.4.7.1.1., “When Using a Thermal Imaging System,” is voided and replaced by the following:

The Contractor may pave any time the roadway is dry and the roadway surface temperature is at least 60°F; however, the Engineer may restrict the Contractor from paving surface mixtures if the ambient temperature is likely to drop below 32°F within 12 hr. of paving. Provide output data from the thermal imaging system to demonstrate to the Engineer that no recurring severe thermal segregation exists in accordance with Section 347.4.7.3.1.2., “Thermal Imaging System.”

Section 347.4.7.1.2., “When Not Using a Thermal Imaging System,” is voided and replaced by the following.

Place mixture when the roadway surface temperature is at or above 70°F unless otherwise approved. Measure the roadway surface temperature with a hand-held thermal camera or infrared thermometer. The Engineer may allow mixture placement to begin before the roadway surface reaches the required temperature requirements if conditions are such that the roadway surface will reach the required temperature within 1 hr. of beginning placement operations. Place mixtures only when weather conditions and moisture conditions of the roadway surface are suitable as determined by the Engineer. The Engineer may restrict the Contractor from paving if the air temperature is 70°F and falling.

Section 347.4.7.2., “Tack Coat.” The paragraph is voided and replaced by the following.

4.7.2.1. Application. Clean the surface before placing the tack coat. The Engineer will set the rate between 0.04 and 0.10 gal. of residual asphalt per square yard of surface area. Apply a uniform tack coat at the specified rate unless otherwise directed. Apply the tack coat in a uniform manner to avoid streaks and other irregular patterns. Apply the tack coat to all surfaces the will come in contact with the subsequent HMA placement, unless otherwise directed. Allow adequate time for emulsion to break completely before placing any material. Prevent splattering of tack coat when placed adjacent to curb, gutter, and structures. Do not dilute emulsified asphalts at the terminal, in the field, or at any other location before use.

4.7.2.2. Sampling. The Engineer will obtain at least one sample of the tack coat binder per project in accordance with Tex-500-C, Part III, and test it to verify compliance with Item 300, “Asphalts, Oils, and Emulsions.” The Engineer will obtain the sample from the asphalt distributor immediately before use.

For emulsions, the Engineer may test as often as necessary to ensure the residual of the emulsion is greater than or equal to the specification requirement in Item 300, “Asphalts, Oils, and Emulsions.”

Section 347.4.7.3.1.3., “Thermal Camera,” is voided and replaced by the following.

Take immediate corrective action to eliminate recurring moderate thermal segregation when a hand-held thermal camera is used. Evaluate areas with moderate thermal segregation by performing water flow testing in accordance to [Tex-246-F](#) and verify the water flow is greater than 120 sec. Provide the Engineer with the thermal profile of every subplot within one working day of the completion of each lot. When requested by the Engineer, provide the electronic files generated using the thermal camera. Report the results of each thermal profile in accordance with Section 347.4.2., “Reporting and Responsibilities.” The Engineer will use a hand-held thermal camera to obtain a thermal profile at least once per project. Suspend operations and take immediate corrective action to eliminate severe thermal segregation unless otherwise directed. Resume operations when the Engineer determines that subsequent production will meet the requirements of this Section. Evaluate areas with severe thermal segregation by performing water flow testing in accordance to [Tex-246-F](#) and verify the water flow is greater than 120 sec. Remove and replace the material in any areas that have both severe thermal segregation and a failing result for water flow test unless otherwise directed.

Table 10, “Production and Placement Testing Frequency,” is voided and replaced by the following.

Table 10
Production and Placement Testing Frequency

Description	Test Method	Minimum Contractor Testing Frequency	Minimum Engineer Testing Frequency
Individual % retained for #8 sieve and larger	Tex-200-F or Tex-236-F	1 per subplot	1 per 12 sublots
Individual % retained for sieves smaller than #8 and larger than #200			
% passing the #200 sieve	Tex-207-F	N/A	1 per subplot
Laboratory-molded density			
Laboratory-molded bulk specific gravity			
VMA	Tex-204-F	When directed	
Moisture content	Tex-212-F, Part II		
Theoretical maximum specific (Rice) gravity	Tex-227-F	N/A	1 per subplot
Asphalt binder content	Tex-236-F	1 per subplot	1 per lot
Overlay test ¹	Tex-248-F	N/A	1 per project
Hamburg Wheel test	Tex-242-F	N/A	1 per project
Thermal profile	Tex-244-F	1 per subplot	
Asphalt binder sampling and testing ¹	Tex-500-C	1 per subplot (sample only)	
Boil test ²	Tex-530-C	1 per subplot	
Water flow	Tex-246-F		

1. Testing performed by the Materials and Tests Division or as directed.

2. The Engineer may reduce or waive the sampling and testing requirements based on a satisfactory test history.

Section 347.5., "Measurement," is supplemented by the following.

- 5.3 Tack Coat.** Tack coat will be measured at the applied temperature by strapping the tank before and after road application and determining the net volume in gallons from the calibrated distributor. The Engineer will witness all strapping operations for volume determination. All tack, including emulsions, will be measured by the gallon applied.

The Engineer may allow the use of a metering device to determine asphalt volume used and application rate if the device is accurate within 1.5% of the strapped volume.

Section 347.6., "Payment," the first paragraph is voided and replaced with the following.

The work performed and materials furnished in accordance with this Item and measured as provided under Article 347.5.1 and Article 347.5.2, "Measurement," will be paid for at the unit bid price for "TOM (Asphalt)" of the binder specified and for "TOM (Aggregate)" of the grade and SAC specified. These prices are full compensation for surface preparation, materials, placement, equipment, labor, tools, and incidentals.

Section 347.6., "Payment," is supplemented by the following.

The work performed and materials furnished in accordance with this Item and measured as provided under Article 347.5.3, "Measurement," will be paid for at the unit bid price for "Tack Coat" of the tack coat provided. These prices are full compensation for materials, placement, equipment, labor, tools, and incidentals.

Special Provision to Item 502

Barricades, Signs and Traffic Handling



Item 502, "Barricades, Signs and Traffic Handling" of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Article 502.1., "Description," is supplemented by the following:

Temporary work-zone (TWZ) traffic control devices manufactured after December 31, 2019, must have been successfully tested to the crashworthiness requirements of the 2016 edition of the Manual for Assessing Safety Hardware (MASH). Such devices manufactured on or before this date and successfully tested to NCHRP Report 350 or the 2009 edition of MASH may continue to be used throughout their normal service lives. An exception to the manufacture date applies when, based on the project's date of letting, a category of MASH-2016 compliant TWZ traffic control devices are not approved, or are not self-certified after the December 31, 2019, date. In such case, devices that meet NCHRP-350 or MASH-2009 may be used regardless of the manufacture date.

Such TWZ traffic control devices include: portable sign supports, barricades, portable traffic barriers designated exclusively for use in temporary work zones, crash cushions designated exclusively for use in temporary work zones, longitudinal channelizers, truck and trailer mounted attenuators. Category I Devices (i.e., lightweight devices) such as cones, tubular markers and drums without lights or signs attached however, may be self-certified by the vendor or provider, with documentation provided to Department or as are shown on Department's Compliant Work Zone Traffic Control Device List.

Article 502.4., "Payment," is supplemented by the following:

Truck mounted attenuators and trailer attenuators will be paid for under Special Specification, "Truck Mounted Attenuator (TMA) and Trailer Attenuator (TA)." Portable Changeable Message Signs will be paid for under Special Specification, "Portable Changeable Message Sign." Portable Traffic Signals will be paid for under Special Specification, "Portable Traffic Signals."

Special Provision to Item 506

Temporary Erosion, Sedimentation, and Environmental Controls



For this project, Item 506, "Temporary Erosion, Sedimentation, and Environmental Controls," of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Article 506.1., "Description," is voided and replaced by the following:

Install, maintain, and remove erosion, sedimentation, and environmental control measures to prevent or reduce the discharge of pollutants in accordance with the Storm Water Pollution Prevention Plan (SWP3) or as directed. Ensure the installation and maintenance of control measures is performed in accordance with the manufacturer's or designer's specifications. Erosion and sediment control devices must be selected from the "Erosion Control Approved Products" or "Sediment Control Approved Products" lists. Perform work in a manner to prevent degradation of receiving waters, facilitate project construction, and comply with applicable federal, state, and local regulations.

Article 506.3., "Qualifications, Training, and Employee Requirements," is voided and not replaced.

Section 506.4.1., "Contractor Responsibilities," Section 506.4.2., "Implementation," and Section 506.4.3., "General," are voided and replaced by the following:

4.1. **Contractor Responsibilities.** Implement the SWP3 for the project site in accordance with the plans and specifications, and as directed. Coordinate storm water management with all other work on the project. Develop and implement an SWP3 for project-specific material supply plants within and outside of the Department's right of way in accordance with the specific or general storm water permit requirements. Prevent water pollution from storm water associated with construction activity from entering any surface water or private property on or adjacent to the project site.

4.2. **Implementation.**

4.2.1. **Commencement.** Implement the SWP3 as shown and as directed. Contractor proposed recommendations for changes will be allowed as approved. Do not implement changes until approval has been received and changes have been incorporated into the plans by the Engineer. Minor adjustments to meet field conditions are allowed and will be recorded by the Engineer in the SWP3.

Implement control measures before the commencement of activities that result in soil disturbance. Phase and minimize the soil disturbance to the areas shown on the plans. Coordinate temporary control measures with permanent control measures and all other work activities on the project to assure economical, effective, safe, continuous water pollution prevention. Provide control measures that are appropriate to the construction means, methods, and sequencing allowed by the Contract.

Do not prolong final grading and shaping. Preserve vegetation where possible throughout the project and minimize clearing, grubbing, and excavation within stream banks, bed, and approach sections.

4.3. **General.**

4.3.1. **Temporary Alterations or Control Measure Removal.** Altering or removal of control measures is allowed when control measures are restored within the same working day.

- 4.3.2. **Stabilization.** Initiate stabilization for disturbed areas no more than 14 days after the construction activities in that portion of the site has temporarily or permanently ceased. Establish a uniform vegetative cover or use another stabilization practice as approved.
- 4.3.3. **Finished Work.** Upon the Engineer's acceptance of vegetative cover or other stabilization practice, remove and dispose of all temporary control measures unless otherwise directed. Complete soil disturbing activities and establish a uniform perennial vegetative cover. A project will not be considered for acceptance until a vegetative cover of 70% density of existing adjacent undisturbed areas is obtained or equivalent permanent stabilization is obtained as approved.
- 4.3.4. **Restricted Activities and Required Precautions.** Do not discharge onto the ground or surface waters any pollutants such as chemicals, raw sewage, fuels, lubricants, coolants, hydraulic fluids, bitumens, or any other petroleum product. Operate and maintain equipment on site in a manner as to prevent actual or potential water pollution. Manage, control, and dispose of litter on site such that no adverse impacts to water quality occur. Prevent dust from creating a potential or actual unsafe condition, public nuisance, or condition endangering the value, utility, or appearance of any property. Wash out concrete trucks only in approved contained areas. Use appropriate controls to minimize the offsite transport of suspended sediments and other pollutants if it is necessary to pump or channel standing water (i.e. dewatering). Prevent discharges that would contribute to a violation of Edwards Aquifer Rules, water quality standards, the impairment of a listed water body, or other state or federal law.

Section 506.4.4., "Installation, Maintenance, and Removal Work." The first paragraph is voided and replaced by the following.

Perform work in accordance with the SWP3, and according to the manufacturers' guidelines. Install and maintain the integrity of temporary erosion and sedimentation control devices to accumulate silt and debris until soil disturbing activities are completed and permanent erosion control features are in place or the disturbed area has been adequately stabilized as determined by the Engineer.

Section 506.4.5., "Monitoring and Documentation," is voided and not replaced.

Section 506.6.5.2., "Maintenance Earthwork for Erosion and Sediment Control for Cleaning and/or Restoring Control Measures," is voided and replaced by the following:

Earthwork needed to remove and obliterate of erosion-control features will not be paid for directly but is subsidiary to pertinent Items unless otherwise shown on the plans.

Sprinkling and rolling required by this Item will not be paid for directly but will be subsidiary to this Item.

Special Provision to Item 520

Weighing and Measuring Equipment



Item 520, "Weighing and Measuring Equipment" of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 520.2., "Equipment." The third paragraph is voided and replaced by the following.

Calibrate truck scales using weights certified by the Texas Department of Agriculture (TDA) or an equivalent agency as approved. Provide a written calibration report from a scale mechanic for truck scale calibrations. Cease plant operations during the checking operation. Do not use inaccurate or inadequate scales. Bring performance errors as close to zero as practicable when adjusting equipment.

Article 520.2., "Equipment." The fourth paragraph is amended to include the following:

At the Contractors option, an electronic ticket delivery system (e-ticketing) may be used instead of printed tickets. The use of e-ticketing will require written approval of the Engineer. At a minimum, the approved system will:

- Provide electronic, real-time e-tickets meeting the requirements of the applicable bid items;
- Automatically generate e-tickets using software and hardware fully integrated with the automated scale system used to weigh the material, and be designed in such a way that data input cannot be altered by the Contractor or the Engineer;
- Provide the Engineer access to the e-ticketing data in real-time with a web-based or app-based system compatible with iOS;
- Provide offline capabilities to prevent data loss if power or connectivity is lost;
- Require both the Contractor and the Engineer to accept or reject the e-ticket and provide the ability to record the information required by the applicable bid items, as well as any comments. Record the time of the approval/rejection and include it in the summary spreadsheet described below. Provide each party the capability to edit their respective actions and any entered information;

The Contractor may discontinue use of the e-ticket system and provide printed tickets as needed to meet the requirements of the applicable bid items.

Special Provision to Item 666

Retroreflectorized Pavement Markings



Item 666, "Retroreflectorized Pavement Markings," of the Standard Specifications is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Section 2.3., "Glass Traffic Beads." The first paragraph is voided and replaced by the following:

Furnish drop-on glass beads in accordance with DMS-8290, "Glass Traffic Beads," or as approved. Furnish a double-drop of Type II and Type III drop-on glass beads for longitudinal pavement markings where each type bead is applied separately in equal portions (by weight), unless otherwise approved. Apply the Type III beads before applying the Type II beads. Furnish Type II beads for work zone pavement markings and transverse markings or symbols.

Section 4.3.1., "Type I Markings.," is supplemented by the following:

4.3.1.3. Spot Striping. Perform spot striping on a callout basis with a minimum callout quantity as shown on the plans.

Section 4.3.2., "Type II Markings.," is supplemented by the following:

4.3.2.1. Spot Striping. Perform spot striping on a callout basis with a minimum callout quantity as shown on the plans.

Section 4.4., "Retroreflectivity Requirements.," is voided and replaced by the following.

Type I markings for Contracts totaling more than 20,000 ft. of pavement markings must meet the following minimum retroreflectivity values for all longitudinal edgeline, centerline or no passing barrier-line, and lane line markings when measured any time after 3 days, but not later than 10 days after application.

- White markings: 250 millicandelas per square meter per lux (mcd/m²/lx)
- Yellow markings: 175 mcd/m²/lx

Retroreflectivity requirements for Type I markings are not required for Contracts with less than 20,000 ft. of pavement markings or Contracts with callout work, unless otherwise shown on the plans.

Section 4.5., "Retroreflectivity Measurements.," is voided and replaced by the following:

Use a mobile retroreflectometer to measure retroreflectivity for Contracts totaling more than 50,000 ft. of pavement markings, unless otherwise shown on the plans. For Contracts with less than 50,000 ft. of pavement markings, mobile or portable retroreflectometers may be used at the Contractor's discretion. Coordinate with and obtain authorization from the Engineer before starting any retroreflectivity data collection.

Section 4.5.1., "Mobile Retroreflectometer Measurements." The last paragraph is voided and replaced by the following.

Restripe again at the Contractor's expense with a minimum of 0.060 in. (60 mils) of Type I marking material if the average of these measurements falls below the minimum retroreflectivity requirements. Take measurements every 0.1 miles a minimum of 10 days after this third application within that mile segment for that series of markings. If the markings do not meet minimum retroreflectivity after this third application, the Engineer may require removal of all existing markings, a new application as initially specified, and a repeat of the application process until minimum retroreflectivity requirements are met.

Section 4.5.2., "Portable Retroreflector Measurements." The first and second paragraphs are voided and replaced by the following.

Provide portable measurement averages for every 1.0 mile unless otherwise specified or approved. Take a minimum of 20 measurements for each 1-mi. section of roadway for each series of markings (e.g., edgeline, center skip line, each line of a double line) and direction of traffic flow when using a portable reflectometer. Measure each line in both directions for centerlines on two-way roadways (i.e., measure both double solid lines in both directions and measure all center skip lines in both directions). The spacing between each measurement must be at least 100 ft. The Engineer may decrease the mileage frequency for measurements if the previous measurements provide satisfactory results. The Engineer may require the original number of measurements if concerns arise.

Restripe at the Contractor's expense with a minimum of 0.060 in. (60 mils) of Type I marking material if the averages of these measurements fail. Take a minimum of 10 more measurements after 10 days of this second application within that mile segment for that series of markings. Restripe again at the Contractor's expense with a minimum of 0.060 in. (60 mils) of Type I marking material if the average of these measurements falls below the minimum retroreflectivity requirements. If the markings do not meet minimum retroreflectivity after this third application, the Engineer may require removal of all existing markings, a new application as initially specified, and a repeat of the application process until minimum retroreflectivity requirements are met.

Section 4.6. "Performance Period." The first sentence is voided and replaced by the following:

All longitudinal markings must meet the minimum retroreflectivity requirements within the time frame specified. All markings must meet all other performance requirements of this specification for at least 30 calendar days after installation.

Article 6. "Payment." The first two paragraphs are voided and replaced by the following.

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Pavement Sealer" of the size specified; "Retroreflectorized Pavement Markings" of the type and color specified and the shape, width, size, and thickness (Type I markings only) specified, as applicable; "Retroreflectorized Pavement Markings with Retroreflective Requirements" of the types, colors, sizes, widths, and thicknesses specified; "Retroreflectorized Profile Pavement Markings" of the various types, colors, shapes, sizes, and widths specified; or "Reflecterized Pavement Marking (Call Out)" of the shape, width, size, and thickness (Type I markings only) specified, as applicable; or "Pavement Sealer (Call Out)" of the size specified.

This price is full compensation for materials, application of pavement markings, equipment, labor, tools, and incidentals.

Special Provision to Special Specification 6185 Truck Mounted Attenuator (TMA) and Trailer Attenuator (TA)



Item 6185, "Truck Mounted Attenuator (TMA) and Trailer Attenuator (TA)" of the Standard Specifications, is hereby amended with respect to the clauses cited below, and no other clauses or requirements of this Item are waived or changed hereby.

Article 4. "Measurement", is voided and replaced by the following:

- 4.1. **Truck Mounted Attenuator/Trailer Attenuator (Stationary).** This Item will be measured by the day. TMA/TAs must be set up in a work area and operational before a calendar day can be considered measurable. A day will be measured for each TMA/TA set up and operational on the worksite.
- 4.2. **Truck Mounted Attenuator/Trailer Attenuator (Mobile Operation).** This Item will be measured by the hour or by the day. The time begins once the TMA/TA is ready for operation at the predetermined site and stops when notified by the Engineer. When measurement by the hour is specified, a minimum of 4 hr. will be paid each day for each operating TMA/TA used in a mobile operation. When measurement by the day is specified, a day will be measured for each TMA/TA set up and operational on the worksite.

Special Specification 3076

Dense-Graded Hot-Mix Asphalt



1. DESCRIPTION

Construct a hot-mix asphalt (HMA) pavement layer composed of a compacted, dense-graded mixture of aggregate and asphalt binder mixed hot in a mixing plant. Payment adjustments will apply to HMA placed under this specification unless the HMA is deemed exempt in accordance with Section 3076.4.9.4., "Exempt Production."

2. MATERIALS

Furnish uncontaminated materials of uniform quality that meet the requirements of the plans and specifications.

Notify the Engineer of all material sources and before changing any material source or formulation. The Engineer will verify that the specification requirements are met when the Contractor makes a source or formulation change, and may require a new laboratory mixture design, trial batch, or both. The Engineer may sample and test project materials at any time during the project to verify specification compliance in accordance with Item 6, "Control of Materials."

- 2.1. **Aggregate.** Furnish aggregates from sources that conform to the requirements shown in Table 1 and as specified in this Section. Aggregate requirements in this Section, including those shown in Table 1, may be modified or eliminated when shown on the plans. Additional aggregate requirements may be specified when shown on the plans. Provide aggregate stockpiles that meet the definitions in this Section for coarse, intermediate, or fine aggregate. Aggregate from reclaimed asphalt pavement (RAP) is not required to meet Table 1 requirements unless otherwise shown on the plans. Supply aggregates that meet the definitions in [Tex-100-E](#) for crushed gravel or crushed stone. The Engineer will designate the plant or the quarry as the sampling location. Provide samples from materials produced for the project. The Engineer will establish the Surface Aggregate Classification (SAC) and perform Los Angeles abrasion, magnesium sulfate soundness, and Micro-Deval tests. Perform all other aggregate quality tests listed in Table 1. Document all test results on the mixture design report. The Engineer may perform tests on independent or split samples to verify Contractor test results. Stockpile aggregates for each source and type separately. Determine aggregate gradations for mixture design and production testing based on the washed sieve analysis given in [Tex-200-F](#), Part II.

- 2.1.1. **Coarse Aggregate.** Coarse aggregate stockpiles must have no more than 20% material passing the No. 8 sieve. Aggregates from sources listed in the Department's *Bituminous Rated Source Quality Catalog* (BRSQC) are preapproved for use. Use only the rated values for hot-mix listed in the BRSQC. Rated values for surface treatment (ST) do not apply to coarse aggregate sources used in hot-mix asphalt.

For sources not listed on the Department's BRSQC:

- build an individual stockpile for each material;
- request the Department test the stockpile for specification compliance; and
- once approved, do not add material to the stockpile unless otherwise approved.

Provide aggregate from non-listed sources only when tested by the Engineer and approved before use. Allow 30 calendar days for the Engineer to sample, test, and report results for non-listed sources.

Provide coarse aggregate with at least the minimum SAC shown on the plans. SAC requirements only apply to aggregates used on the surface of travel lanes. SAC requirements apply to aggregates used on surfaces other than travel lanes when shown on the plans. The SAC for sources on the Department's *Aggregate Quality Monitoring Program (AQMP)* ([Tex-499-A](#)) is listed in the BRSQC.

- 2.1.1.1. **Blending Class A and Class B Aggregates.** Class B aggregate meeting all other requirements in Table 1 may be blended with a Class A aggregate to meet requirements for Class A materials, unless otherwise shown on the plans. Ensure that at least 50% by weight, or volume if required, of the material retained on the No. 4 sieve comes from the Class A aggregate source when blending Class A and B aggregates to meet a Class A requirement unless otherwise shown on the plans. Blend by volume if the bulk specific gravities of the Class A and B aggregates differ by more than 0.300. Coarse aggregate from RAP and Recycled Asphalt Shingles (RAS) will be considered as Class B aggregate for blending purposes.

The Engineer may perform tests at any time during production, when the Contractor blends Class A and B aggregates to meet a Class A requirement, to ensure that at least 50% by weight, or volume if required, of the material retained on the No. 4 sieve comes from the Class A aggregate source. The Engineer will use the Department's mix design template, when electing to verify conformance, to calculate the percent of Class A aggregate retained on the No. 4 sieve by inputting the bin percentages shown from readouts in the control room at the time of production and stockpile gradations measured at the time of production. The Engineer may determine the gradations based on either washed or dry sieve analysis from samples obtained from individual aggregate cold feed bins or aggregate stockpiles. The Engineer may perform spot checks using the gradations supplied by the Contractor on the mixture design report as an input for the template; however, a failing spot check will require confirmation with a stockpile gradation determined by the Engineer.

- 2.1.1.2. **Micro-Deval Abrasion.** The Engineer will perform a minimum of one Micro-Deval abrasion test in accordance with [Tex-461-A](#) for each coarse aggregate source used in the mixture design that has a Rated Source Soundness Magnesium (RSSM) loss value greater than 15 as listed in the BRSQC. The Engineer will perform testing before the start of production and may perform additional testing at any time during production. The Engineer may obtain the coarse aggregate samples from each coarse aggregate source or may require the Contractor to obtain the samples. The Engineer may waive all Micro-Deval testing based on a satisfactory test history of the same aggregate source.

The Engineer will estimate the magnesium sulfate soundness loss for each coarse aggregate source, when tested, using the following formula:

$$Mg_{est.} = (RSSM)(MD_{act.}/RSMD)$$

where:

$Mg_{est.}$ = magnesium sulfate soundness loss

$MD_{act.}$ = actual Micro-Deval percent loss

$RSMD$ = Rated Source Micro-Deval

When the estimated magnesium sulfate soundness loss is greater than the maximum magnesium sulfate soundness loss specified, the coarse aggregate source will not be allowed for use unless otherwise approved. The Engineer will consult the Soils and Aggregates Section of the Materials and Tests Division, and additional testing may be required before granting approval.

- 2.1.2. **Intermediate Aggregate.** Aggregates not meeting the definition of coarse or fine aggregate will be defined as intermediate aggregate. Supply intermediate aggregates, when used that are free from organic impurities. The Engineer may test the intermediate aggregate in accordance with [Tex-408-A](#) to verify the material is free from organic impurities. Supply intermediate aggregate from coarse aggregate sources, when used that meet the requirements shown in Table 1 unless otherwise approved.

Test the stockpile if 10% or more of the stockpile is retained on the No. 4 sieve, and verify that it meets the requirements in Table 1 for crushed face count ([Tex-460-A](#)) and flat and elongated particles ([Tex-280-F](#)).

2.1.3.

Fine Aggregate. Fine aggregates consist of manufactured sands, screenings, and field sands. Fine aggregate stockpiles must meet the gradation requirements in Table 2. Supply fine aggregates that are free from organic impurities. The Engineer may test the fine aggregate in accordance with [Tex-408-A](#) to verify the material is free from organic impurities. Unless otherwise shown on the plans, up to 10% of the total aggregate may be field sand or other uncrushed fine aggregate. Use fine aggregate, with the exception of field sand, from coarse aggregate sources that meet the requirements shown in Table 1 unless otherwise approved.

Test the stockpile if 10% or more of the stockpile is retained on the No. 4 sieve and verify that it meets the requirements in Table 1 for crushed face count ([Tex-460-A](#)) and flat and elongated particles ([Tex-280-F](#)).

Table 1
Aggregate Quality Requirements

Property	Test Method	Requirement
Coarse Aggregate		
SAC	Tex-499-A (AQMP)	As shown on the plans
Deleterious material, %, Max	Tex-217-F , Part I	1.5
Decantation, %, Max	Tex-217-F , Part II	1.5
Micro-Deval abrasion, %	Tex-461-A	Note 1
Los Angeles abrasion, %, Max	Tex-410-A	40
Magnesium sulfate soundness, 5 cycles, %, Max	Tex-411-A	30
Crushed face count, ² %, Min	Tex-460-A , Part I	85
Flat and elongated particles @ 5:1, %, Max	Tex-280-F	10
Fine Aggregate		
Linear shrinkage, %, Max	Tex-107-E	3
Sand equivalent, %, Min	Tex-203-F	45

- Used to estimate the magnesium sulfate soundness loss in accordance with Section 3076.2.1.1.2., "Micro-Deval Abrasion."
- Only applies to crushed gravel.

Table 2
Gradation Requirements for Fine Aggregate

Sieve Size	% Passing by Weight or Volume
3/8"	100
#8	70–100
#200	0–30

2.2.

Mineral Filler. Mineral filler consists of finely divided mineral matter such as agricultural lime, crusher fines, hydrated lime, or fly ash. Mineral filler is allowed unless otherwise shown on the plans. Use no more than 2% hydrated lime or fly ash unless otherwise shown on the plans. Use no more than 1% hydrated lime if a substitute binder is used unless otherwise shown on the plans or allowed. Test all mineral fillers except hydrated lime and fly ash in accordance with [Tex-107-E](#) to ensure specification compliance. The plans may require or disallow specific mineral fillers. Provide mineral filler, when used, that:

- is sufficiently dry, free-flowing, and free from clumps and foreign matter as determined by the Engineer;
- does not exceed 3% linear shrinkage when tested in accordance with [Tex-107-E](#); and
- meets the gradation requirements in Table 3, unless otherwise shown on the plans.

Table 3
Gradation Requirements for Mineral Filler

Sieve Size	% Passing by Weight or Volume
#8	100
#200	55–100

2.3.

Baghouse Fines. Fines collected by the baghouse or other dust-collecting equipment may be reintroduced into the mixing drum.

2.4.

Asphalt Binder. Furnish the type and grade of performance-graded (PG) asphalt specified on the plans.

- 2.5. **Tack Coat.** Furnish CSS-1H, SS-1H, or a PG binder with a minimum high-temperature grade of PG 58 for tack coat binder in accordance with Item 300, "Asphalts, Oils, and Emulsions." Specialized tack coat materials listed on the Department's MPL are allowed or required when shown on the plans. Do not dilute emulsified asphalts at the terminal, in the field, or at any other location before use.
- 2.6. **Additives.** Use the type and rate of additive specified when shown on the plans. Additives that facilitate mixing, compaction, or improve the quality of the mixture are allowed when approved. Provide the Engineer with documentation such as the bill of lading showing the quantity of additives used in the project unless otherwise directed.
- 2.6.1. **Lime and Liquid Antistripping Agent.** When lime or a liquid antistripping agent is used, add in accordance with Item 301, "Asphalt Antistripping Agents." Do not add lime directly into the mixing drum of any plant where lime is removed through the exhaust stream unless the plant has a baghouse or dust collection system that reintroduces the lime into the drum.
- 2.6.2. **Warm Mix Asphalt (WMA).** Warm Mix Asphalt (WMA) is defined as HMA that is produced within a target temperature discharge range of 215°F and 275°F using approved WMA additives or processes from the Department's MPL.
- WMA is allowed for use on all projects and is required when shown on the plans. When WMA is required, the maximum placement or target discharge temperature for WMA will be set at a value below 275°F.
- Department-approved WMA additives or processes may be used to facilitate mixing and compaction of HMA produced at target discharge temperatures above 275°F; however, such mixtures will not be defined as WMA.
- 2.6.3. **Compaction Aid.** Compaction Aid is defined as a chemical warm mix additive that is used to produce an asphalt mixture at a discharge temperature greater than 275°F.
- Compaction Aid is allowed for use on all projects and is required when shown on the plans.
- 2.7. **Recycled Materials.** Use of RAP and RAS is permitted unless otherwise shown on the plans. Use of RAS is restricted to only intermediate and base mixes unless otherwise shown on the plans. Do not exceed the maximum allowable percentages of RAP and RAS shown in Table 4. The allowable percentages shown in Table 4 may be decreased or increased when shown on the plans. Determine the asphalt binder content and gradation of the RAP and RAS stockpiles for mixture design purposes in accordance with [Tex-236-F](#), Part I. The Engineer may verify the asphalt binder content of the stockpiles at any time during production. Perform other tests on RAP and RAS when shown on the plans. Asphalt binder from RAP and RAS is designated as recycled asphalt binder. Calculate and ensure that the ratio of the recycled asphalt binder to total binder does not exceed the percentages shown in Table 5 during mixture design and HMA production when RAP or RAS is used. Use a separate cold feed bin for each stockpile of RAP and RAS during HMA production.
- Surface, intermediate, and base mixes referenced in Tables 4 and 5 are defined as follows:
- **Surface.** The final HMA lift placed at the top of the pavement structure or placed directly below mixtures produced in accordance with Items 316, 342, 347, or 348;
 - **Intermediate.** Mixtures placed below an HMA surface mix and less than or equal to 8.0 in. from the riding surface; and
 - **Base.** Mixtures placed greater than 8.0 in. from the riding surface. Unless otherwise shown on the plans, mixtures used for bond breaker are defined as base mixtures.
- 2.7.1. **RAP.** RAP is salvaged, milled, pulverized, broken, or crushed asphalt pavement. Fractionated RAP is defined as a stockpile that contains RAP material with a minimum of 95.0% passing the 3/8-in. or 1/2-in. sieve, before burning in the ignition oven, unless otherwise approved. The Engineer may allow the Contractor to use an alternate to the 3/8-in. or 1/2-in. screen to fractionate the RAP.

Use of Contractor-owned RAP including HMA plant waste is permitted unless otherwise shown on the plans. Department-owned RAP stockpiles are available for the Contractor's use when the stockpile locations are shown on the plans. If Department-owned RAP is available for the Contractor's use, the Contractor may use Contractor-owned fractionated RAP and replace it with an equal quantity of Department-owned RAP. Department-owned RAP generated through required work on the Contract is available for the Contractor's use when shown on the plans. Perform any necessary tests to ensure Contractor- or Department-owned RAP is appropriate for use. The Department will not perform any tests or assume any liability for the quality of the Department-owned RAP unless otherwise shown on the plans. The Contractor will retain ownership of RAP generated on the project when shown on the plans.

Do not use Department- or Contractor-owned RAP contaminated with dirt or other objectionable materials. Do not use Department- or Contractor-owned RAP if the decantation value exceeds 5% and the plasticity index is greater than 8. Test the stockpiled RAP for decantation in accordance with [Tex-406-A](#), Part I. Determine the plasticity index in accordance with [Tex-106-E](#) if the decantation value exceeds 5%. The decantation and plasticity index requirements do not apply to RAP samples with asphalt removed by extraction or ignition.

Do not intermingle Contractor-owned RAP stockpiles with Department-owned RAP stockpiles. Remove unused Contractor-owned RAP material from the project site upon completion of the project. Return unused Department-owned RAP to the designated stockpile location.

Table 4
Maximum Allowable Amounts of RAP¹

Maximum Allowable Fractionated RAP (%)		
Surface	Intermediate	Base
15.0	25.0	30.0

1. Must also meet the recycled binder to total binder ratio shown in Table 5.

2.7.2.

RAS. Use of post-manufactured RAS or post-consumer RAS (tear-offs) is not permitted in surface mixtures unless otherwise shown on the plans. RAS may be used in intermediate and base mixtures unless otherwise shown on the plans. Up to 3% RAS may be used separately or as a replacement for fractionated RAP in accordance with Table 4 and Table 5. RAS is defined as processed asphalt shingle material from manufacturing of asphalt roofing shingles or from re-roofing residential structures. Post-manufactured RAS is processed manufacturer's shingle scrap by-product. Post-consumer RAS is processed shingle scrap removed from residential structures. Comply with all regulatory requirements stipulated for RAS by the TCEQ. RAS may be used separately or in conjunction with RAP.

Process the RAS by ambient grinding or granulating such that 100% of the particles pass the 3/8 in. sieve when tested in accordance with [Tex-200-F](#), Part I. Perform a sieve analysis on processed RAS material before extraction (or ignition) of the asphalt binder.

Add sand meeting the requirements of Table 1 and Table 2 or fine RAP to RAS stockpiles if needed to keep the processed material workable. Any stockpile that contains RAS will be considered a RAS stockpile and be limited to no more than 3.0% of the HMA mixture in accordance with Table 4.

Certify compliance of the RAS with [DMS-11000](#), "Evaluating and Using Nonhazardous Recyclable Materials Guidelines." Treat RAS as an established nonhazardous recyclable material if it has not come into contact with any hazardous materials. Use RAS from shingle sources on the Department's MPL. Remove substantially all materials before use that are not part of the shingle, such as wood, paper, metal, plastic, and felt paper. Determine the deleterious content of RAS material for mixture design purposes in accordance with [Tex-217-F](#), Part III. Do not use RAS if deleterious materials are more than 0.5% of the stockpiled RAS unless otherwise approved. Submit a sample for approval before submitting the mixture design. The Department will perform the testing for deleterious material of RAS to determine specification compliance.

2.8.

Substitute Binders. Unless otherwise shown on the plans, the Contractor may use a substitute PG binder listed in Table 5 instead of the PG binder originally specified, if using recycled materials, and if the substitute PG binder and mixture made with the substitute PG binder meet the following:

- the substitute binder meets the specification requirements for the substitute binder grade in accordance with Section 300.2.10., "Performance-Graded Binders;" and
- the mixture has less than 10.0 mm of rutting on the Hamburg Wheel test ([Tex-242-F](#)) after the number of passes required for the originally specified binder. Use of substitute PG binders may only be allowed at the discretion of the Engineer if the Hamburg Wheel test results are between 10.0 mm and 12.5 mm.

Table 5
Allowable Substitute PG Binders and Maximum Recycled Binder Ratios

Originally Specified PG Binder	Allowable Substitute PG Binder for Surface Mixes	Allowable Substitute PG Binder for Intermediate and Base Mixes	Maximum Ratio of Recycled Binder ¹ to Total Binder (%)		
			Surface	Intermediate	Base
76-22 ^{4,5}	70-22	70-22	10.0	20.0	25.0
70-22 ^{2,5}	N/A	64-22	10.0	20.0	25.0
64-22 ^{2,3}	N/A	N/A	10.0	20.0	25.0
76-28 ^{4,5}	70-28	70-28	10.0	20.0	25.0
70-28 ^{2,5}	N/A	64-28	10.0	20.0	25.0
64-28 ^{2,3}	N/A	N/A	10.0	20.0	25.0

1. Combined recycled binder from RAP and RAS. RAS is not permitted in surface mixtures unless otherwise shown on the plans.
2. Binder substitution is not allowed for surface mixtures.
3. Binder substitution is not allowed for intermediate and base mixtures.
4. Use no more than 10.0% recycled binder in surface mixtures when using this originally specified PG binder.
5. Use no more than 20.0% recycled binder when using this originally specified PG binder for intermediate mixtures. Use no more than 25.0% recycled binder when using this originally specified PG binder for base mixtures.

3.

EQUIPMENT

Provide required or necessary equipment in accordance with Item 320, "Equipment for Asphalt Concrete Pavement."

4.

CONSTRUCTION

Produce, haul, place, and compact the specified paving mixture. In addition to tests required by the specification, Contractors may perform other QC tests as deemed necessary. At any time during the project, the Engineer may perform production and placement tests as deemed necessary in accordance with Item 5, "Control of the Work." Schedule and participate in a mandatory pre-paving meeting with the Engineer on or before the first day of paving unless otherwise shown on the plans.

4.1.

Certification. Personnel certified by the Department-approved hot-mix asphalt certification program must conduct all mixture designs, sampling, and testing in accordance with Table 6. Supply the Engineer with a list of certified personnel and copies of their current certificates before beginning production and when personnel changes are made. Provide a mixture design developed and signed by a Level 2 certified specialist. Provide Level 1A certified specialists at the plant during production operations. Provide Level 1B certified specialists to conduct placement tests. Provide AGG101 certified specialists for aggregate testing.

Table 6
Test Methods, Test Responsibility, and Minimum Certification Levels

Test Description	Test Method	Contractor	Engineer	Level ¹
1. Aggregate and Recycled Material Testing				
Sampling	Tex-221-F	✓	✓	1A/AGG101
Dry sieve	Tex-200-F , Part I	✓	✓	1A/AGG101
Washed sieve	Tex-200-F , Part II	✓	✓	1A/AGG101
Deleterious material	Tex-217-F , Parts I & III	✓	✓	AGG101
Decantation	Tex-217-F , Part II	✓	✓	AGG101
Los Angeles abrasion	Tex-410-A		✓	TxDOT
Magnesium sulfate soundness	Tex-411-A		✓	TxDOT
Micro-Deval abrasion	Tex-461-A		✓	AGG101
Crushed face count	Tex-460-A	✓	✓	AGG101
Flat and elongated particles	Tex-280-F	✓	✓	AGG101
Linear shrinkage	Tex-107-E	✓	✓	AGG101
Sand equivalent	Tex-203-F	✓	✓	AGG101
Organic impurities	Tex-408-A	✓	✓	AGG101
2. Asphalt Binder & Tack Coat Sampling				
Asphalt binder sampling	Tex-500-C , Part II	✓	✓	1A/1B
Tack coat sampling	Tex-500-C , Part III	✓	✓	1A/1B
3. Mix Design & Verification				
Design and JMF changes	Tex-204-F	✓	✓	2
Mixing	Tex-205-F	✓	✓	2
Molding (TGC)	Tex-206-F	✓	✓	1A
Molding (SGC)	Tex-241-F	✓	✓	1A
Laboratory-molded density	Tex-207-F , Parts I & VI	✓	✓	1A
Rice gravity	Tex-227-F , Part II	✓	✓	1A
Ignition oven correction factors ²	Tex-236-F , Part II	✓	✓	2
Indirect tensile strength	Tex-226-F	✓	✓	1A
Hamburg Wheel test	Tex-242-F	✓	✓	1A
Boil test	Tex-530-C	✓	✓	1A
4. Production Testing				
Selecting production random numbers	Tex-225-F , Part I		✓	1A
Mixture sampling	Tex-222-F	✓	✓	1A/1B
Molding (TGC)	Tex-206-F	✓	✓	1A
Molding (SGC)	Tex-241-F	✓	✓	1A
Laboratory-molded density	Tex-207-F , Parts I & VI	✓	✓	1A
Rice gravity	Tex-227-F , Part II	✓	✓	1A
Gradation & asphalt binder content ²	Tex-236-F , Part I	✓	✓	1A
Control charts	Tex-233-F	✓	✓	1A
Moisture content	Tex-212-F , Part II	✓	✓	1A/AGG101
Hamburg Wheel test	Tex-242-F	✓	✓	1A
Micro-Deval abrasion	Tex-461-A		✓	AGG101
Boil test	Tex-530-C	✓	✓	1A
Abson recovery	Tex-211-F		✓	TxDOT
5. Placement Testing				
Selecting placement random numbers	Tex-225-F , Part II		✓	1B
Trimming roadway cores	Tex-251-F , Parts I & II	✓	✓	1A/1B
In-place air voids	Tex-207-F , Parts I & VI	✓	✓	1A
In-place density (nuclear method)	Tex-207-F , Part III	✓		1B
Establish rolling pattern	Tex-207-F , Part IV	✓		1B
Control charts	Tex-233-F	✓	✓	1A
Ride quality measurement	Tex-1001-S	✓	✓	Note 3
Segregation (density profile)	Tex-207-F , Part V	✓	✓	1B
Longitudinal joint density	Tex-207-F , Part VII	✓	✓	1B
Thermal profile	Tex-244-F	✓	✓	1B
Shear Bond Strength Test	Tex-249-F		✓	TxDOT

- Level 1A, 1B, AGG101, and 2 are certification levels provided by the Hot Mix Asphalt Center certification program.
- Refer to Section 3076.4.9.2.3., "Production Testing," for exceptions to using an ignition oven.
- Profiler and operator are required to be certified at the Texas A&M Transportation Institute facility when Surface Test Type B is specified.

4.2.

Reporting and Responsibilities. Use Department-provided templates to record and calculate all test data, including mixture design, production and placement QC/QA, control charts, thermal profiles, segregation density profiles, and longitudinal joint density. Obtain the current version of the templates at <http://www.txdot.gov/inside-txdot/forms-publications/consultants-contractors/forms/site-manager.html> or from the Engineer. The Engineer and the Contractor will provide any available test results to the other party when requested. The maximum allowable time for the Contractor and Engineer to exchange test data is as given in Table 7 unless otherwise approved. The Engineer and the Contractor will immediately report to the other party any test result that requires suspension of production or placement, a payment adjustment less than 1.000, or that fails to meet the specification requirements. Record and electronically submit all test results and pertinent information on Department-provided templates.

Subsequent sublots placed after test results are available to the Contractor, which require suspension of operations, may be considered unauthorized work. Unauthorized work will be accepted or rejected at the discretion of the Engineer in accordance with Article 5.3., "Conformity with Plans, Specifications, and Special Provisions."

Table 7
Reporting Schedule

Description	Reported By	Reported To	To Be Reported Within
Production Quality Control			
Gradation ¹	Contractor	Engineer	1 working day of completion of the subplot
Asphalt binder content ¹			
Laboratory-molded density ²			
Moisture content ³			
Boil test ³			
Production Quality Assurance			
Gradation ³	Engineer	Contractor	1 working day of completion of the subplot
Asphalt binder content ³			
Laboratory-molded density ¹			
Hamburg Wheel test ⁴			
Boil test ³			
Binder tests ⁴			
Placement Quality Control			
In-place air voids ²	Contractor	Engineer	1 working day of completion of the lot
Segregation ¹			
Longitudinal joint density ¹			
Thermal profile ¹			
Placement Quality Assurance			
In-place air voids ¹	Engineer	Contractor	1 working day after receiving the trimmed cores ⁵
Segregation ³			1 working day of completion of the lot
Longitudinal joint density ³			
Thermal profile ³			
Aging ratio ⁴			
Payment adjustment summary	Engineer	Contractor	2 working days of performing all required tests and receiving Contractor test data

1. These tests are required on every subplot.
2. Optional test. When performed on split samples, report the results as soon as they become available.
3. To be performed at the frequency specified in Table 16 or as shown on the plans.
4. To be reported as soon as the results become available.
5. 2 days are allowed if cores cannot be dried to constant weight within 1 day.

The Engineer will use the Department-provided template to calculate all payment adjustment factors for the lot. Sublot samples may be discarded after the Engineer and Contractor sign off on the payment adjustment summary documentation for the lot.

Use the procedures described in [Tex-233-F](#) to plot the results of all quality control (QC) and quality assurance (QA) testing. Update the control charts as soon as test results for each subplot become available. Make the control charts readily accessible at the field laboratory. The Engineer may suspend production for failure to update control charts.

- 4.3. **Quality Control Plan (QCP).** Develop and follow the QCP in detail. Obtain approval for changes to the QCP made during the project. The Engineer may suspend operations if the Contractor fails to comply with the QCP.

Submit a written QCP before the mandatory pre-paving meeting. Receive approval of the QCP before beginning production. Include the following items in the QCP:

- 4.3.1. **Project Personnel.** For project personnel, include:

- a list of individuals responsible for QC with authority to take corrective action;
- current contact information for each individual listed; and
- current copies of certification documents for individuals performing specified QC functions.

- 4.3.2. **Material Delivery and Storage.** For material delivery and storage, include:

- the sequence of material processing, delivery, and minimum quantities to assure continuous plant operations;
- aggregate stockpiling procedures to avoid contamination and segregation;
- frequency, type, and timing of aggregate stockpile testing to assure conformance of material requirements before mixture production; and
- procedure for monitoring the quality and variability of asphalt binder.

- 4.3.3. **Production.** For production, include:

- loader operation procedures to avoid contamination in cold bins;
- procedures for calibrating and controlling cold feeds;
- procedures to eliminate debris or oversized material;
- procedures for adding and verifying rates of each applicable mixture component (e.g., aggregate, asphalt binder, RAP, RAS, lime, liquid antistripping, WMA);
- procedures for reporting job control test results; and
- procedures to avoid segregation and drain-down in the silo.

- 4.3.4. **Loading and Transporting.** For loading and transporting, include:

- type and application method for release agents; and
- truck loading procedures to avoid segregation.

- 4.3.5. **Placement and Compaction.** For placement and compaction, include:

- proposed agenda for mandatory pre-paving meeting, including date and location;
- proposed paving plan (e.g., paving widths, joint offsets, and lift thicknesses);
- type and application method for release agents in the paver and on rollers, shovels, lutes, and other utensils;
- procedures for the transfer of mixture into the paver, while avoiding segregation and preventing material spillage;
- process to balance production, delivery, paving, and compaction to achieve continuous placement operations and good ride quality;
- paver operations (e.g., operation of wings, height of mixture in auger chamber) to avoid physical and thermal segregation and other surface irregularities; and
- procedures to construct quality longitudinal and transverse joints.

4.4. Mixture Design.

4.4.1. **Design Requirements.** The Contractor will design the mixture using a Superpave Gyrotory Compactor (SGC). A Texas Gyrotory Compactor (TGC) may be used when shown on the plans. Use the dense-graded design procedure provided in [Tex-204-F](#). Design the mixture to meet the requirements listed in Tables 1, 2, 3, 4, 5, 8, 9, and 10.

4.4.1.1. **Design Number of Gyration (Ndesign) When The SGC Is Used.** Design the mixture at 50 gyrations (Ndesign). Use a target laboratory-molded density of 96.0% to design the mixture; however, adjustments can be made to the Ndesign value as noted in Table 9. The Ndesign level may be reduced to at least 35 gyrations at the Contractor's discretion.

Use an approved laboratory from the Department's MPL to perform the Hamburg Wheel test, and provide results with the mixture design, or provide the laboratory mixture and request that the Department perform the Hamburg Wheel test. The Engineer will be allowed 10 working days to provide the Contractor with Hamburg Wheel test results on the laboratory mixture design.

The Engineer will provide the mixture design when shown on the plans. The Contractor may submit a new mixture design at any time during the project. The Engineer will verify and approve all mixture designs (JMF1) before the Contractor can begin production.

Provide the Engineer with a mixture design report using the Department-provided template. Include the following items in the report:

- the combined aggregate gradation, source, specific gravity, and percent of each material used;
- asphalt binder content and aggregate gradation of RAP and RAS stockpiles;
- the target laboratory-molded density (or Ndesign level when using the SGC);
- results of all applicable tests;
- the mixing and molding temperatures;
- the signature of the Level 2 person or persons that performed the design;
- the date the mixture design was performed; and
- a unique identification number for the mixture design.

Table 8
Master Gradation Limits (% Passing by Weight or Volume) and VMA Requirements

Sieve Size	B Fine Base	C Coarse Surface	D Fine Surface	F Fine Mixture
2"	–	–	–	–
1-1/2"	100.0 ¹	–	–	–
1"	98.0–100.0	100.0 ¹	–	–
3/4"	84.0–98.0	95.0–100.0	100.0 ¹	–
1/2"	–	–	98.0–100.0	100.0 ¹
3/8"	60.0–80.0	70.0–85.0	85.0–100.0	98.0–100.0
#4	40.0–60.0	43.0–63.0	50.0–70.0	70.0–90.0
#8	29.0–43.0	32.0–44.0	35.0–46.0	38.0–48.0
#30	13.0–28.0	14.0–28.0	15.0–29.0	12.0–27.0
#50	6.0–20.0	7.0–21.0	7.0–20.0	6.0–19.0
#200	2.0–7.0	2.0–7.0	2.0–7.0	2.0–7.0
Design VMA, % Minimum				
–	13.0	14.0	15.0	16.0
Production (Plant-Produced) VMA, % Minimum				
–	12.5	13.5	14.5	15.5

1. Defined as maximum sieve size. No tolerance allowed.

Table 9
Laboratory Mixture Design Properties

Mixture Property	Test Method	Requirement
Target laboratory-molded density, % (SGC)	Tex-207-F	96.0
Design gyrations (N _{design} for SGC)	Tex-241-F	50 ¹
Indirect tensile strength (dry), psi	Tex-226-F	85–200 ²
Boil test ³	Tex-530-C	–

- Adjust within a range of 35–100 gyrations when shown on the plans or specification or when mutually agreed between the Engineer and Contractor.
- The Engineer may allow the IDT strength to exceed 200 psi if the corresponding Hamburg Wheel rut depth is greater than 3.0 mm and less than 12.5 mm.
- Used to establish baseline for comparison to production results. May be waived when approved.

Table 10
Hamburg Wheel Test Requirements

High-Temperature Binder Grade	Test Method	Minimum # of Passes @ 12.5 mm ¹ Rut Depth, Tested @ 50°C
PG 64 or lower	Tex-242-F	10,000 ²
PG 70		15,000 ³
PG 76 or higher		20,000

- When the rut depth at the required minimum number of passes is less than 3 mm, the Engineer may require the Contractor to increase the target laboratory-molded density (TGC) by 0.5% to no more than 97.5% or lower the N_{design} level (SGC) to at least 35 gyrations.
- May be decreased to at least 5,000 passes when shown on the plans.
- May be decreased to at least 10,000 passes when shown on the plans.

- 4.4.1.2. **Target Laboratory-Molded Density When The TGC Is Used.** Design the mixture at a 96.5% target laboratory-molded density. Increase the target laboratory-molded density to 97.0% or 97.5% at the Contractor's discretion or when shown on the plans or specification.
- 4.4.2. **Job-Mix Formula Approval.** The job-mix formula (JMF) is the combined aggregate gradation, target laboratory-molded density (or N_{design} level), and target asphalt percentage used to establish target values for hot-mix production. JMF1 is the original laboratory mixture design used to produce the trial batch. When WMA is used, JMF1 may be designed and submitted to the Engineer without including the WMA additive. When WMA is used, document the additive or process used and recommended rate on the JMF1 submittal. The Engineer and the Contractor will verify JMF1 based on plant-produced mixture from the trial batch unless otherwise approved. The Engineer may accept an existing mixture design previously used on a Department project and may waive the trial batch to verify JMF1. The Department may require the Contractor to reimburse the Department for verification tests if more than 2 trial batches per design are required.
- 4.4.2.1. **Contractor's Responsibilities.**
- 4.4.2.1.1. **Providing Gyrotory Compactor.** Use a SGC calibrated in accordance with [Tex-241-F](#) to design the mixture in accordance with [Tex-204-F](#), Part IV, for molding production samples. Locate the SGC, if used, at the Engineer's field laboratory and make the SGC available to the Engineer for use in molding production samples. Furnish a TGC calibrated in accordance with [Tex-914-K](#) when shown on the plans to design the mixture in accordance with [Tex-204-F](#), Part I, for molding production samples.
- 4.4.2.1.2. **Gyrotory Compactor Correlation Factors.** Use [Tex-206-F](#), Part II, to perform a gyrotory compactor correlation when the Engineer uses a different gyrotory compactor. Apply the correlation factor to all subsequent production test results.
- 4.4.2.1.3. **Submitting JMF1.** Furnish a mix design report (JMF1) with representative samples of all component materials and request approval to produce the trial batch. Provide approximately 10,000 g of the design mixture if opting to have the Department perform the Hamburg Wheel test on the laboratory mixture, and request that the Department perform the test.

- 4.4.2.1.4. **Supplying Aggregates.** Provide approximately 40 lb. of each aggregate stockpile unless otherwise directed.
- 4.4.2.1.5. **Supplying Asphalt.** Provide at least 1 gal. of the asphalt material and enough quantities of any additives proposed for use.
- 4.4.2.1.6. **Ignition Oven Correction Factors.** Determine the aggregate and asphalt correction factors from the ignition oven in accordance with [Tex-236-F](#), Part II. Provide correction factors that are not more than 12 months old. Provide the Engineer with split samples of the mixtures before the trial batch production, including all additives (except water), and blank samples used to determine the correction factors for the ignition oven used for QA testing during production. Correction factors established from a previously approved mixture design may be used for the current mixture design if the mixture design and ignition oven are the same as previously used, unless otherwise directed.
- 4.4.2.1.7. **Boil Test.** Perform the test and retain the tested sample from [Tex-530-C](#) until completion of the project or as directed. Use this sample for comparison purposes during production. The Engineer may waive the requirement for the boil test.
- 4.4.2.1.8. **Trial Batch Production.** Provide a plant-produced trial batch upon receiving conditional approval of JMF1 and authorization to produce a trial batch, including the WMA additive or process if applicable, for verification testing of JMF1 and development of JMF2. Produce a trial batch mixture that meets the requirements in Table 4, Table 5, and Table 11. The Engineer may accept test results from recent production of the same mixture instead of a new trial batch.
- 4.4.2.1.9. **Trial Batch Production Equipment.** Use only equipment and materials proposed for use on the project to produce the trial batch.
- 4.4.2.1.10. **Trial Batch Quantity.** Produce enough quantity of the trial batch to ensure that the mixture meets the specification requirements.
- 4.4.2.1.11. **Number of Trial Batches.** Produce trial batches as necessary to obtain a mixture that meets the specification requirements.
- 4.4.2.1.12. **Trial Batch Sampling.** Obtain a representative sample of the trial batch and split it into 3 equal portions in accordance with [Tex-222-F](#). Label these portions as "Contractor," "Engineer," and "Referee." Deliver samples to the appropriate laboratory as directed.
- 4.4.2.1.13. **Trial Batch Testing.** Test the trial batch to ensure the mixture produced using the proposed JMF1 meets the mixture requirements in Table 11. Ensure the trial batch mixture is also in compliance with the Hamburg Wheel requirement in Table 10. Use a Department-approved laboratory to perform the Hamburg Wheel test on the trial batch mixture or request that the Department perform the Hamburg Wheel test. The Engineer will be allowed 10 working days to provide the Contractor with Hamburg Wheel test results on the trial batch. Provide the Engineer with a copy of the trial batch test results.
- 4.4.2.1.14. **Development of JMF2.** Evaluate the trial batch test results after the Engineer grants full approval of JMF1 based on results from the trial batch, determine the optimum mixture proportions, and submit as JMF2. Adjust the asphalt binder content or gradation to achieve the specified target laboratory-molded density. The asphalt binder content established for JMF2 is not required to be within any tolerance of the optimum asphalt binder content established for JMF1; however, mixture produced using JMF2 must meet the voids in mineral aggregates (VMA) requirements for production shown in Table 8. If the optimum asphalt binder content for JMF2 is more than 0.5% lower than the optimum asphalt binder content for JMF1, the Engineer may perform or require the Contractor to perform [Tex-226-F](#) on Lot 1 production to confirm the indirect tensile strength does not exceed 200 psi. Verify that JMF2 meets the mixture requirements in Table 5.
- 4.4.2.1.15. **Mixture Production.** Use JMF2 to produce Lot 1 as described in Section 3076.4.9.3.1.1., "Lot 1 Placement," after receiving approval for JMF2 and a passing result from the Department's or a Department-approved

laboratory's Hamburg Wheel test on the trial batch. If desired, proceed to Lot 1 production, once JMF2 is approved, at the Contractor's risk without receiving the results from the Department's Hamburg Wheel test on the trial batch.

Notify the Engineer if electing to proceed without Hamburg Wheel test results from the trial batch. Note that the Engineer may require up to the entire subplot of any mixture failing the Hamburg Wheel test to be removed and replaced at the Contractor's expense.

4.4.2.1.16. **Development of JMF3.** Evaluate the test results from Lot 1, determine the optimum mixture proportions, and submit as JMF3 for use in Lot 2.

4.4.2.1.17. **JMF Adjustments.** If JMF adjustments are necessary to achieve the specified requirements, make the adjustments before beginning a new lot. The adjusted JMF must:

- be provided to the Engineer in writing before the start of a new lot;
- be numbered in sequence to the previous JMF;
- meet the mixture requirements in Table 4 and Table 5;
- meet the master gradation limits shown in Table 8; and
- be within the operational tolerances of JMF2 listed in Table 11.

4.4.2.1.18. **Requesting Referee Testing.** Use referee testing, if needed, in accordance with Section 3076.4.9.1., "Referee Testing," to resolve testing differences with the Engineer.

Table 11
Operational Tolerances

Description	Test Method	Allowable Difference Between Trial Batch and JMF1 Target	Allowable Difference from Current JMF Target	Allowable Difference between Contractor and Engineer ¹
Individual % retained for #8 sieve and larger	Tex-200-F or Tex-236-F	Must be Within Master Grading Limits in Table 8	$\pm 5.0^{2,3}$	± 5.0
Individual % retained for sieves smaller than #8 and larger than #200			$\pm 3.0^{2,3}$	± 3.0
% passing the #200 sieve			$\pm 2.0^{2,3}$	± 1.6
Asphalt binder content, %	Tex-236-F	± 0.5	$\pm 0.3^3$	± 0.3
Laboratory-molded density, %	Tex-207-F	± 1.0	± 1.0	± 1.0
In-place air voids, %		N/A	N/A	± 1.0
Laboratory-molded bulk specific gravity		N/A	N/A	± 0.020
VMA, %, min	Tex-204-F	Note ⁴	Note ⁴	N/A
Theoretical maximum specific (Rice) gravity	Tex-227-F	N/A	N/A	± 0.020

1. Contractor may request referee testing only when values exceed these tolerances.
2. When within these tolerances, mixture production gradations may fall outside the master grading limits; however, the % passing the #200 will be considered out of tolerance when outside the master grading limits.
3. Only applies to mixture produced for Lot 1 and higher.
4. Test and verify that Table 8 requirements are met.

4.4.2.2. **Engineer's Responsibilities.**

4.4.2.2.1. **Gyratory Compactor.** For SGC mixtures designed in accordance with [Tex-204-F](#), Part IV, the Engineer will use a Department SGC, calibrated in accordance with [Tex-241-F](#), to mold samples for laboratory mixture design verification. For molding trial batch and production specimens, the Engineer will use the Contractor-provided SGC at the field laboratory or provide and use a Department SGC at an alternate location. The Engineer will make the Contractor-provided SGC in the Department field laboratory available to the Contractor for molding verification samples.

For TGC mixtures designed in accordance with [Tex-204-F](#), Part I, the Engineer will use a Department TGC, calibrated in accordance with [Tex-914-K](#), to mold samples for trial batch and production testing. The Engineer will make the Department TGC and the Department field laboratory available to the Contractor for molding verification samples, if requested by the Contractor.

4.4.2.2.2. **Conditional Approval of JMF1 and Authorizing Trial Batch.** The Engineer will review and verify conformance of the following information within 2 working days of receipt:

- the Contractor's mix design report (JMF1);
- the Contractor-provided Hamburg Wheel test results;
- all required materials including aggregates, asphalt, additives, and recycled materials; and
- the mixture specifications.

The Engineer will grant the Contractor conditional approval of JMF1 if the information provided on the paper copy of JMF1 indicates that the Contractor's mixture design meets the specifications. When the Contractor does not provide Hamburg Wheel test results with laboratory mixture design, 10 working days are allowed for conditional approval of JMF1. The Engineer will base full approval of JMF1 on the test results on mixture from the trial batch.

Unless waived, the Engineer will determine the Micro-Deval abrasion loss in accordance with Section 3076.2.1.1.2., "Micro-Deval Abrasion." If the Engineer's test results are pending after two working days, conditional approval of JMF1 will still be granted within two working days of receiving JMF1. When the Engineer's test results become available, they will be used for specification compliance.

After conditionally approving JMF1, including either Contractor- or Department-supplied Hamburg Wheel test results, the Contractor is authorized to produce a trial batch.

4.4.2.2.3. **Hamburg Wheel Testing of JMF1.** If the Contractor requests the option to have the Department perform the Hamburg Wheel test on the laboratory mixture, the Engineer will mold samples in accordance with [Tex-242-F](#) to verify compliance with the Hamburg Wheel test requirement in Table 10.

4.4.2.2.4. **Ignition Oven Correction Factors.** The Engineer will use the split samples provided by the Contractor to determine the aggregate and asphalt correction factors for the ignition oven used for QA testing during production in accordance with [Tex-236-F](#), Part II. Provide correction factors that are not more than 12 months old.

4.4.2.2.5. **Testing the Trial Batch.** Within 1 full working day, the Engineer will sample and test the trial batch to ensure that the mixture meets the requirements in Table 11. If the Contractor requests the option to have the Department perform the Hamburg Wheel test on the trial batch mixture, the Engineer will mold samples in accordance with [Tex-242-F](#) to verify compliance with the Hamburg Wheel test requirement in Table 10.

The Engineer will have the option to perform the following tests on the trial batch:

- [Tex-226-F](#), to verify that the indirect tensile strength meets the requirement shown in Table 9; and
- [Tex-530-C](#), to retain and use for comparison purposes during production.

4.4.2.2.6. **Full Approval of JMF1.** The Engineer will grant full approval of JMF1 and authorize the Contractor to proceed with developing JMF2 if the Engineer's results for the trial batch meet the requirements in Table 11. The Engineer will notify the Contractor that an additional trial batch is required if the trial batch does not meet these requirements.

4.4.2.2.7. **Approval of JMF2.** The Engineer will approve JMF2 within one working day if the mixture meets the requirements in Table 5 and the gradation meets the master grading limits shown in Table 8. The asphalt binder content established for JMF2 is not required to be within any tolerance of the optimum asphalt binder content established for JMF1; however, mixture produced using JMF2 must meet the VMA requirements shown in Table 8. If the optimum asphalt binder content for JMF2 is more than 0.5% lower than the optimum asphalt binder content for JMF1, the Engineer may perform or require the Contractor to perform [Tex-226-F](#) on Lot 1 production to confirm the indirect tensile strength does not exceed 200 psi.

4.4.2.2.8. **Approval of Lot 1 Production.** The Engineer will authorize the Contractor to proceed with Lot 1 production (using JMF2) as soon as a passing result is achieved from the Department's or a Department-approved laboratory's Hamburg Wheel test on the trial batch. The Contractor may proceed at its own risk with Lot 1 production without the results from the Hamburg Wheel test on the trial batch.

If the Department's or Department-approved laboratory's sample from the trial batch fails the Hamburg Wheel test, the Engineer will suspend production until further Hamburg Wheel tests meet the specified values. The Engineer may require up to the entire subplot of any mixture failing the Hamburg Wheel test be removed and replaced at the Contractor's expense.

4.4.2.2.9. **Approval of JMF3 and Subsequent JMF Changes.** JMF3 and subsequent JMF changes are approved if they meet the mixture requirements shown in Table 4, Table 5, and the master grading limits shown in Table 8, and are within the operational tolerances of JMF2 shown in Table 11.

4.5. **Production Operations.** Perform a new trial batch when the plant or plant location is changed. Take corrective action and receive approval to proceed after any production suspension for noncompliance to the specification. Submit a new mix design and perform a new trial batch when the asphalt binder content of:

- any RAP stockpile used in the mix is more than 0.5% higher than the value shown on the mixture design report; or
- RAS stockpile used in the mix is more than 2.0% higher than the value shown on the mixture design report.

4.5.1. **Storage and Heating of Materials.** Do not heat the asphalt binder above the temperatures specified in Item 300, "Asphalts, Oils, and Emulsions," or outside the manufacturer's recommended values. Provide the Engineer with daily records of asphalt binder and hot-mix asphalt discharge temperatures (in legible and discernible increments) in accordance with Item 320, "Equipment for Asphalt Concrete Pavement," unless otherwise directed. Do not store mixture for a period long enough to affect the quality of the mixture, nor in any case longer than 12 hr. unless otherwise approved.

4.5.2. **Mixing and Discharge of Materials.** Notify the Engineer of the target discharge temperature and produce the mixture within 25°F of the target. Monitor the temperature of the material in the truck before shipping to ensure that it does not exceed the maximum production temperatures listed in Table 12 (or 275°F for WMA). The Department will not pay for or allow placement of any mixture produced above the maximum production temperatures listed in Table 12.

Table 12
Maximum Production Temperature

High-Temperature Binder Grade ¹	Maximum Production Temperature
PG 64	325°F
PG 70	335°F
PG 76	345°F

1. The high-temperature binder grade refers to the high-temperature grade of the virgin asphalt binder used to produce the mixture.

Produce WMA within the target discharge temperature range of 215°F and 275°F when WMA is required. Take corrective action any time the discharge temperature of the WMA exceeds the target discharge range. The Engineer may suspend production operations if the Contractor's corrective action is not successful at controlling the production temperature within the target discharge range. Note that when WMA is produced, it may be necessary to adjust burners to ensure complete combustion such that no burner fuel residue remains in the mixture.

Control the mixing time and temperature so that substantially all moisture is removed from the mixture before discharging from the plant. Determine the moisture content, if requested, by oven-drying in accordance with

[Tex-212-F](#), Part II, and verify that the mixture contains no more than 0.2% of moisture by weight. Obtain the sample immediately after discharging the mixture into the truck, and perform the test promptly.

- 4.6. **Hauling Operations.** Clean all truck beds before use to ensure that mixture is not contaminated. Use a release agent shown on the Department's MPL to coat the inside bed of the truck when necessary.

Use equipment for hauling as defined in Section 3076.4.7.3.3., "Hauling Equipment." Use other hauling equipment only when allowed.

- 4.7. **Placement Operations.** Collect haul tickets from each load of mixture delivered to the project and provide the Department's copy to the Engineer approximately every hour, or as directed. Use a hand-held thermal camera or infrared thermometer, when a thermal imaging system is not used, to measure and record the internal temperature of the mixture as discharged from the truck or Material Transfer Device (MTD) before or as the mix enters the paver and an approximate station number or GPS coordinates on each ticket. Calculate the daily yield and cumulative yield for the specified lift and provide to the Engineer at the end of paving operations for each day unless otherwise directed. The Engineer may suspend production if the Contractor fails to produce and provide haul tickets and yield calculations by the end of paving operations for each day.

Prepare the surface by removing raised pavement markers and objectionable material such as moisture, dirt, sand, leaves, and other loose impediments from the surface before placing mixture. Remove vegetation from pavement edges. Place the mixture to meet the typical section requirements and produce a smooth, finished surface with a uniform appearance and texture. Offset longitudinal joints of successive courses of hot-mix by at least 6 in. Place mixture so that longitudinal joints on the surface course coincide with lane lines and are not placed in the wheel path, or as directed. Ensure that all finished surfaces will drain properly. Place the mixture at the rate or thickness shown on the plans. The Engineer will use the guidelines in Table 13 to determine the compacted lift thickness of each layer when multiple lifts are required. The thickness determined is based on the rate of 110 lb./sq. yd. for each inch of pavement unless otherwise shown on the plans.

Table 13
Compacted Lift Thickness and Required Core Height

Mixture Type	Compacted Lift Thickness Guidelines		Minimum Untrimmed Core Height (in.) Eligible for Testing
	Minimum (in.)	Maximum (in.)	
B	2.50	5.00	1.75
C	2.00	4.00	1.50
D	1.50	3.00	1.25
F	1.25	2.50	1.25

- 4.7.1. **Weather Conditions.**

- 4.7.1.1. **When Using a Thermal Imaging System.** Place mixture when the roadway surface is dry and the roadway surface temperature is at or above the temperatures listed in Table 14A. The Engineer may restrict the Contractor from paving surface mixtures if the ambient temperature is likely to drop below 32°F within 12 hr. of paving. Place mixtures only when weather conditions and moisture conditions of the roadway surface are suitable as determined by the Engineer. Provide output data from the thermal imaging system to demonstrate to the Engineer that no recurring severe thermal segregation exists in accordance with Section 3076.4.7.3.1.2., "Thermal Imaging System."

Table 14A
Minimum Pavement Surface Temperatures

High-Temperature Binder Grade ¹	Minimum Pavement Surface Temperatures (°F)	
	Subsurface Layers or Night Paving Operations	Surface Layers Placed in Daylight Operations
PG 64	35	40
PG 70	45 ²	50 ²
PG 76	45 ²	50 ²

1. The high-temperature binder grade refers to the high-temperature grade of the virgin asphalt binder used to produce the mixture.
2. Contractors may pave at temperatures 10°F lower than these values when a chemical WMA additive is used as a compaction aid in the mixture or when using WMA.

4.7.1.2.

When Not Using a Thermal Imaging System. When using a thermal camera instead of the thermal imaging system, place mixture when the roadway surface temperature is at or above the temperatures listed in Table 14B unless otherwise approved or as shown on the plans. Measure the roadway surface temperature with a hand-held thermal camera or infrared thermometer. The Engineer may allow mixture placement to begin before the roadway surface reaches the required temperature if conditions are such that the roadway surface will reach the required temperature within 2 hr. of beginning placement operations. Place mixtures only when weather conditions and moisture conditions of the roadway surface are suitable as determined by the Engineer. The Engineer may restrict the Contractor from paving if the ambient temperature is likely to drop below 32°F within 12 hr. of paving.

Table 14B
Minimum Pavement Surface Temperatures

High-Temperature Binder Grade ¹	Minimum Pavement Surface Temperatures (°F)	
	Subsurface Layers or Night Paving Operations	Surface Layers Placed in Daylight Operations
PG 64	45	50
PG 70	55 ²	60 ²
PG 76	60 ²	60 ²

1. The high-temperature binder grade refers to the high-temperature grade of the virgin asphalt binder used to produce the mixture.
2. Contractors may pave at temperatures 10°F lower than these values when a chemical WMA additive is used as a compaction aid in the mixture, when using WMA, or utilizing a paving process with equipment that eliminates thermal segregation. In such cases, for each sublot and in the presence of the Engineer, use a hand-held thermal camera operated in accordance with [Tex-244-F](#) to demonstrate to the satisfaction of the Engineer that the uncompacted mat has no more than 10°F of thermal segregation.

4.7.2.

Tack Coat.

4.7.2.1.

Application. Clean the surface before placing the tack coat. The Engineer will set the rate between 0.04 and 0.10 gal. of residual asphalt per square yard of surface area. Apply a uniform tack coat at the specified rate unless otherwise directed. Apply the tack coat in a uniform manner to avoid streaks and other irregular patterns. Apply the tack coat to all surfaces that will come in contact with the subsequent HMA placement, unless otherwise directed. Allow adequate time for emulsion to break completely before placing any material. Prevent splattering of tack coat when placed adjacent to curb, gutter, and structures. Do not dilute emulsified asphalts at the terminal, in the field, or at any other location before use.

4.7.2.2.

Sampling. The Engineer will obtain at least one sample of the tack coat binder per project in accordance with [Tex-500-C](#), Part III, and test it to verify compliance with Item 300, "Asphalts, Oils, and Emulsions." The Engineer will notify the Contractor when the sampling will occur and will witness the collection of the sample from the asphalt distributor immediately before use.

For emulsions, the Engineer may test as often as necessary to ensure the residual of the emulsion is greater than or equal to the specification requirement in Item 300, "Asphalts, Oils, and Emulsions."

- 4.7.3. **Lay-Down Operations.** Use the placement temperatures in Table 15 to establish the minimum placement temperature of the mixture delivered to the paver.

Table 15
Minimum Mixture Placement Temperature

High-Temperature Binder Grade ¹	Minimum Placement Temperature (Before Entering Paver) ^{2,3}
PG 64	260°F
PG 70	270°F
PG 76	280°F

1. The high-temperature binder grade refers to the high-temperature grade of the virgin asphalt binder used to produce the mixture.
2. Minimum placement temperatures may be reduced 10°F if using a chemical WMA additive as a compaction aid.
3. When using WMA, the minimum placement temperature is 215°F.

- 4.7.3.1. **Thermal Profile.** Use a hand-held thermal camera or a thermal imaging system to obtain a continuous thermal profile in accordance with [Tex-244-F](#). Thermal profiles are not applicable in areas described in Section 3076.4.9.3.1.4., “Miscellaneous Areas.”
- 4.7.3.1.1. **Thermal Segregation.**
- 4.7.3.1.1.1. **Moderate.** Any areas that have a temperature differential greater than 25°F, but not exceeding 50°F, are deemed as moderate thermal segregation.
- 4.7.3.1.1.2. **Severe.** Any areas that have a temperature differential greater than 50°F are deemed as severe thermal segregation.
- 4.7.3.1.2. **Thermal Imaging System.** Review the output results when a thermal imaging system is used, and provide the automated report described in [Tex-244-F](#) to the Engineer daily unless otherwise directed. Modify the paving process as necessary to eliminate any recurring (moderate or severe) thermal segregation identified by the thermal imaging system. The Engineer may suspend paving operations if the Contractor cannot successfully modify the paving process to eliminate recurring severe thermal segregation. Density profiles are not required and not applicable when using a thermal imaging system. Provide the Engineer with electronic copies of all daily data files that can be used with the thermal imaging system software to generate temperature profile plots daily or upon completion of the project or as requested by the Engineer.
- 4.7.3.1.3. **Thermal Camera.** When using a thermal camera instead of the thermal imaging system, take immediate corrective action to eliminate recurring moderate thermal segregation when a hand-held thermal camera is used. Evaluate areas with moderate thermal segregation by performing density profiles in accordance with Section 3076.4.9.3.3.2., “Segregation (Density Profile).” Provide the Engineer with the thermal profile of every subplot within one working day of the completion of each lot. When requested by the Engineer, provide the thermal images generated using the thermal camera. Report the results of each thermal profile in accordance with Section 3076.4.2., “Reporting and Responsibilities.” The Engineer will use a hand-held thermal camera to obtain a thermal profile at least once per project. No production or placement payment adjustments greater than 1.000 will be paid for any subplot that contains severe thermal segregation. Suspend operations and take immediate corrective action to eliminate severe thermal segregation unless otherwise directed. Resume operations when the Engineer determines that subsequent production will meet the requirements of this Section. Evaluate areas with severe thermal segregation by performing density profiles in accordance with Section 3076.4.9.3.3.2., “Segregation (Density Profile).” Remove and replace the material in any areas that have both severe thermal segregation and a failing result for Segregation (Density Profile) unless otherwise directed. The subplot in question may receive a production and placement payment adjustment greater than 1.000, if applicable, when the defective material is successfully removed and replaced.
- 4.7.3.2. **Windrow Operations.** Operate windrow pickup equipment so that when hot-mix is placed in windrows, substantially all the mixture deposited on the roadbed is picked up and loaded into the paver.

4.7.3.3. **Hauling Equipment.** Use belly dumps, live bottom, or end dump trucks to haul and transfer mixture; however, with exception of paving miscellaneous areas, end dump trucks are only allowed when used in conjunction with an MTD with remixing capability or when a thermal imaging system is used unless otherwise allowed.

4.7.3.4. **Screed Heaters.** Turn off screed heaters to prevent overheating of the mat if the paver stops for more than 5 min. The Engineer may evaluate the suspect area in accordance with Section 3076.4.9.3.3.4., "Recovered Asphalt Dynamic Shear Rheometer (DSR)," if the screed heater remains on for more than 5 min. while the paver is stopped.

4.8. **Compaction.** Compact the pavement uniformly to contain between 3.8% and 8.5% in-place air voids. Take immediate corrective action to bring the operation within 3.8% and 8.5% when the in-place air voids exceed the range of these tolerances. The Engineer will allow paving to resume when the proposed corrective action is likely to yield between 3.8% and 8.5% in-place air voids.

Obtain cores in areas placed under Exempt Production, as directed, at locations determined by the Engineer. The Engineer may test these cores and suspend operations or require removal and replacement if the in-place air voids are less than 2.7% or more than 9.9%. Areas defined in Section 3076.4.9.3.1.4., "Miscellaneous Areas," are not subject to in-place air void determination.

Furnish the type, size, and number of rollers required for compaction as approved. Use additional rollers as required to remove any roller marks. Use only water or an approved release agent on rollers, tamps, and other compaction equipment unless otherwise directed.

Use the control strip method shown in [Tex-207-F](#), Part IV, on the first day of production to establish the rolling pattern that will produce the desired in-place air voids unless otherwise directed.

Use tamps to thoroughly compact the edges of the pavement along curbs, headers, and similar structures and in locations that will not allow thorough compaction with rollers. The Engineer may require rolling with a trench roller on widened areas, in trenches, and in other limited areas.

Complete all compaction operations before the pavement temperature drops below 160°F unless otherwise allowed. The Engineer may allow compaction with a light finish roller operated in static mode for pavement temperatures below 160°F.

Allow the compacted pavement to cool to 160°F or lower before opening to traffic unless otherwise directed. Sprinkle the finished mat with water or limewater, when directed, to expedite opening the roadway to traffic.

4.9. **Acceptance Plan.** Payment adjustments for the material will be in accordance with Article 3076.6., "Payment."

Sample and test the hot-mix on a lot and subplot basis. Suspend production until test results or other information indicates to the satisfaction of the Engineer that the next material produced or placed will result in payment factors of at least 1.000, if the production payment factor given in Section 3076.6.1., "Production Payment Adjustment Factors," for two consecutive lots or the placement pay factor given in Section 3076.6.2., "Placement Payment Adjustment Factors," for two consecutive lots is below 1.000.

4.9.1. **Referee Testing.** The Materials and Tests Division is the referee laboratory. The Contractor may request referee testing if a "remove and replace" condition is determined based on the Engineer's test results, or if the differences between Contractor and Engineer test results exceed the maximum allowable difference shown in Table 11 and the differences cannot be resolved. The Contractor may also request referee testing if the Engineer's test results require suspension of production and the Contractor's test results are within specification limits. Make the request within five working days after receiving test results and cores from the Engineer. Referee tests will be performed only on the subplot in question and only for the particular tests in question. Allow 10 working days from the time the referee laboratory receives the samples for test results to

be reported. The Department may require the Contractor to reimburse the Department for referee tests if more than three referee tests per project are required and the Engineer's test results are closer to the referee test results than the Contractor's test results.

The Materials and Tests Division will determine the laboratory-molded density based on the molded specific gravity and the maximum theoretical specific gravity of the referee sample. The in-place air voids will be determined based on the bulk specific gravity of the cores, as determined by the referee laboratory and the Engineer's average maximum theoretical specific gravity for the lot. With the exception of "remove and replace" conditions, referee test results are final and will establish payment adjustment factors for the subplot in question. The Contractor may decline referee testing and accept the Engineer's test results when the placement payment adjustment factor for any subplot results in a "remove and replace" condition. Placement sublots subject to be removed and replaced will be further evaluated in accordance with Section 3076.6.2.2., "Placement Sublots Subject to Removal and Replacement."

4.9.2. **Production Acceptance.**

4.9.2.1. **Production Lot.** A production lot consists of four equal sublots. The default quantity for Lot 1 is 1,000 tons; however, when requested by the Contractor, the Engineer may increase the quantity for Lot 1 to no more than 4,000 tons. The Engineer will select subsequent lot sizes based on the anticipated daily production such that approximately three to four sublots are produced each day. The lot size will be between 1,000 tons and 4,000 tons. The Engineer may change the lot size before the Contractor begins any lot.

If the optimum asphalt binder content for JMF2 is more than 0.5% lower than the optimum asphalt binder content for JMF1, the Engineer may perform or require the Contractor to perform [Tex-226-F](#) on Lot 1 to confirm the indirect tensile strength does not exceed 200 psi. Take corrective action to bring the mixture within specification compliance if the indirect tensile strength exceeds 200 psi unless otherwise directed.

4.9.2.1.1. **Incomplete Production Lots.** If a lot is begun but cannot be completed, such as on the last day of production or in other circumstances deemed appropriate, the Engineer may close the lot. Adjust the payment for the incomplete lot in accordance with Section 3076.6.1., "Production Payment Adjustment Factors." Close all lots within five working days unless otherwise allowed.

4.9.2.2. **Production Sampling.**

4.9.2.2.1. **Mixture Sampling.** Obtain hot-mix samples from trucks at the plant in accordance with [Tex-222-F](#). The sampler will split each sample into three equal portions in accordance with [Tex-200-F](#) and label these portions as "Contractor," "Engineer," and "Referee." The Engineer will perform or witness the sample splitting and take immediate possession of the samples labeled "Engineer" and "Referee." The Engineer will maintain the custody of the samples labeled "Engineer" and "Referee" until the Department's testing is completed.

4.9.2.2.1.1. **Random Sample.** At the beginning of the project, the Engineer will select random numbers for all production sublots. Determine sample locations in accordance with [Tex-225-F](#). Take one sample for each subplot at the randomly selected location. The Engineer will perform or witness the sampling of production sublots.

4.9.2.2.1.2. **Blind Sample.** For one subplot per lot, the Engineer will obtain and test a "blind" sample instead of the random sample collected by the Contractor. Test either the "blind" or the random sample; however, referee testing (if applicable) will be based on a comparison of results from the "blind" sample. The location of the Engineer's "blind" sample will not be disclosed to the Contractor. The Engineer's "blind" sample may be randomly selected in accordance with [Tex-225-F](#) for any subplot or selected at the discretion of the Engineer. The Engineer will use the Contractor's split sample for sublots not sampled by the Engineer.

4.9.2.2.2. **Informational Shear Bond Strength Testing.** Select one random subplot from Lot 2 or higher for shear bond strength testing. Obtain full depth cores in accordance with [Tex-249-F](#). Label the cores with the Control Section Job (CSJ), producer of the tack coat, mix type, shot rate, lot, and subplot number and provide to the

Engineer. The Engineer will ship the cores to the Materials and Tests Division or district laboratory for shear bond strength testing. Results from these tests will not be used for specification compliance.

- 4.9.2.2.3. **Asphalt Binder Sampling.** Obtain a 1-qt. sample of the asphalt binder witnessed by the Engineer for each lot of mixture produced. The Contractor will notify the Engineer when the sampling will occur. Obtain the sample at approximately the same time the mixture random sample is obtained. Sample from a port located immediately upstream from the mixing drum or pug mill and upstream from the introduction of any additives in accordance with [Tex-500-C](#), Part II. Label the can with the corresponding lot and subplot numbers, producer, producer facility location, grade, district, date sampled, and project information including highway and CSJ. The Engineer will retain these samples for one year. The Engineer may also obtain independent samples. If obtaining an independent asphalt binder sample and upon request of the Contractor, the Engineer will split a sample of the asphalt binder with the Contractor.

At least once per project, the Engineer will collect split samples of each binder grade and source used. The Engineer will submit one split sample to MTD to verify compliance with Item 300, "Asphalts, Oils, and Emulsions" and will retain the other split sample for one year.

- 4.9.2.3. **Production Testing.** The Contractor and Engineer must perform production tests in accordance with Table 16. The Contractor has the option to verify the Engineer's test results on split samples provided by the Engineer. Determine compliance with operational tolerances listed in Table 11 for all sublots.

Take immediate corrective action if the Engineer's laboratory-molded density on any subplot is less than 95.0% or greater than 97.0% to bring the mixture within these tolerances. The Engineer may suspend operations if the Contractor's corrective actions do not produce acceptable results. The Engineer will allow production to resume when the proposed corrective action is likely to yield acceptable results.

The Engineer may allow alternate methods for determining the asphalt binder content and aggregate gradation if the aggregate mineralogy is such that [Tex-236-F](#), Part I does not yield reliable results. Provide evidence that results from [Tex-236-F](#), Part I are not reliable before requesting permission to use an alternate method unless otherwise directed. Use the applicable test procedure as directed if an alternate test method is allowed.

Table 16
Production and Placement Testing Frequency

Description	Test Method	Minimum Contractor Testing Frequency	Minimum Engineer Testing Frequency
Individual % retained for #8 sieve and larger	Tex-200-F or Tex-236-F	1 per subplot	1 per 12 sublots ¹
Individual % retained for sieves smaller than #8 and larger than #200			
% passing the #200 sieve			
Laboratory-molded density	Tex-207-F	N/A	1 per subplot ¹
Laboratory-molded bulk specific gravity			
In-place air voids			
VMA	Tex-204-F	1 per subplot	1 per project
Segregation (density profile) ²	Tex-207-F , Part V		
Longitudinal joint density	Tex-207-F , Part VII	When directed	1 per subplot ¹
Moisture content	Tex-212-F , Part II	N/A	
Theoretical maximum specific (Rice) gravity	Tex-227-F	1 per subplot	1 per lot ¹
Asphalt binder content	Tex-236-F	N/A	1 per project
Hamburg Wheel test	Tex-242-F	N/A	
Recycled Asphalt Shingles (RAS) ³	Tex-217-F , Part III	1 per subplot	
Thermal profile ²	Tex-244-F	1 per lot (sample only) ⁴	
Asphalt binder sampling and testing	Tex-500-C , Part II	N/A	
Tack coat sampling and testing	Tex-500-C , Part III	1 per lot	
Boil test ⁵	Tex-530-C	1 per project (sample only)	
Shear Bond Strength Test ⁶	Tex-249-F		

1. For production defined in Section 3076.4.9.4., "Exempt Production," the Engineer will test one per day if 100 tons or more are produced. For Exempt Production, no testing is required when less than 100 tons are produced.
2. Not required when a thermal imaging system is used.
3. Testing performed by the Materials and Tests Division or designated laboratory.
4. Obtain witnessed by the Engineer. The Engineer will retain these samples for one year.
5. The Engineer may reduce or waive the sampling and testing requirements based on a satisfactory test history.
6. Testing performed by the Materials and Tests Division or District for informational purposes only.

4.9.2.4. **Operational Tolerances.** Control the production process within the operational tolerances listed in Table 11. When production is suspended, the Engineer will allow production to resume when test results or other information indicates the next mixture produced will be within the operational tolerances.

4.9.2.4.1. **Gradation.** Suspend operation and take corrective action if any aggregate is retained on the maximum sieve size shown in Table 8. A subplot is defined as out of tolerance if either the Engineer's or the Contractor's test results are out of operational tolerance. Suspend production when test results for gradation exceed the operational tolerances in Table 11 for three consecutive sublots on the same sieve or four consecutive sublots on any sieve unless otherwise directed. The consecutive sublots may be from more than one lot.

4.9.2.4.2. **Asphalt Binder Content.** A subplot is defined as out of operational tolerance if either the Engineer's or the Contractor's test results exceed the values listed in Table 11. No production or placement payment adjustments greater than 1.000 will be paid for any subplot that is out of operational tolerance for asphalt binder content. Suspend production and shipment of the mixture if the Engineer's or the Contractor's asphalt binder content deviates from the current JMF by more than 0.5% for any subplot.

4.9.2.4.3. **Voids in Mineral Aggregates (VMA).** The Engineer will determine the VMA for every subplot. For sublots when the Engineer does not determine asphalt binder content, the Engineer will use the asphalt binder content results from QC testing performed by the Contractor to determine VMA.

Take immediate corrective action if the VMA value for any subplot is less than the minimum VMA requirement for production listed in Table 8. Suspend production and shipment of the mixture if the Engineer's VMA results on two consecutive sublots are below the minimum VMA requirement for production listed in Table 8. No production or placement payment adjustments greater than 1.000 will be paid for any subplot that does not

meet the minimum VMA requirement for production listed in Table 8 based on the Engineer's VMA determination.

Suspend production and shipment of the mixture if the Engineer's VMA result is more than 0.5% below the minimum VMA requirement for production listed in Table 8. In addition to suspending production, the Engineer may require removal and replacement or may allow the subplot to be left in place without payment.

- 4.9.2.4.4. **Hamburg Wheel Test.** The Engineer may perform a Hamburg Wheel test at any time during production, including when the boil test indicates a change in quality from the materials submitted for JMF1. In addition to testing production samples, the Engineer may obtain cores and perform Hamburg Wheel tests on any areas of the roadway where rutting is observed. Suspend production until further Hamburg Wheel tests meet the specified values when the production or core samples fail the Hamburg Wheel test criteria in Table 10. Core samples, if taken, will be obtained from the center of the finished mat or other areas excluding the vehicle wheel paths. The Engineer may require up to the entire subplot of any mixture failing the Hamburg Wheel test to be removed and replaced at the Contractor's expense.

If the Department's or Department approved laboratory's Hamburg Wheel test results in a "remove and replace" condition, the Contractor may request that the Department confirm the results by re-testing the failing material. The Materials and Tests Division will perform the Hamburg Wheel tests and determine the final disposition of the material in question based on the Department's test results.

- 4.9.2.5. **Individual Loads of Hot-Mix.** The Engineer can reject individual truckloads of hot-mix. When a load of hot-mix is rejected for reasons other than temperature, contamination, or excessive uncoated particles, the Contractor may request that the rejected load be tested. Make this request within 4 hr. of rejection. The Engineer will sample and test the mixture. If test results are within the operational tolerances shown in Table 11, payment will be made for the load. If test results are not within operational tolerances, no payment will be made for the load.

4.9.3. **Placement Acceptance.**

- 4.9.3.1. **Placement Lot.** A placement lot consists of four placement sublots. A placement subplot consists of the area placed during a production subplot.

- 4.9.3.1.1. **Lot 1 Placement.** Placement payment adjustments greater than 1.000 for Lot 1 will be in accordance with Section 3076.6.2., "Placement Payment Adjustment Factors"; however, no placement adjustment less than 1.000 will be assessed for any subplot placed in Lot 1 when the in-place air voids are greater than or equal to 2.7% and less than or equal to 9.9%. Remove and replace any subplot with in-place air voids less than 2.7% or greater than 9.9%.

- 4.9.3.1.2. **Incomplete Placement Lots.** An incomplete placement lot consists of the area placed as described in Section 3076.4.9.2.1.1., "Incomplete Production Lots," excluding areas defined in Section 3076.4.9.3.1.4., "Miscellaneous Areas." Placement sampling is required if the random sample plan for production resulted in a sample being obtained from an incomplete production subplot.

- 4.9.3.1.3. **Shoulders, Ramps, Etc.** Shoulders, ramps, intersections, acceleration lanes, deceleration lanes, and turn lanes are subject to in-place air void determination and payment adjustments unless designated on the plans as not eligible for in-place air void determination. Intersections may be considered miscellaneous areas when determined by the Engineer.

- 4.9.3.1.4. **Miscellaneous Areas.** Miscellaneous areas include areas that typically involve significant handwork or discontinuous paving operations, such as temporary detours, driveways, mailbox turnouts, crossovers, gores, spot level-up areas, and other similar areas. Temporary detours are subject to in-place air void determination when shown on the plans. Miscellaneous areas also include level-ups and thin overlays when the layer thickness specified on the plans is less than the minimum untrimmed core height eligible for testing shown in Table 13. The specified layer thickness is based on the rate of 110 lb./sq. yd. for each inch of

pavement unless another rate is shown on the plans. When “level up” is listed as part of the item bid description code, a payment adjustment factor of 1.000 will be assigned for all placement sublots as described in Article 3076.6, “Payment.” Miscellaneous areas are not eligible for random placement sampling locations. Compact miscellaneous areas in accordance with Section 3076.4.8., “Compaction.” Miscellaneous areas are not subject to in-place air void determination, thermal profiles testing, segregation (density profiles), or longitudinal joint density evaluations.

4.9.3.2.

Placement Sampling. The Engineer will select random numbers for all placement sublots at the beginning of the project. The Engineer will provide the Contractor with the placement random numbers immediately after the subplot is completed. Mark the roadway location at the completion of each subplot and record the station number. Determine one random sample location for each placement subplot in accordance with [Tex-225-F](#). Adjust the random sample location by no more than necessary to achieve a 2-ft. clearance if the location is within 2 ft. of a joint or pavement edge.

Shoulders, ramps, intersections, acceleration lanes, deceleration lanes, and turn lanes are always eligible for selection as a random sample location; however, if a random sample location falls on one of these areas and the area is designated on the plans as not subject to in-place air void determination, cores will not be taken for the subplot and a 1.000 pay factor will be assigned to that subplot.

Provide the equipment and means to obtain and trim roadway cores on site. On-site is defined as in close proximity to where the cores are taken. Obtain the cores within one working day of the time the placement subplot is completed unless otherwise approved. Obtain two 6-in. diameter cores side-by-side from within 1 ft. of the random location provided for the placement subplot. For Type D and Type F mixtures, 4-in. diameter cores are allowed. Mark the cores for identification, measure and record the untrimmed core height, and provide the information to the Engineer. The Engineer will witness the coring operation and measurement of the core thickness. Visually inspect each core and verify that the current paving layer is bonded to the underlying layer. Take corrective action if an adequate bond does not exist between the current and underlying layer to ensure that an adequate bond will be achieved during subsequent placement operations.

Trim the cores immediately after obtaining the cores from the roadway in accordance with [Tex-251-F](#) if the core heights meet the minimum untrimmed value listed in Table 13. Trim the cores on site in the presence of the Engineer. Use a permanent marker or paint pen to record the lot and subplot numbers on each core as well as the designation as Core A or B. The Engineer may require additional information to be marked on the core and may choose to sign or initial the core. The Engineer will take custody of the cores immediately after witnessing the trimming of the cores and will retain custody of the cores until the Department’s testing is completed. Before turning the trimmed cores over to the Engineer, the Contractor may wrap the trimmed cores or secure them in a manner that will reduce the risk of possible damage occurring during transport by the Engineer. After testing, the Engineer will return the cores to the Contractor.

The Engineer may have the cores transported back to the Department’s laboratory at the HMA plant via the Contractor’s haul truck or other designated vehicle. In such cases where the cores will be out of the Engineer’s possession during transport, the Engineer will use Department-provided security bags and the Roadway Core Custody protocol located at <http://www.txdot.gov/business/specifications.htm> to provide a secure means and process that protects the integrity of the cores during transport.

Decide whether to include the pair of cores in the air void determination for that subplot if the core height before trimming is less than the minimum untrimmed value shown in Table 13. Trim the cores as described above before delivering to the Engineer if electing to have the cores included in the air void determination. Deliver untrimmed cores to the Engineer and inform the Engineer of the decision to not have the cores included in air void determination if electing to not have the cores included in air void determination. The placement pay factor for the subplot will be 1.000 if cores will not be included in air void determination.

Instead of the Contractor trimming the cores on site immediately after coring, the Engineer and the Contractor may mutually agree to have the trimming operations performed at an alternate location such as a field laboratory or other similar location. In such cases, the Engineer will take possession of the cores

immediately after they are obtained from the roadway and will retain custody of the cores until testing is completed. Either the Department or Contractor representative may perform trimming of the cores. The Engineer will witness all trimming operations in cases where the Contractor representative performs the trimming operation.

Dry the core holes and tack the sides and bottom immediately after obtaining the cores. Fill the hole with the same type of mixture and properly compact the mixture. Repair core holes with other methods when approved.

4.9.3.3. **Placement Testing.** Perform placement tests in accordance with Table 16. After the Engineer returns the cores, the Contractor may test the cores to verify the Engineer's test results for in-place air voids. The allowable differences between the Contractor's and Engineer's test results are listed in Table 11.

4.9.3.3.1. **In-Place Air Voids.** The Engineer will measure in-place air voids in accordance with [Tex-207-F](#) and [Tex-227-F](#). Before drying to a constant weight, cores may be pre-dried using a CoreDry or similar vacuum device to remove excess moisture. The Engineer will average the values obtained for all sublots in the production lot to determine the theoretical maximum specific gravity. The Engineer will use the average air void content for in-place air voids.

The Engineer will use the vacuum method to seal the core if required by [Tex-207-F](#). The Engineer will use the test results from the unsealed core to determine the placement payment adjustment factor if the sealed core yields a higher specific gravity than the unsealed core. After determining the in-place air void content, the Engineer will return the cores and provide test results to the Contractor.

4.9.3.3.2. **Segregation (Density Profile).** Test for segregation using density profiles in accordance with [Tex-207-F](#), Part V when using a thermal camera instead of the thermal imaging system. Density profiles are not required and are not applicable when using a thermal imaging system. Density profiles are not applicable in areas described in Section 3076.4.9.3.1.4., "Miscellaneous Areas."

Perform a minimum of one density profile per subplot. Perform additional density profiles when any of the following conditions occur, unless otherwise approved:

- the paver stops due to lack of material being delivered to the paving operations and the temperature of the uncompacted mat before the initial break down rolling is less than the temperatures shown in Table 17;
- areas that are identified by either the Contractor or the Engineer with thermal segregation,;
- any visibly segregated areas that exist.

Table 17
Minimum Uncompacted Mat Temperature Requiring a Segregation Profile

High-Temperature Binder Grade ¹	Minimum Temperature of the Uncompacted Mat Allowed Before Initial Break Down Rolling ^{2,3,4}
PG 64	<250°F
PG 70	<260°F
PG 76	<270°F

1. The high-temperature binder grade refers to the high-temperature grade of the virgin asphalt binder used to produce the mixture.
2. Segregation profiles are required in areas with moderate and severe thermal segregation as described in Section 3076.4.7.3.1.3.
3. Minimum uncompacted mat temperature requiring a segregation profile may be reduced 10°F if using a chemical WMA additive as a compaction aid.
4. When using WMA, the minimum uncompacted mat temperature requiring a segregation profile is 215°F.

Provide the Engineer with the density profile of every subplot in the lot within one working day of the completion of each lot. Report the results of each density profile in accordance with Section 3076.4.2., "Reporting and Responsibilities."

The density profile is considered failing if it exceeds the tolerances in Table 18. No production or placement payment adjustments greater than 1.000 will be paid for any subplot that contains a failing density profile. When a hand-held thermal camera is used instead of a thermal imaging system, the Engineer will measure the density profile at least once per project. The Engineer's density profile results will be used when available. The Engineer may require the Contractor to remove and replace the area in question if the area fails the density profile and has surface irregularities as defined in Section 3076.4.9.3.3.5., "Irregularities." The subplot in question may receive a production and placement payment adjustment greater than 1.000, if applicable, when the defective material is successfully removed and replaced.

Investigate density profile failures and take corrective actions during production and placement to eliminate the segregation. Suspend production if 2 consecutive density profiles fail unless otherwise approved. Resume production after the Engineer approves changes to production or placement methods.

Table 18
Segregation (Density Profile) Acceptance Criteria

Mixture Type	Maximum Allowable Density Range (Highest to Lowest)	Maximum Allowable Density Range (Average to Lowest)
Type B	8.0 pcf	5.0 pcf
Type C, Type D & Type F	6.0 pcf	3.0 pcf

4.9.3.3.3. Longitudinal Joint Density.

4.9.3.3.3.1. **Informational Tests.** Perform joint density evaluations while establishing the rolling pattern and verify that the joint density is no more than 3.0 pcf below the density taken at or near the center of the mat. Adjust the rolling pattern, if needed, to achieve the desired joint density. Perform additional joint density evaluations, at least once per subplot, unless otherwise directed.

4.9.3.3.3.2. **Record Tests.** Perform a joint density evaluation for each subplot at each pavement edge that is or will become a longitudinal joint. Joint density evaluations are not applicable in areas described in Section 3076.4.9.3.1.4., "Miscellaneous Areas." Determine the joint density in accordance with [Tex-207-F](#), Part VII. Record the joint density information and submit results on Department forms to the Engineer. The evaluation is considered failing if the joint density is more than 3.0 pcf below the density taken at the core random sample location and the correlated joint density is less than 90.0%. The Engineer will make independent joint density verification at least once per project and may make independent joint density verifications at the random sample locations. The Engineer's joint density test results will be used when available.

Provide the Engineer with the joint density of every subplot in the lot within one working day of the completion of each lot. Report the results of each joint density in accordance with Section 3076.4.2., "Reporting and Responsibilities."

Investigate joint density failures and take corrective actions during production and placement to improve the joint density. Suspend production if the evaluations on two consecutive sublots fail unless otherwise approved. Resume production after the Engineer approves changes to production or placement methods.

4.9.3.3.4. **Recovered Asphalt Dynamic Shear Rheometer (DSR).** The Engineer may take production samples or cores from suspect areas of the project to determine recovered asphalt properties. Asphalt binders with an aging ratio greater than 3.5 do not meet the requirements for recovered asphalt properties and may be deemed defective when tested and evaluated by the Materials and Tests Division. The aging ratio is the DSR value of the extracted binder divided by the DSR value of the original unaged binder. Obtain DSR values in accordance with AASHTO T 315 at the specified high temperature performance grade of the asphalt. The Engineer may require removal and replacement of the defective material at the Contractor's expense. The asphalt binder will be recovered for testing from production samples or cores in accordance with [Tex-211-F](#).

4.9.3.3.5. **Irregularities.** Identify and correct irregularities including segregation, rutting, raveling, flushing, fat spots, mat slippage, irregular color, irregular texture, roller marks, tears, gouges, streaks, uncoated aggregate particles, or broken aggregate particles. The Engineer may also identify irregularities, and in such cases, the Engineer will promptly notify the Contractor. If the Engineer determines that the irregularity will adversely affect pavement performance, the Engineer may require the Contractor to remove and replace (at the Contractor's expense) areas of the pavement that contain irregularities. The Engineer may also require the Contractor to remove and replace (at the Contractor's expense) areas where the mixture does not bond to the existing pavement.

If irregularities are detected, the Engineer may require the Contractor to immediately suspend operations or may allow the Contractor to continue operations for no more than one day while the Contractor is taking appropriate corrective action.

4.9.4. **Exempt Production.** The Engineer may deem the mixture as exempt production for the following conditions:

- anticipated daily production is less than 500 tons;
- total production for the project is less than 5,000 tons;
- when mutually agreed between the Engineer and the Contractor; or
- when shown on the plans.

For exempt production, the Contractor is relieved of all production and placement sampling and testing requirements, except for coring operations when required by the Engineer. The production and placement pay factors are 1.000 if the specification requirements listed below are met, all other specification requirements are met, and the Engineer performs acceptance tests for production and placement listed in Table 16 when 100 tons or more per day are produced.

- produce, haul, place, and compact the mixture in compliance with the specification and as directed;
- control mixture production to yield a laboratory-molded density that is within $\pm 1.0\%$ of the target laboratory-molded density as tested by the Engineer;
- compact the mixture in accordance with Section 3076.4.8., "Compaction;" and
- when a thermal imaging system is not used, the Engineer may perform segregation (density profiles) and thermal profiles in accordance with the specification.

4.9.5. **Ride Quality.** Measure ride quality in accordance with Item 585, "Ride Quality for Pavement Surfaces," unless otherwise shown on the plans.

5. MEASUREMENT

- 5.1. **Dense Graded Hot-Mix Asphalt.** Hot mix will be measured by the ton of composite hot-mix, which includes asphalt, aggregate, and additives. Measure the weight on scales in accordance with Item 520, "Weighing and Measuring Equipment."
- 5.2. **Tack Coat.** Tack coat will be measured at the applied temperature by strapping the tank before and after road application and determining the net volume in gallons from the calibrated distributor. The Engineer will witness all strapping operations for volume determination. All tack, including emulsions, will be measured by the gallon applied.

The Engineer may allow the use of a metering device to determine asphalt volume used and application rate if the device is accurate within 1.5% of the strapped volume.

6. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under Section 3076.5.1, "Measurement," will be paid for at the unit bid price for "Dense Graded Hot-Mix Asphalt" of the mixture type, SAC, and binder specified. These prices are full compensation for surface preparation, materials, placement, equipment, labor, tools, and incidentals.

The work performed and materials furnished in accordance with this Item and measured as provided under Article 3076.5.2, "Measurement," will be paid for at the unit bid price for "Tack Coat" of the tack coat provided. These prices are full compensation for materials, placement, equipment, labor, tools, and incidentals. Payment adjustments will be applied as determined in this Item; however, a payment adjustment factor of 1.000 will be assigned for all placement sublots for "level ups" only when "level up" is listed as part of the item bid description code. A payment adjustment factor of 1.000 will be assigned to all production and placement sublots when "exempt" is listed as part of the item bid description code, and all testing requirements are met.

Payment for each subplot, including applicable payment adjustments greater than 1.000, will only be paid for sublots when the Contractor supplies the Engineer with the required documentation for production and placement QC/QA, thermal profiles, segregation density profiles, and longitudinal joint densities in accordance with Section 3076.4.2., "Reporting and Responsibilities." When a thermal imaging system is used, documentation is not required for thermal profiles or segregation density profiles on individual sublots; however, the thermal imaging system automated reports described in [Tex-244-F](#) are required.

Trial batches will not be paid for unless they are included in pavement work approved by the Department.

Payment adjustment for ride quality will be determined in accordance with Item 585, "Ride Quality for Pavement Surfaces."

- 6.1. **Production Payment Adjustment Factors.** The production payment adjustment factor is based on the laboratory-molded density using the Engineer's test results. The bulk specific gravities of the samples from each subplot will be divided by the Engineer's maximum theoretical specific gravity for the subplot. The individual sample densities for the subplot will be averaged to determine the production payment adjustment factor in accordance with Table 19 for each subplot, using the deviation from the target laboratory-molded density defined in Table 9. The production payment adjustment factor for completed lots will be the average of the payment adjustment factors for the four sublots sampled within that lot.

Table 19
Production Payment Adjustment Factors for Laboratory-Molded Density¹

Absolute Deviation from Target Laboratory-Molded Density	Production Payment Adjustment Factor (Target Laboratory-Molded Density)
0.0	1.050
0.1	1.050
0.2	1.050
0.3	1.044
0.4	1.038
0.5	1.031
0.6	1.025
0.7	1.019
0.8	1.013
0.9	1.006
1.0	1.000
1.1	0.965
1.2	0.930
1.3	0.895
1.4	0.860
1.5	0.825
1.6	0.790
1.7	0.755
1.8	0.720
> 1.8	Remove and replace

1. If the Engineer's laboratory-molded density on any subplot is less than 95.0% or greater than 98.0%, take immediate corrective action to bring the mixture within these tolerances. The Engineer may suspend operations if the Contractor's corrective actions do not produce acceptable results. The Engineer will allow production to resume when the proposed corrective action is likely to yield acceptable results.

6.1.1. **Payment for Incomplete Production Lots.** Production payment adjustments for incomplete lots, described under Section 3076.4.9.2.1.1., "Incomplete Production Lots," will be calculated using the average production payment factors from all sublots sampled.

A production payment factor of 1.000 will be assigned to any lot when the random sampling plan did not result in collection of any samples within the first subplot.

6.1.2. **Production Sublots Subject to Removal and Replacement.** If after referee testing, the laboratory-molded density for any subplot results in a "remove and replace" condition as listed in Table 19, the Engineer may require removal and replacement or may allow the subplot to be left in place without payment. The Engineer may also accept the subplot in accordance with Section 3076.5.3.1., "Acceptance of Defective or Unauthorized Work." Replacement material meeting the requirements of this Item will be paid for in accordance with this Section.

6.2. **Placement Payment Adjustment Factors.** The placement payment adjustment factor is based on in-place air voids using the Engineer's test results. The bulk specific gravities of the cores from each subplot will be divided by the Engineer's average maximum theoretical specific gravity for the lot. The individual core densities for the subplot will be averaged to determine the placement payment adjustment factor in accordance with Table 20 for each subplot that requires in-place air void measurement. A placement payment adjustment factor of 1.000 will be assigned to the entire subplot when the random sample location falls in an area designated on the plans as not subject to in-place air void determination. A placement payment adjustment factor of 1.000 will be assigned to quantities placed in areas described in Section 3076.4.9.3.1.4., "Miscellaneous Areas." The placement payment adjustment factor for completed lots will be the average of the placement payment adjustment factors for up to four sublots within that lot.

Table 20
Placement Payment Adjustment Factors for In-Place Air Voids

In-Place Air Voids	Placement Pay Adjustment Factor	In-Place Air Voids	Placement Pay Adjustment Factor
< 2.7	Remove and Replace	6.4	1.042
2.7	0.710	6.5	1.040
2.8	0.740	6.6	1.038
2.9	0.770	6.7	1.036
3.0	0.800	6.8	1.034
3.1	0.830	6.9	1.032
3.2	0.860	7.0	1.030
3.3	0.890	7.1	1.028
3.4	0.920	7.2	1.026
3.5	0.950	7.3	1.024
3.6	0.980	7.4	1.022
3.7	0.998	7.5	1.020
3.8	1.002	7.6	1.018
3.9	1.006	7.7	1.016
4.0	1.010	7.8	1.014
4.1	1.014	7.9	1.012
4.2	1.018	8.0	1.010
4.3	1.022	8.1	1.008
4.4	1.026	8.2	1.006
4.5	1.030	8.3	1.004
4.6	1.034	8.4	1.002
4.7	1.038	8.5	1.000
4.8	1.042	8.6	0.998
4.9	1.046	8.7	0.996
5.0	1.050	8.8	0.994
5.1	1.050	8.9	0.992
5.2	1.050	9.0	0.990
5.3	1.050	9.1	0.960
5.4	1.050	9.2	0.930
5.5	1.050	9.3	0.900
5.6	1.050	9.4	0.870
5.7	1.050	9.5	0.840
5.8	1.050	9.6	0.810
5.9	1.050	9.7	0.780
6.0	1.050	9.8	0.750
6.1	1.048	9.9	0.720
6.2	1.046	> 9.9	Remove and Replace
6.3	1.044		

6.2.1.

Payment for Incomplete Placement Lots. Payment adjustments for incomplete placement lots described under Section 3076.4.9.3.1.2., "Incomplete Placement Lots," will be calculated using the average of the placement payment factors from all sublots sampled and sublots where the random location falls in an area designated on the plans as not eligible for in-place air void determination.

If the random sampling plan results in production samples, but not in placement samples, the random core location and placement adjustment factor for the sublot will be determined by applying the placement random number to the length of the sublot placed.

If the random sampling plan results in placement samples, but not in production samples, no placement adjustment factor will apply for that sublot placed.

A placement payment adjustment factor of 1.000 will be assigned to any lot when the random sampling plan did not result in collection of any production samples.

- 6.2.2. **Placement Sublots Subject to Removal and Replacement.** If after referee testing, the placement payment adjustment factor for any subplot results in a “remove and replace” condition as listed in Table 20, the Engineer will choose the location of two cores to be taken within 3 ft. of the original failing core location. The Contractor will obtain the cores in the presence of the Engineer. The Engineer will take immediate possession of the untrimmed cores and submit the untrimmed cores to the Materials and Tests Division, where they will be trimmed if necessary and tested for bulk specific gravity within 10 working days of receipt.

The bulk specific gravity of the cores from each subplot will be divided by the Engineer’s average maximum theoretical specific gravity for the lot. The individual core densities for the subplot will be averaged to determine the new payment adjustment factor of the subplot in question. If the new payment adjustment factor is 0.700 or greater, the new payment adjustment factor will apply to that subplot. If the new payment adjustment factor is less than 0.700, no payment will be made for the subplot. Remove and replace the failing subplot, or the Engineer may allow the subplot to be left in place without payment. The Engineer may also accept the subplot in accordance with Section 3076.5.3.1., “Acceptance of Defective or Unauthorized Work.” Replacement material meeting the requirements of this Item will be paid for in accordance with this Section.

- 6.3. **Total Adjusted Pay Calculation.** Total adjusted pay (TAP) will be based on the applicable payment adjustment factors for production and placement for each lot.

$$TAP = (A+B)/2$$

where:

$A = \text{Bid price} \times \text{production lot quantity} \times \text{average payment adjustment factor for the production lot}$

$B = \text{Bid price} \times \text{placement lot quantity} \times \text{average payment adjustment factor for the placement lot} + (\text{bid price} \times \text{quantity placed in miscellaneous areas} \times 1.000)$

$\text{Production lot quantity} = \text{Quantity actually placed} - \text{quantity left in place without payment}$

$\text{Placement lot quantity} = \text{Quantity actually placed} - \text{quantity left in place without payment} - \text{quantity placed in miscellaneous areas}$

Special Specification 3084

Bonding Course

1. DESCRIPTION

Construct a bonding course where improved bonding is needed using a Tracking-Resistant Asphalt Interlayer (TRAIL) or a Spray Applied Underseal Membrane, applied before the placement of a new hot-mix asphalt concrete pavement.

2. MATERIALS

2.1. Furnish the materials for one of the following two options:

2.1.1. **TRAIL.** Furnish asphalt material described as “tack” for typical use in the TRAIL Material Producer List. Do not dilute emulsified asphalts at the terminal, in the field, or at any other location before use.

2.1.2. **Spray Applied Underseal Membrane.** Furnish asphalt material meeting the requirements of Special Specification 3002, “Spray Applied Underseal Membrane.” Do not dilute emulsified asphalts at the terminal, in the field, or at any other location before use.

2.2. Furnish the material for applying tack coat to all miscellaneous contact surfaces when approved by the Engineer:

2.2.1. **Miscellaneous Tack.** Furnish TRAIL asphalt, CSS-1H, SS-1H, or a PG binder with a minimum high-temperature of PG 58 for tack coat binder in accordance with Item 300, “Asphalts, Oils, and Emulsions.” Do not dilute emulsified asphalts at the terminal, in the field, or at any other location before use.

2.3. **Sampling.** The Engineer will witness the collection of at least one sample of each asphalt binder per project in accordance with Tex-500-C, Part III, and test it to verify compliance with Item 300, “Asphalts, Oils, and Emulsions” or Special Specification 3002, “Spray Applied Underseal Membrane.”

3. EQUIPMENT

3.1. **TRAIL.** Provide the equipment recommended by the producer.

3.2. **Spray Applied Underseal Membrane.** Provide in accordance with Special Specification 3002, “Spray Applied Underseal Membrane.”

4. CONSTRUCTION

4.1. **Preparation.** Remove existing raised pavement markers. Repair any damage incurred by removal as directed. Remove dirt, dust, or other harmful material before sealing. When shown on the plans, remove vegetation and blade pavement edges. When approved by the Engineer, apply a thin, uniform coating of Miscellaneous Tack to all miscellaneous contact surfaces such as curbs, structures, and manholes. Prevent splattering of the tack coat when placed adjacent to curb, gutter, and structures.

4.2. **Test Strips.** When required by the Engineer, perform a test strip of TRAIL at a location on or near the project as directed. Allow the strip to cure for a maximum of 30 min. Drive over the test strip with equipment used during laid-down construction to simulate the effect of paving equipment. There should be no evidence of tracking or picking up of the TRAIL material on the wheels of the equipment.

- 4.3. **TRAIL.** Perform the following construction methods when applying a TRAIL for a bonding course:
- 4.3.1. **Placement.** Uniformly apply the TRAIL material to all areas where mix will be placed, including joints, at the rate shown on the plans or as directed, within 15°F of the approved temperature, and not above the maximum allowable temperature. Unless otherwise directed, uniformly apply the TRAIL material at a minimum rate specified on the plans. The Engineer may adjust the application rate, taking into consideration the existing pavement surface conditions.
- 4.4. **Spray Applied Underseal Membrane.** Place in accordance with Special Specification 3002, "Spray Applied Underseal Membrane."
- 4.4.1. **Placement.** Do not allow any loose mixture onto the prepared surface before application of the membrane. Unless otherwise directed, uniformly apply the membrane to all areas where mix will be placed, including joints, at the rate shown on the plans. Unless otherwise directed, uniformly apply the membrane at the minimum rate specified on the plans. The Engineer may adjust the application rate, taking into consideration the existing pavement surface conditions.
- 4.5. **Informational Shear Test.** Obtain one set of full depth core specimens per project in accordance with Tex-249-F within one working day of the time the lot placement is completed. The Engineer will select the core locations. Provide the cores to the Engineer in a container labeled with the Control-Section-Job (CSJ) and lot number. The district will determine the shear bond strength between the two bonded pavement layers in accordance with Tex-249-F. Results from these tests will not be used for specification compliance.
- 4.6. **Quality Control.** Stop application if it is not uniform due to streaking, ridging, pooling, or flowing off the roadway surface. Verify equipment condition, operating procedures, application temperature, and material properties. Determine and correct the cause of non-uniform application.

The Engineer may perform independent tests to confirm contractor compliance and may require testing differences or failing results to be resolved before resuming production.

The Engineer may stop the application and require construction of test strips at the Contractor's expense if any of the following occurs:

- Non-uniformity of application continues after corrective action;
- Evidence of tracking or picking up of the TRAIL;
- In 3 consecutive shots, application rate differs by more than 0.02 gal. per square yard from the rate directed; or
- Any shot differs by more than 0.04 gal. per square yard from the rate directed.

The Engineer will approve the test strip location. The Engineer may require additional test strips until surface treatment application meets specification requirements.

5. MEASUREMENT

- 5.1. **Volume.** The asphalt material, including all components, will be measured at the applied temperature by strapping the tank before and after road application and determining the net volume from the calibrated distributor. The Engineer will witness all strapping operations for volume determination. All asphalt material, including emulsions, will be measured by the gallon applied.

The Engineer may allow the use of a metering device to determine the asphalt volume used and application rate if the device is accurate to within 1.5% of the strapped volume.

6. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit bid price for "Bonding Course." These prices are full compensation

for all materials, Miscellaneous Tack used for miscellaneous contact surfaces, equipment, labor, tools, and incidentals necessary to complete the work.

Special Specification 6001

Portable Changeable Message Sign



1. DESCRIPTION

Furnish, operate, and maintain portable trailer mounted changeable message sign (PCMS) units.

2. MATERIALS

Furnish new or used material in accordance with the requirements of this Item and the details shown on the plans. Provide a self-contained PCMS unit with the following:

- Sign controller
- Changeable Message Sign
- Trailer
- Power source

Paint the exterior surfaces of the power supply housing, supports, trailer, and sign with Federal Orange No. 22246 or Federal Yellow No. 13538 of Federal Standard 595C, except paint the sign face assembly flat black.

- 2.1. **Sign Controller.** Provide a controller with permanent storage of a minimum of 75 pre-programmed messages. Provide an external input device for random programming and storage of a minimum of 75 additional messages. Provide a controller capable of displaying up to 3 messages sequentially. Provide a controller with adjustable display rates. Enclose sign controller equipment in a lockable enclosure.
- 2.2. **Changeable Message Sign.** Provide a sign capable of being elevated to at least 7 ft. above the roadway surface from the bottom of the sign. Provide a sign capable of being rotated 360° and secured against movement in any position.
- Provide a sign with 3 separate lines of text and 8 characters per line minimum. Provide a minimum 18 in. character height. Provide a 5 × 7 character pixel matrix. Provide a message legibility distance of 600 ft. for nighttime conditions and 800 ft. for normal daylight conditions. Provide for manual and automatic dimming light sources.
- The following are descriptions for 3 screen types of PCMS:
- **Character Modular Matrix.** This screen type comprises of character blocks.
 - **Continuous Line Matrix.** This screen type uses proportionally spaced fonts for each line of text.
 - **Full Matrix.** This screen type uses proportionally spaced fonts, varies the height of characters, and displays simple graphics on the entire sign.
- 2.3. **Trailer.** Provide a 2 wheel trailer with square top fenders, 4 leveling jacks, and trailer lights. Do not exceed an overall trailer width of 96 in. Shock mount the electronics and sign assembly.
- 2.4. **Power Source.** Provide a diesel generator, solar powered power source, or both. Provide a backup power source as necessary.
- 2.5. **Cellular Telephone.** When shown on the plans, provide a cellular telephone connection to communicate with the PCMS unit remotely.

3. CONSTRUCTION

Place or relocate PCMS units as shown on the plans or as directed. The plans will show the number of PCMS units needed, for how many days, and for which construction phases.

Maintain the PCMS units in good working condition. Repair damaged or malfunctioning PCMS units as soon as possible. PCMS units will remain the property of the Contractor.

4. MEASUREMENT

This Item will be measured by each PCMS or by the day used. All PCMS units must be set up on a work area and operational before a calendar day can be considered measurable. When measurement by the day is specified, a day will be measured for each PCMS set up and operational on the worksite.

5. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Portable Changeable Message Sign." This price is full compensation for PCMS units; set up; relocating; removing; replacement parts; batteries (when required); fuel, oil, and oil filters (when required); cellular telephone charges (when required); software; and equipment, materials, tools, labor, and incidentals.

Special Specification 6185

Truck Mounted Attenuator (TMA) and Trailer Attenuator (TA)



1. DESCRIPTION

Furnish, operate, maintain and remove upon completion of work, Truck Mounted Attenuator (TMA) or Trailer Attenuator (TA).

2. MATERIALS

Furnish, operate and maintain new or used TMAs or TAs. Assure used attenuators are in good working condition and are approved for use. A list of approved TMA/TA units can be found in the Department's Compliant Work Zone Traffic Control Devices List. The host vehicle for the TMA and TA must weigh a minimum of 19,000 lbs. Host vehicles may be ballasted to achieve the required weight. Any weight added to the host vehicle must be properly attached or contained within it so that it does not present a hazard and that proper energy dissipation occurs if the attenuator is impacted from behind by a large truck. The weight of a TA will not be considered in the weight of the host vehicle but the weight of a TMA may be included in the weight of the host vehicle. Upon request, provide either a manufacturer's curb weight or a certified scales weight ticket to the Engineer.

3. CONSTRUCTION

Place or relocate TMA/TAs as shown on the plans or as directed. The plans will show the number of TMA/TAs needed, for how many days or hours, and for which construction phases.

Maintain the TMA/TAs in good working condition. Replace damaged TMA/TAs as soon as possible.

4. MEASUREMENT

4.1. **Truck Mounted Attenuator/Trailer Attenuator (Stationary).** This Item will be measured by the each or by the day. TMA/TAs must be set up in a work area and operational before a calendar day can be considered measurable. When measurement by the day is specified, a day will be measured for each TMA/TA set up and operational on the worksite.

4.2. **Truck Mounted Attenuator/Trailer Attenuator (Mobile Operation).** This Item will be measured by the hour. The time begins once the TMA/TA is ready for operation at the predetermined site and stops when notified by the Engineer. A minimum of 4 hr. will be paid each day for each operating TMA/TA used in a mobile operation.

5. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Truck Mounted Attenuators/Trailer Attenuators (Stationary)," or "Truck Mounted Attenuators/Trailer Attenuators (Mobile Operation)." This price is full compensation for furnishing TMA/TA: set up; relocating; removing; operating; fuel; and equipment, materials, tools, labor, and incidentals.



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

June 30, 2021
AGENDA ITEM #10

Legislative Update

Strategic Plan Relevance: Regional Mobility/Economic Vitality/ Sustainability
Department: Communications
Contact: Jori Liu, Acting Director of Communications
Associated Costs: N/A
Funding Source: N/A
Action Requested: Presentation

Description/Background: The 87th Legislature's regular session convened January 12, 2021 and closed on May 31, 2021. This presentation will provide a legislative recap and overview of the proposals, bills and issues that affected the Mobility Authority.

Backup provided: None



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

June 30, 2021
AGENDA ITEM #11

Executive Director Board Report

Strategic Plan Relevance: Regional Mobility
Department: Executive
Contact: James M. Bass, Executive Director
Associated Costs: N/A
Funding Source: N/A
Action Requested: Briefing and Board Discussion Only

Project Description/Background:

Executive Director's report on activities during his first month at the Mobility Authority.

Backup provided: None



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

June 30, 2021
AGENDA ITEM #12

Executive Session

Executive Session:

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



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

June 30, 2021
AGENDA ITEM #13

Executive Session

Executive Session:

Discuss legal issues relating to procurement and financing of Mobility Authority transportation projects, as authorized by §551.071 (Consultation with Attorney).



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

June 30, 2021
AGENDA ITEM #14

Executive Session

Executive Session:

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



CENTRAL TEXAS REGIONAL
MOBILITY AUTHORITY

June 30, 2021
AGENDA ITEM #15

Adjourn Meeting

Adjourn Board Meeting.