Control	**6408-34-001**
Project	**MMC - 640834001**
Highway	**IH0035W**
County	**TARRANT**

ADDENDUM ACKNOWLEDGMENT

Each bidder is required to acknowledge receipt of an addendum issued for a specific project. This page is provided for the purpose of acknowledging an addendum.

FAILURE TO ACKNOWLEDGE RECEIPT OF AN ADDENDUM WILL RESULT IN THE BID NOT BEING READ.

In order to properly acknowledge an addendum place a mark in the box next to the respective addendum.

ADDENDUM NO. 1 ☐

ADDENDUM NO. 2 ☐

ADDENDUM NO. 3 ☐

ADDENDUM NO. 4 ☐

ADDENDUM NO. 5 ☐

In addition, the bidder by affixing their signature to the signature page of the proposal is acknowledging that they have taken the addendum(s) into consideration when preparing their bid and that the information contained in the addendum will be included in the contract, if awarded by the Commission or other designees.

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Control	**6408-34-001**
Project	**MMC - 640834001**
Highway	**IH0035W**
County	**TARRANT**

PROPOSAL TO THE TEXAS TRANSPORTATION COMMISSION

2014 SPECIFICATIONS

WORK CONSISTING OF DENSE GRADED HOT MIX

TARRANT COUNTY, TEXAS

The quantities in the proposal are approximate. The quantities of work and materials may be increased or decreased as considered necessary to complete the work as planned and contemplated.

This project is to be completed in 120 calendar days and will be accepted when fully completed and finished to the satisfaction of the Executive Director or designee.

Provide a proposal guaranty in the form of a Cashier's Check, Teller's Check (including an Official Check) or Bank Money Order on a State or National Bank or Savings and Loan Association, or State or Federally chartered Credit Union made payable to the Texas Transportation Commission in the following amount:

TWENTY-SIX THOUSAND (Dollars) **($26,000)**

A bid bond may be used as the required proposal guaranty. The bond form may be detached from the proposal for completion. The proposal may not be disassembled to remove the bond form. The bond must be in accordance with Item 2 of the specifications.

Any addenda issued amending this proposal and/or the plans that have been acknowledged by the bidder, become part of this proposal.

By signing the proposal the bidder certifies:

1. the only persons or parties interested in this proposal are those named and the bidder has not directly or indirectly participated in collusion, entered into an agreement or otherwise taken any action in restraint of free competitive bidding in connection with the above captioned project.
2. in the event of the award of a contract, the organization represented will secure bonds for the full amount of the contract.
3. the signatory represents and warrants that they are an authorized signatory for the organization for which the bid is submitted and they have full and complete authority to submit this bid on behalf of their firm.
4. that the certifications and representations contained in the proposal are true and accurate and the bidder intends the proposal to be taken as a genuine government record.

- **Signed: ****

(1) _____ (2) _____ (3) _____

Print Name:

(1) _____ (2) _____ (3) _____

Title:

(1) _____ (2) _____ (3) _____

Company:

(1) _____ (2) _____ (3) _____

- Signatures to comply with Item 2 of the specifications.

**Note: Complete (1) for single venture, through (2) for joint venture and through (3) for triple venture.

*** When the calendar days field contains an asterisk (*) refer to the Special Provisions and General Notes.**

NOTICE TO CONTRACTORS

FOR THIS PROJECT THE AUDITED FINANCIAL PREQUALIFICATION REQUIREMENT IS WAIVED. ANY CONTRACTOR INTENDING TO BID ON THIS WORK MUST SUBMIT A COMPLETED "BIDDERS QUESTIONNAIRE", WITH ANY ADDITIONAL INFORMATION REQUESTED IN THAT FORM, AT LEAST TEN DAYS PRIOR TO THE LETTING DATE.

CONTRACTORS THAT ARE CURRENTLY PREQUALIFIED BASED ON AN AUDITED FINANCIAL STATEMENT DO NOT NEED TO SUBMIT A "BIDDERS QUESTIONAIRE" SINCE THE NECESSARY INFORMATION IS CONTAINED IN THE AUDITED PREQUALIFICATION DOCUMENTS.

UNIT PRICES MUST BE SUBMITTED IN ACCORDANCE WITH ITEM 2 OF THE STANDARD SPECIFICATIONS OR SPECIAL PROVISION TO ITEM 2 FOR EACH ITEM LISTED IN THIS PROPOSAL.

TEXAS DEPARTMENT OF TRANSPORTATION

BID BOND

KNOW ALL PERSONS BY THESE PRESENTS,

That we, (Contractor Name) _____

_____

Hereinafter called the Principal, and (Surety Name) _____

_____

a corporation or firm duly authorized to transact surety business in the State of Texas, hereinafter called the Surety, are held and firmly bound unto the Texas Department of Transportation, hereinafter called the Obligee, in the sum of not less than two percent (2%) of the department's engineer's estimate, rounded to the nearest one thousand dollars, not to exceed one hundred thousand dollars ($100,000) as a proposal guaranty (amount displayed on the cover of the proposal), the payment of which sum will and truly be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the principal has submitted a bid for the following project identified as:

Control	**6408-34-001**
Project	**MMC - 640834001**
Highway	**IH0035W**
County	**TARRANT**

NOW, THEREFORE, if the Obligee shall award the Contract to the Principal and the Principal shall enter into the Contract in writing with the Obligee in accordance with the terms of such bid, then this bond shall be null and void. If in the event of failure of the Principal to execute such Contract in accordance with the terms of such bid, this bond shall become the property of the Obligee, without recourse of the Principal and/or Surety, not as a penalty but as liquidated damages.

Signed this _____ Day of _____ 20_____

By: _____

(Contractor/Principal Name)

_____

(Signature and Title of Authorized Signatory for Contractor/Principal)

*By: _____

(Surety Name)

_____

(Signature of Attorney-in-Fact)

*Attach Power of attorney (Surety) for Attorney-in-Fact

Impressed Surety Seal Only

This form may be removed from the proposal.

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BIDDER'S CHECK RETURN

IMPORTANT

The space provided for the return address must be completed to facilitate the return of your bidder's check. Care must be taken to provide a legible, accurate, and complete return address, including zip code. A copy of this sheet should be used for each different return address.

NOTE

Successful bidders will receive their guaranty checks with the executed contract.

RETURN BIDDERS CHECK TO (PLEASE PRINT):

Control	**6408-34-001**
Project	**MMC - 640834001**
Highway	**IH0035W**
County	**TARRANT**

IMPORTANT

PLEASE RETURN THIS SHEET IN ITS ENTIRETY

Please acknowledge receipt of this check(s) at your earliest convenience by signing below in longhand, in ink, and returning this acknowledgement in the enclosed self addressed envelope.

Check Received By: _____ Date:_____

Title: _____

For (Contractor's Name): _____

Project _____ County_____

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NOTICE TO THE BIDDER

In the space provided below, please enter your total bid amount for this project. Only this figure will be read publicly by the Department at the public bid opening.

It is understood and agreed by the bidder in signing this proposal that the total bid amount entered below is not binding on either the bidder or the Department. It is further agreed that **the official total bid amount for this proposal will be determined by multiplying the unit bid prices for each pay item by the respective estimated quantities shown in this proposal and then totaling all of the extended amounts.**

$_____

Total Bid Amount

Control 0001-03-030
Project STP 2000(938)HES
Highway SH 20
County EL PASO

ALT	ITEM	DESC	SP	Bid Item Description	Unit	Quantity	Bid Price	Amount	Seq
	104	509		REMOV CONC (SDWLK)	SY	266.400	$10.000	$2,664.00	1

EXAMPLE

Total Bid Amount _____$2,664.00_____

Signed _____
Title _____
Date _____

Additional Signature for Joint Venture:

Signed _____
Title _____
Date _____

EXAMPLE OF BID PRICES SUBMITTED BY COMPUTER PRINTOUT

EXAMPLES

BID PRICES SUBMITTED BY HAND WRITTEN FORMAT

ALT	ITEM-CODE			UNIT BID PRICE ONLY WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC NO	S.P. NO.				
	190	026		RED OAK 1 1/2 - 1 3/4 GAL BB	EA	9.000	1
				EXAMPLE: One hundred fifty DLRS and No CENTS			

Unit price for each plant in place

	249	014		FLEX BASE(DEL)(DENSCOT)(TY A GR4 CL2)	TON	56,787.00	14
				EXAMPLE: Seven DLRS and Fifty three CENTS			

Unit price for each ton of Flexible Base

	430	001	001	CL A CONC FOR EXT STR (CULV)	CY	45.000	27
				EXAMPLE: Three hundred five DLRS and No CENTS			

Unit price for each cubic yard of Concrete

	610	007	001	RDWY ILL ASSEM(TY ST 50T-8-8)(.4 KW)S	EA	13.000	7
				EXAMPLE: Fourteen hundred sixteen DLRS and Thirty seven CENTS			

Unit price of each Roadway Illumination Assembly

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PROJECT MMC - 640834001
COUNTY TARRANT

Proposal Sheet
TxDOT
FORM 234-B I-61-5M

ALT	ITEM-CODE			UNIT BID PRICE ONLY. WRITTEN IN WORDS	UNIT	APPROX QUANTITIES	DEPT USE ONLY
	ITEM NO	DESC CODE	S.P. NO.				
	8011	6039		D-GR HMA(SQ) TY B SAC B PG64-22(PICKUP) DOLLARS and CENTS	TON	1,000.000	1
	8011	6040		D-GR HMA(SQ) TY C SAC A PG70-28(DEL) DOLLARS and CENTS	TON	10,000.000	2
	8019	6010		ASPHALTIC CONC PATCH MATERIAL (DEL) DOLLARS and CENTS	TON	200.000	3

CERTIFICATION OF INTEREST IN OTHER BID PROPOSALS FOR THIS WORK

By signing this proposal, the bidding firm and the signer certify that the following information, as indicated by checking “Yes” or “No” below, is true, accurate, and complete.

A. Quotation(s) have been issued in this firm's name to other firm(s) interested in this work for consideration for performing a portion of this work.

_____ YES

_____ NO

B. If this proposal is the low bid, the bidder agrees to provide the following information prior to award of the contract.

1. Identify firms which bid as a prime contractor and from which the bidder received quotations for work on this project.
2. Identify all the firms which bid as a prime contractor to which the bidder gave quotations for work on this project.

GENERAL NOTES:

General:

The purpose of this contract is to supply "**Dense Graded Hot Mix Asphalt and Asphaltic Con Patching Material**" to locations provided to the Contractor by Work Order

Provide and maintain a dedicated email address for receipt of work orders and correspondence throughout the term of this contract. Acknowledgement of emailed work order/callouts is required no more than 12 hr. from notification.

Contractor's attention is called to the fact that all Department property will be protected during all phases of the execution of the contract and any damages incurred due to Contractor's operation will be repaired and replaced at the Contractor's expense.

Each contract awarded by the Department stands on its own as such, is separate from other contracts. A Contractor awarded multiple contracts, must be capable and sufficiently staffed to concurrently process any or all contracts at the same time.

Prior to beginning operations, the Department will arrange a preconstruction meeting between representatives of the Department and the Contractor. In this meeting, the representatives from all parties will discuss the Contract, proposed procedures, and plans for performing the work while providing safe passage for traffic at all times. Specifications, unusual conditions, and other pertinent items regarding the work will also be discussed. Limit the use of the roadway for the hauling of material to legal loads. Keep the traveled surfaces used in hauling operations free of dirt or other materials.

Coordinate work through the Maintenance Section Supervisor or Representative:

North Tarrant	
508 Blue Mound Rd Saginaw, TX 76179 (817) 399-4350	2501 W. Euless Blvd, Euless, TX 76040 (817) 370-6901

Bids will be received at 6230 East Stassney Lane, Austin, TX 78744.

Contractor questions on this project are to be emailed to the following individual:

Area Engineer: Minh Tran Minh.Tran@txdot.gov
Asst. Area Engineer: James Bell James.Bell1@txdot.gov

All Contractor questions will be reviewed by the Engineer. Once a response is developed, it will be posted to TxDOT's Public FTP at the following address:

https://ftp.dot.state.tx.us/pub/txdot-info/Pre-Letting Responses/

All questions submitted that generate a response will be posted through this site. The site is organized by District, Project Type (Construction or Maintenance), Letting Date, CCSJ/Project Name.

Attention is directed to the possible presence of underground utilities owned by the Texas Department of Transportation (irrigation, signal, illumination and surveillance, communication, and control) on the right of way. Call TxDOT for locates at 817-370-6500, or the appropriate department of the local city or town a minimum of 48 hr. in advance of excavation.

If overhead or underground power lines need to be de-energized, contact the electrical service provider to perform this work. Cost associated with de-energizing the power lines or other protective measures required are at no expense to the Department.

If working near power lines, comply with the appropriate sections of Texas State Law and Federal Regulations relating to the type of work involved.

Item 2 – Instructions to Bidders:

This project includes plan sheets that are not part of the bid proposal.

Order plans from any Reproduction Company listed at:

http://www.dot.state.tx.us/business/contractors_consultants/repro_companies.htm

View or download plans at:

http://www.dot.state.tx.us/business/plansonline/plansonline.htm

Item 3 – Award and Execution of Contract:

This contract is non-site specific, only materials received delivered to the Delivery Sites within state right of way or state property specified in the plans will be paid.

Material will be made available for pickup or delivery, as indicated in the plans.

When material is specified to be picked up by TxDOT, material shall be made available within 48 hrs. or as directed in the Work Order.

When material is specified to be delivered, successfully deliver each Work Order within 3 calendar days upon notification, or as directed in the Work Order. Delivery hours will be stated in the Work Order. This contract may require work to be done at night between the hours of 9PM and 5AM.

Notify the Maintenance Section Supervisor 24 hours in advance prior to delivery.

Item 4 – Scope of Work:

This contract allows for two (2) 120-day extensions as allowed by Special Provision 004-004, provided both the Contractor and TxDOT agree.

Item 6 – Control of Materials:

Use materials from pre-qualified producers. A list of material producers pre-qualified by the Constriction Division (CST) of the Texas Department of Transportation (TxDOT) can be found at the following website:

https://www.txdot.gov/business/resources/producer-list.html

Item 7 – Legal Relations and Responsibilities:

Appropriate Personal Protective Equipment (PPE), including Department-approved safety hats and safety shirts, will be worn by all workers and visitors when:

Workers are outside of vehicles at all outdoor worksites. This includes those who occasionally visit worksites either on the highway surface or right of way.

Working in areas where there is danger of head injury from impact, from falling or flying objects, or from electrical shock or burns.

Non-compliance with this requirement will be grounds of suspension of work.

All work on this contract will be scheduled and directed by the Maintenance Section Supervisor.

Any hazardous spills or releases of this material on TxDOT property will be promptly cleaned and remediated at Contractor's expense, including cost of spilled material.

Item 8 – Prosecution and Progress:

Working days will be charged in accordance with Section 8.3.1.5., "Calendar Day".

Unless otherwise directed, prosecute the work continuously to completion of the Callout Work Request.

This contract may require work to be done at night between the hours of 9PM and 5AM.

Item 9 – Measurement and Payment:

Units delivered in volume and weight measurements will be in accordance with Article 9.1, "Measurement of Quantities". Furnish the tare and maximum gross weights as well as the volume capacity of all vehicles, trucks, truck-tractors, trailers, semi-trailers or combination of such vehicles to deliver materials for the contract. Also furnish calculations supporting these weights and capacities. Provide all measurements required for pay a minimum of two days before the equipment is used.

When material is measured by the ton, provide a conversion rate to cubic yards on each haul ticket.

Contractor is responsible for obtaining annual overweight tolerance permit if hauling materials exceed the legal road weight.

Items with units measured individually, not measured by volume or weight, will be counted and confirmed at point of delivery.

In accordance with Article 9.2, "Plans Quantity Measurement", plans quantity measurement requirements are not applicable to this contract.

TxDOT does not guarantee that all quantities shown in plans will be requested for delivery.

Item 500 – Mobilization:

Mobilization does not apply to this Maintenance Materials Contract.

Item 8011 – Dense-Graded Hot Mix Asphalt (Materials Only):

No Blending, of the material to meet SAC A will be allowed.

Substitute binders are not allowed on this project.

RAP and RAS are not permitted in any surface and level-up mixes on this project

Furnish a mix design to the State's representative to be sent to the District Laboratory for verification testing.

Use the Boil Test, Test Procedure Tex-530-C, and provide only mixes that produce zero percent (0%) stripping for design verification and during production.

Use only Department MPL approved asphalt release agents. Diesel and/or solvents in the production, transportation, and/or construction of the mix is prohibited.

No material shall be left in the haul vehicle overnight.

Canvas covers and insulating of the truck bodies will be required.

Contractor must have equipment and personnel to supply a minimum of 500 ton per day.

Include the approved mix design number on each delivery ticket.

Item 8019 – Asphaltic Conc Patch Material (Materials Only):

This item will be measured by the ton as defined in the plans and specifications. Delivery location will be listed in each Work Order.

CONTROL : 6408-34-001
PROJECT : MMC - 640834001
HIGHWAY : IH0035W
COUNTY : TARRANT

TEXAS DEPARTMENT OF TRANSPORTATION

GOVERNING SPECIFICATIONS AND SPECIAL PROVISIONS

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 TO 9 INCL., GENERAL REQUIREMENTS AND COVENANTS

SPECIAL PROVISIONS: SPECIAL PROVISIONS WILL GOVERN AND TAKE PRECEDENCE OVER THE SPECIFICATIONS ENUMERATED HEREON WHEREVER IN CONFLICT THEREWITH.

SPECIAL PROVISION "NONDISCRIMINATION" (000---002)
SPECIAL PROVISION "CERTIFICATE OF INTERESTED PARTIES (FORM 1295)" (000--1019)
SPECIAL PROVISION "SCHEDULE OF LIQUIDATED DAMAGES" (000---658)
SPECIAL PROVISIONS TO ITEM 2 (002---011)(002---013)
SPECIAL PROVISIONS TO ITEM 3 (003---011)(003---013)
SPECIAL PROVISION TO ITEM 4 (004---004)
SPECIAL PROVISIONS TO ITEM 5 (005---002)(005---003)
SPECIAL PROVISIONS TO ITEM 6 (006---001)(006---012)
SPECIAL PROVISIONS TO ITEM 7 (007---004)(007---010)(007---011)
SPECIAL PROVISIONS TO ITEM 8 (008---030)(008---033)
SPECIAL PROVISIONS TO ITEM 9 (009---010)(009---011)

SPECIAL SPECIFICATIONS:

ITEM 8011 DENSE-GRADED HOT-MIX ASPHALT (SMALL QUANTITY) (MATERIALS ONLY)
ITEM 8019 ASPHALTIC CONCRETE PATCHING MATERIAL (STOCKPILE STORAGE OR BAGGED) (MATERIALS ONLY)

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.

CHILD SUPPORT STATEMENT

Under Section 231.006, Family Code, the vendor or applicant certifies that the individual or business entity 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.

CONFLICT OF INTEREST CERTIFICATION

Pursuant to Texas Government Code Section 2261.252(b), the Department is prohibited from entering into contracts in which Department officers and employees have a financial interest.

By signing the Contract, the Contractor certifies that it is not prohibited from entering into a Contract with the Department as a result of a financial interest as defined under Texas Government Code Section 2261.252(b), and that it will exercise reasonable care and diligence to prevent any actions or conditions that could result in a conflict of interest with the Department.

The Contractor also certifies that none of the following individuals, nor any of their family members within the second degree of affinity or consanguinity, owns 1% or more interest or has a financial interest as defined under Texas Government Code Section 2261.252(b) in the Contractor:

- Any member of the Texas Transportation Commission; and
- The Department's Executive Director, General Counsel, Chief of Procurement and Field Support Operations, Director of Procurement, and Director of Contract Services.

Violation of this certification may result in action by the Department.

E-VERIFY CERTIFICATION

Pursuant to Texas Transportation Code §223.051, all TxDOT contracts for construction, maintenance, or improvement of a highway must include a provision requiring Contractors and subcontractors to use the U.S. Department of Homeland Security's E-Verify system to determine employment eligibility. By signing the contract, the Contractor certifies that prior to the award of the Contract:

- the Contractor has registered with and will, to the extent permitted by law, utilize the United States Department of Homeland Security's E-Verify system during the term of the Contract to determine the eligibility of all persons hired to perform duties within Texas during the term of the agreement; and
- the Contractor will require that all subcontractors also register with and, to the extent permitted by law, utilize the United States Department of Homeland Security's E-Verify system during the term of the subcontract to determine the eligibility of all persons hired to perform duties within Texas during the term of the agreement.

Violation of this requirement constitutes a material breach of the Contract, subjects a subcontractor to removal from the Contract, and subjects the Contractor or subcontractors to possible sanctions in accordance with Title 43, Texas Administrative Code, Chapter 10, Subchapter F, "Sanctions and Suspension for Ethical Violations by Entities Doing Business with the Department."

Certification Regarding Disclosure of Public Information

Pursuant to Subchapter J, Chapter 552, Texas Government Code, contractors executing a contract with a governmental body that results in the expenditure of at least $1 million in public funds must:

1) preserve all contracting information* as provided by the records retention requirements applicable to Texas Department of Transportation (TxDOT) for the duration of the contract,
2) on request of TxDOT, promptly provide any contracting information related to the contract that is in the custody or possession of the entity, and
3) on completion of the contract, either:
    A. provide, at no cost to TxDOT, all contracting information related to the contract that is in the custody or possession of the entity, or
    B. preserve the contracting information related to the contract as provided by the records retention requirements applicable to TxDOT

The requirements of Subchapter J, Chapter 552, Government Code, may apply to this contract, and the contractor or vendor agrees that the contract can be terminated if the contractor or vendor knowingly or intentionally fails to comply with a requirement of that subchapter.

By entering into Contract, the Contractor agrees to:

- provide, or make available, to TxDOT and any authorized governmental investigating or auditing agency all records, including electronic and payment records related to the contract, for the same period provided by the records retention schedule applicable to TxDOT, and
- ensure that all subcontracts include a clause requiring the same.

* As defined in Government Code §552.003, "Contracting information" means the following information maintained by a governmental body or sent between a governmental body and a vendor, contractor, potential vendor, or potential contractor:

1) information in a voucher or contract relating to the receipt or expenditure of public funds by a governmental body;
2) solicitation or bid documents relating to a contract with a governmental body;
3) communications sent between a governmental body and a vendor, contractor, potential vendor, or potential contractor during the solicitation, evaluation, or negotiation of a contract;
4) documents, including bid tabulations, showing the criteria by which a governmental body evaluates each vendor, contractor, potential vendor, or potential contractor responding to a solicitation and, if applicable, an explanation of why the vendor or contractor was selected; and
5) communications and other information sent between a governmental body and a vendor or contractor related to the performance of a final contract with the governmental body or work performed on behalf of the governmental body.

CERTIFICATION TO NOT BOYCOTT ISRAEL

Pursuant to Texas Government Code §2271.002, the Department must include a provision requiring a written verification affirming that the Contractor does not boycott Israel, as defined in Government Code §808.001, and will not boycott Israel during the term of the contract. This provision applies to a contract that:

1) is with a Contractor that is not a sole proprietorship,
2) is with a Contractor with 10 or more full-time employees, and
3) has a value of $100,000 or more.

By signing the contract, the Contractor certifies that it does not boycott Israel and will not boycott Israel during the term of this contract. “Boycott” means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made for ordinary business purposes.

Violation of this certification may result in action by the Department.

CERTIFICATION TO NOT BOYCOTT ENERGY COMPANIES

Pursuant to Texas Government Code §2274.002, the Department must include a provision requiring a written verification affirming that the Contractor does not boycott energy companies, as defined in Government Code §809.001, and will not boycott energy companies during the term of the contract. This provision applies to a contract that:

1) is with a Contractor that is not a sole proprietorship,
2) is with a Contractor with 10 or more full-time employees, and
3) has a value of $100,000 or more.

By signing the contract, the Contractor certifies that it does not boycott energy companies and will not boycott energy companies during the term of this contract. “Boycott” means taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations with a company because the company: (1) engages in the exploration, production, utilization, transportation, sale, or manufacturing of fossil fuel-based energy and does not commit or pledge to meet environmental standards beyond applicable federal and state law; or (2) does business with a company described by (1).

Violation of this certification may result in action by the Department.

CERTIFICATION TO NOT DISCRIMINATE AGAINST FIREARM ENTITIES OR FIREARM TRADE ASSOCIATIONS

Pursuant to Texas Government Code §2274.002, the Department must include a provision requiring a written verification affirming that the Contractor:

1) does not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association, as defined in Government Code §2274.001, and
2) will not discriminate against a firearm entity or firearm trade association during the term of the contract.

This provision applies to a contract that:

1) is with a Contractor that is not a sole proprietorship,
2) is with a Contractor with 10 or more full-time employees, and
3) has a value of $100,000 or more.

By signing the contract, the Contractor certifies that it does not discriminate against a firearm entity or firearm trade association as described and will not do so during the term of this contract. "Discriminate against a firearm entity or firearm trade association" means, with respect to the entity or association, to: (1) refuse to engage in the trade of any goods or services with the entity or association based solely on its status as a firearm entity or firearm trade association; (2) refrain from continuing an existing business relationship with the entity or association based solely on its status as a firearm entity or firearm trade association; or (3) terminate an existing business relationship with the entity or association based solely on its status as a firearm entity or firearm trade association. "Discriminate against a firearm entity or firearm trade association" does not include: (1) the established policies of a merchant, retail seller, or platform that restrict or prohibit the listing or selling of ammunition, firearms, or firearm accessories; (2) a company's refusal to engage in the trade of any goods or services, decision to refrain from continuing an existing business relationship, or decision to terminate an existing business relationship to comply with federal, state, or local law, policy, or regulations or a directive by a regulatory agency, or for any traditional business reason that is specific to the customer or potential customer and not based solely on an entity 's or association's status as a firearm entity or firearm trade association.

Violation of this certification may result in action by the Department.

Special Provision to Item 000
Nondiscrimination

1. DESCRIPTION

All recipients of federal financial assistance are required to comply with various nondiscrimination laws including Title VI of the Civil Rights Act of 1964, as amended, (Title VI). Title VI forbids discrimination against anyone in the United States on the grounds of race, color, or national origin by any agency receiving federal funds.

Texas Department of Transportation, as a recipient of Federal financial assistance, and under Title VI and related statutes, ensures that no person shall on the grounds of race, religion (where the primary objective of the financial assistance is to provide employment per 42 U.S.C. § 2000d-3), color, national origin, sex, age or disability be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination under any Department programs or activities.

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 agrees as follows:

3.1. **Compliance with Regulations**. The Contractor shall comply with the Regulations relative to nondiscrimination in Federally-assisted programs of the Department of Transportation (hereinafter, “DOT”) Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time, (hereinafter referred to as the Regulations), 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, shall 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 shall not participate either directly or indirectly in the discrimination prohibited by section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.

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 shall be notified by the contractor of the contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin.

3.4. **Information and Reports:** The contractor shall provide all information and reports required by the Regulations or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the Texas Department of Transportation to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information the contractor shall so certify to the Recipient, or the Texas Department of Transportation as appropriate, and shall set forth what efforts it has made to obtain the information.

3.5. **Sanctions for Noncompliance**. In the event of the contractor's noncompliance with the nondiscrimination provisions of this contract, the Recipient shall impose such contract sanctions as it or the Texas Department of Transportation may determine to be appropriate, including, but not limited to:

- withholding of payments to the contractor under the contract until the contractor complies, and/or
- cancellation, termination or suspension of the contract, in whole or in part.

3.6. **Incorporation of Provisions**. The contractor shall include the provisions of paragraphs (1) through (6) in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto. The contractor shall take such action with respect to any subcontract or procurement as the Recipient or the Texas Department of Transportation may direct as a means of enforcing such provisions including sanctions for non-compliance: Provided, however, that, in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the contractor may request the Recipient to enter into such litigation to protect the interests of the Recipient, and, in addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

Special Provision 000
Certificate of Interested Parties (Form 1295)

Submit a notarized Form 1295, "Certificate of Interested Parties," in the following instances:

- at Contract execution for Contracts awarded by the Commission;
- at Contract execution for Contracts awarded by the District Engineer or Chief Engineer with an award amount of $1,000,000 or more; at any time an existing Contract awarded by the District Engineer or Chief Engineer increases in value to $1,000,000 or more due to changes in the Contract; at any time there is an increase of $1,000,000 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 000
Schedule of Liquidated Damages

Table 1
Schedule of Liquidated Damages

For Dollar Amount of Original Contract		Dollar Amount of Daily Contract Administration Liquidated Damages per Working Day
From More Than	To and Including	
0	100,000	570
100,000	500,000	590
500,000	1,000,000	610
1,000,000	1,500,000	685
1,500,000	3,000,000	785
3,000,000	5,000,000	970
5,000,000	10,000,000	1,125
10,000,000	20,000,000	1,285
20,000,000	Over 20,000,000	2,590

In addition to the amount shown in Table 1, the Liquidated Damages will be increased by the amount shown in Item 8 of the General Notes for Road User Cost (RUC), when applicable.

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 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 3., "Issuing Proposal Forms," is supplemented by the following:

The Electronic State Business Daily (ESBD), the Integrated Contractor Exchange (iCX) system, and the project proposal are the official sources of advertisement and bidding information for the State and Local Lettings. Bidders should bid the project using the information found therein, including any addenda. These sources take precedence over information from other sources, including TxDOT webpages, which are unofficial and intended for informational purposes only.

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 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.

Section 4.3 "Insurance" is being amended by the following:

Table 2
Insurance Requirements

Type of Insurance	Amount of Coverage
Commercial General Liability Insurance	Not Less Than: $600,000 each occurrence
Business Automobile Policy	Not Less Than: $600,000 combined single limit
Workers' Compensation	Not Less Than: Statutory
All Risk Builder's Risk Insurance (For building-facilities contracts only)	100% of Contract Price

Special Provision to Item 4
Scope of Work (Materials Contract Only)

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", is supplemented by the following:

When mutually agreed in writing, the Engineer may extend the Maintenance/Traffic Materials Contract (Materials Contract) if the Contractor has satisfactorily fulfilled the terms and conditions of the Materials Contract. The extension may be for a period of time not to exceed the original Materials Contract time and may include additional quantities up to the original bid quantities plus any quantities added by change order. Unit prices may be adjusted, with the extension, to reflect the current Federal Consumer Price Index for the Southern Region. The extension will meet the terms and conditions of the Materials Contract. Execute the extension prior to the final acceptance of the Materials Contract unless agreed upon by the Engineer. Prosecute the Materials Contract and the extension consecutively. The extension will be allowed only twice.

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 4., "Sampling, Testing, and Inspection," is supplemented by the following:

Meet with the Engineer and choose either the Department or a Department-selected Commercial Lab (CL) for conducting the subset of project-level sampling and testing shown in Table 1, "Select Guide Schedule Sampling and Testing." Selection may be made on a test by test basis. CLs will meet the testing turnaround times shown (includes test time and time for travel/sampling and reporting) and in all cases issue test reports as soon as possible.

If the Contractor chooses a Department-selected CL for any Table 1 sampling and testing:

- notify the Engineer, District Lab, and the CL of project scheduling that may require CL testing;
- provide the Engineer, District Lab, and CL at least 24 hours' notice by phone and e-mail;
- reimburse the Department for CL Table 1 testing using the contract fee schedule for the CL (including mileage and travel/standby time) at the minimum guide schedule testing frequencies;
- reimburse the Department for CL Table 1 testing above the minimum guide schedule frequencies for retesting when minimum frequency testing results in failures to meet specification limits;
- agree with the Engineer and CL upon a policy regarding notification for testing services;
- give any cancellation notice to the Engineer, District Lab, and CL by phone and e-mail;
- reimburse the Department a $150 cancellation fee to cover technician time and mileage charges for previously scheduled work cancelled without adequate notice, which resulted in mobilization of technician and/or equipment by the CL; and
- all CL charges will be reimbursed to the Department by a deduction from the Contractor's monthly pay estimate.

If the CL does not meet the Table 1 turnaround times, testing charge to the Contractor will be reduced by 50% for the first late day and an additional 5% for each succeeding late day.

Approved CL project testing above the minimum testing frequencies in the Guide Schedule of Sampling and Testing, and not as the result of failing tests, will be paid by the Department.

Other project-level Guide Schedule sampling and testing not shown on Table 1 will be the responsibility of the Department.

Table 1
Select Guide Schedule Sampling and Testing (Note 1)

TxDOT Test	Test Description	Turn-Around Time (Calendar days)
SOILS/BASE		
Tex-101-E	Preparation of Soil and Flexible Base Materials for Testing (included in other tests)	
Tex-104-E	Liquid Limit of Soils (included in 106-E)	
Tex-105-E	Plastic Limit of Soils (included in 106-E)	
Tex-106-E	Calculating the Plasticity Index of Soils	7
Tex-110-E	Particle Size Analysis of Soils	6
Tex-113-E	Moisture-Density Relationship of Base Materials	7
Tex-114-E	Moisture-Density Relationship of Subgrade and Embankment Soil	7
Tex-115-E	Field Method for In-Place Density of Soils and Base Materials	2
Tex-116-E	Ball Mill Method for the Disintegration of Flexible Base Material	5
Tex-117-E, Part II	Triaxial Compression Tests For Disturbed Soils and Base Materials (Part II)	6
Tex-113-E **w/** Tex-117-E	Moisture-Density Relationship of Base Materials **with** Triaxial Compression Tests For Disturbed Soils and Base Materials (Part II)	10
Tex-140-E	Measuring Thickness of Pavement Layer	2
Tex-145-E	Determining Sulfate Content in Soils - Colorimetric Method	4
HOT MIX ASPHALT		
Tex-200-F	Sieve Analysis of Fine and Coarse Aggregate (dry, from ignition oven with known correction factors)	1 (Note 2)
Tex-203-F	Sand Equivalent Test	3
Tex-206-F, **w/** Tex-207-F, Part I, **w/** Tex-227-F	**(Lab-Molded Density of Production Mixture – Texas Gyratory)** Method of Compacting Test Specimens of Bituminous Mixtures **with** Density of Compacted Bituminous Mixtures, Part I - Bulk Specific Gravity of Compacted Bituminous Mixtures, **with** Theoretical Maximum Specific Gravity of Bituminous Mixtures	1 (Note 2)
Tex-207-F, Part I **&/or** Part VI	**(In-Place Air Voids of Roadway Cores)** Density of Compacted Bituminous Mixtures, Part I- Bulk Specific Gravity of Compacted Bituminous Mixtures **&/or** Part VI - Bulk Specific Gravity of Compacted Bituminous Mixtures Using the Vacuum Method	1 (Note 2)
Tex-207-F, Part V	Density of Compacted Bituminous Mixtures, Part V- Determining Mat Segregation using a Density-Testing Gauge	3
Tex-207-F, Part VII	Density of Compacted Bituminous Mixtures, Part VII - Determining Longitudinal Joint Density using a Density-Testing Gauge	4
Tex-212-F	Moisture Content of Bituminous Mixtures	3
Tex-217-F	Deleterious Material and Decantation Test for Coarse Aggregate	4
Tex-221-F	Sampling Aggregate for Bituminous Mixtures, Surface Treatments, and LRA (included in other tests)	
Tex-222-F	Sampling Bituminous Mixtures (included in other tests)	
Tex-224-F	Determination of Flakiness Index	3
Tex-226-F	Indirect Tensile Strength Test (production mix)	4
Tex-235-F	Determining Draindown Characteristics in Bituminous Materials	3
Tex-236-F (Correction Factors)	Asphalt Content from Asphalt Paving Mixtures by the Ignition Method (Determining Correction Factors)	4
Tex-236-F	Asphalt Content from Asphalt Paving Mixtures by the Ignition Method (Production Mixture)	1 (Note 2)
Tex-241-F **w/** Tex-207-F, Part I, **w/** Tex-227-F	**(Lab-Molded Density of Production Mixture – Superpave Gyratory)** Superpave Gyratory Compacting of Specimens of Bituminous Mixtures (production mixture) **with** Density of Compacted Bituminous Mixtures, Part I- Part I - Bulk Specific Gravity of Compacted Bituminous Mixtures, **with** Theoretical Maximum Specific Gravity of Bituminous Mixtures	1 (Note 2)
Tex-242-F	Hamburg Wheel-Tracking Test (production mix, molded samples)	3
Tex-244-F	Thermal Profile of Hot Mix Asphalt	1
Tex-246-F	Permeability of Water Flow of Hot Mix Asphalt	3
Tex-280-F	Flat and Elongated Particles	3
Tex-530-C	Effect of Water on Bituminous Paving Mixtures (production mix)	4

AGGREGATES		
Tex-400-A	Sampling Flexible Base, Stone, Gravel, Sand, and Mineral Aggregates	3
Tex-410-A	Abrasion of Coarse Aggregate Using the Los Angeles Machine	5
Tex-411-A	Soundness of Aggregate by Use of Sodium Sulfate or Magnesium Sulfate	12
Tex-461-A	Degradation of Coarse Aggregate by Micro-Deval Abrasion	5
CHEMICAL		
Tex-612-J	Acid Insoluble Residue for Fine Aggregate	4
GENERAL		
HMA Production Specialist [TxAPA – Level 1-A] ($/hr)		
HMA Roadway Specialist [TxAPA – Level 1-B] ($/hr)		
Technician Travel/Standby Time ($/hr)		
Per Diem ($/day – meals and lodging)		
Mileage Rate ($/mile from closest CL location)		

Note 1– Turn-Around Time includes test time and time for travel/sampling and reporting.
Note 2 – These tests require turn-around times meeting the governing specifications. Provide test results within the stated turn-around time. CL is allowed one additional day to provide the signed and sealed report.

Special Provision to Item 6
Control of Materials

Item 6, "Control of Materials" 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 6.10., "Hazardous Materials," is voided and replaced by the following:

Comply with the requirements of Article 7.12., "Responsibility for Hazardous Materials."

Notify the Engineer immediately when a visual observation or odor indicates that materials on sites owned or controlled by the Department may contain hazardous materials. Except as noted herein, the Department is responsible for testing, removing, and disposing of hazardous materials not introduced by the Contractor. The Engineer may suspend work wholly or in part during the testing, removing, or disposing of hazardous materials, except in the case where hazardous materials are introduced by the Contractor.

Use materials that are free of hazardous materials. Notify the Engineer immediately if materials are suspected to contain hazardous materials. If materials delivered to the project by the Contractor are suspected to contain hazardous materials, have an approved commercial laboratory test the materials for the presence of hazardous materials as approved. Remove, remediate, and dispose of any of these materials found to contain hazardous materials. The work required to comply with this section will be at the Contractor's expense if materials are found to contain hazardous materials. Working day charges will not be suspended and extensions of working days will not be granted for activities related to handling hazardous material introduced by the Contractor. If suspected materials are not found to contain hazardous materials, the Department will reimburse the Contractor for hazardous materials testing and will adjust working day charges if the Contractor can show that this work impacted the critical path.

10.1. Painted Steel Requirements. Coatings on existing steel contain hazardous materials unless otherwise shown on the plans. Remove paint and dispose of steel coated with paint containing hazardous materials is in accordance with the following:

10.1.1. Removing Paint From Steel For contracts that are specifically for painting steel, Item 446, "Field Cleaning and Painting Steel" will be included as a pay item. Perform work in accordance with that item.

For projects where paint must be removed to allow for the dismantling of steel or to perform other work, the Department will provide for a separate contractor (third party) to remove paint containing hazardous materials prior to or during the Contract. Remove paint covering existing steel shown not to contain hazardous materials in accordance with Item 446, "Field Cleaning and Painting Steel."

10.1.2. Removal and Disposal of Painted Steel. For steel able to be dismantled by unbolting, paint removal will not be performed by the Department. The Department will remove paint, at locations shown on the plans or as agreed, for the Contractor's cutting and dismantling purposes. Utilize Department cleaned locations for dismantling when provided or provide own means of dismantling at other locations.

Painted steel to be retained by the Department will be shown on the plans. For painted steel that contains hazardous materials, dispose of the painted steel at a steel recycling or smelting facility unless otherwise shown on the plans. Maintain and make available to the Engineer invoices and other records obtained from the facility showing the received weight of the steel and the facility name. Dispose of steel that does not contain hazardous material coatings in accordance with federal, state and local regulations.

10.2. Asbestos Requirements. The plans will indicate locations or elements where asbestos containing materials (ACM) are known to be present. Where ACM is known to exist or where previously unknown ACM has been found, the Department will arrange for abatement by a separate contractor prior to or during the Contract. Notify the Engineer of proposed dates of demolition or removal of structural elements with ACM at least 60 days before beginning work to allow the Department sufficient time for abatement.

The Department of State Health Services (DSHS), Asbestos Programs Branch, is responsible for administering the requirements of the National Emissions Standards for Hazardous Air Pollutants, 40 CFR Part 61, Subpart M and the Texas Asbestos Health Protection Rules (TAHPR). Based on EPA guidance and regulatory background information, bridges are considered to be a regulated “facility” under NESHAP. Therefore, federal standards for demolition and renovation apply.

The Department is required to notify the DSHS at least 10 working days (by postmarked date) before initiating demolition or renovation of each structure or load bearing member shown on the plans. If the actual demolition or renovation date is changed or delayed, notify the Engineer in writing of the revised dates in sufficient time to allow for the Department’s notification to DSHS to be postmarked at least 10 days in advance of the actual work.

Failure to provide the above information may require the temporary suspension of work under Article 8.4., “Temporary Suspension of Work or Working Day Charges,” due to reasons under the control of the Contractor. The Department retains the right to determine the actual advance notice needed for the change in date to address post office business days and staff availability.

10.3. Lead Abatement. Provide traffic control as shown on the plans, and coordinate and cooperate with the third party and the Department for managing or removing hazardous materials. Work for the traffic control shown on the plans and coordination work will not be paid for directly but will be subsidiary to pertinent Items.

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 7.2.4., "Public Safety and Convenience." The first paragraph is deleted and replaced by the following.

Ensure the safety and convenience of the public and property as provided in the Contract and as directed. Keep existing roadways open to traffic or construct and maintain detours and temporary structures for safe public travel. Manage construction to minimize disruption to traffic. Maintain the roadway in a good and passable condition, including proper drainage and provide for ingress and egress to adjacent property.

If the construction of the project requires the closing of a highway, as directed, coordinate the closure with the Engineer and work to ensure all lanes and ramps possible are available during peak traffic periods before, during, and after significant traffic generator events to avoid any adverse economic impact on the municipalities during:

- dates or events as shown on the plans, and
- other dates as directed.

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 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 009
Measurement and Payment

Item 009 "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" is supplemented with the following:

It is the Department's desire to pay a Contractor for work through the last working day of the month; however, the use of early cut-off dates for monthly estimates and MOH is a project management practice to manage workload at the Area Office level. Approval for using early cut-off dates is at the District's discretion. The earliest cut-off date for estimates is the 25th of the month.

Article 9.6., "PAYMENT FOR MATERIAL ON HAND (MOH)" first paragraph is amended as follows:

If payment for MOH is desired, request compensation for the invoice cost of acceptable nonperishable materials that have not been used in the work before the request, and that have been delivered to the work location or are in acceptable storage places. Nonperishable materials are those that do not have a shelf life or whose characteristics do not materially change when exposed to the elements. Include only materials that have been sampled, tested, approved, or certified, and are ready for incorporation into the work. Only materials which are completely constructed or fabricated on the Contractor's order for a specific Contract and are so marked and on which an approved test report has been issued are eligible. Payment for MOH may include the following types of items: concrete traffic barrier, precast concrete box culverts, concrete piling, reinforced concrete pipe, and illumination poles. Any repairs required after fabricated materials have been approved for storage will require approval of the Engineer before being made and will be made at the Contractor's expense. Include only those materials and products, when cumulated under an individual item or similar bid items, that have an invoice cost of at least $1,000 in the request for MOH payment (e.g. For MOH eligibility, various sizes of conductor are considered similar bid items and may be cumulated to meet the threshold; for small roadside signs, the sign supports, mounting bolts, and the sign face is considered one bid item or similar bid items for more than one pay item for sign supports.) Requests for MOH are to be submitted at least two days before but not later than the estimate cutoff date unless otherwise agreed. If there is a need to request MOH after the established cut-off date, the district can make accommodation as the need arises. This needed accommodation is to be the exception, though, and not the rule.

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.

Section 9.7.1.4.3., "Standby Equipment Costs," is voided and replaced by the following:

7.1.4.3. **Standby Equipment Costs.** Payment for standby equipment will be made in accordance with Section 9.7.1.4., "Equipment," except that the 15% markup will not be allowed and that:

Section 7.1.4.3.1., "Contractor-Owned Equipment," is voided and replaced by the following:

7.1.4.3.1. **Contractor-Owned Equipment**. For Contractor-owned equipment:

- Standby will be paid at 50% of the monthly Equipment Watch rate after the regional and age adjustment factors have been applied. Operating costs will not be allowed. Calculate the standby rate as follows.

  Standby rate = (FHWA hourly rate - operating costs) × 50%

- If an hourly rate is needed, divide the monthly *Equipment Watch* rate by 176.
- No more than 8 hr. of standby will be paid during a 24-hr. day period, nor more than 40 hr. per week.
- Standby costs will not be allowed during periods when the equipment would have otherwise been idle.

Item 8011

Dense-Graded Hot-Mix Asphalt (Small Quantity) (Materials Only)

1. DESCRIPTION

Provide a hot-mix asphalt (HMA) material composed of a dense-graded mixture of aggregate and asphalt binder mixed hot in a mixing plant. This specification is intended for small quantity (SQ) HMA projects, typically under 5,000 tons per work order.

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. 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 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.

2.1.2. 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

1. Not used for acceptance purposes. Optional test used by the Engineer as an indicator of the need for further investigation.
2. 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. 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 HMAC unless otherwise directed.

2.5.1. 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. Compaction Aid. Compaction Aid is defined as a department-approved chemical warm mix additive that is used to produce an asphalt mixture at a discharge temperature greater than 275°F.

A compaction aid may be used to facilitate mixing and compaction of HMA produced at target discharge temperatures 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 is permitted unless otherwise shown on the plans. Do not exceed the maximum allowable percentage of RAP shown in Table 4. The allowable percentage shown in Table 4 may be decreased or increased when shown on the plans. Determine the asphalt binder content and gradation of the RAP 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 when shown on the plans. Asphalt binder from RAP 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 is used. Use a separate cold feed bin for each stockpile of RAP 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 RAP stockpile that contains RAP material with a minimum of 95.0% passing the 3/8-in. or ½-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 ½-in. screen to fractionate the RAP.

Use of Contractor-owned RAP, including HMA plant waste, is permitted unless otherwise shown on the plans. Perform any necessary tests to ensure RAP is appropriate for use.

The coarse RAP stockpile will contain only material retained by processing over a 3/8-in. or 1/2-in. screen unless otherwise approved. The fine RAP stockpile will contain only material passing the 3/8-in. or 1/2-in. screen 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. The maximum percentages of fractionated RAP may be comprised of coarse or fine fractionated RAP or the combination of both coarse and fine fractionated RAP.

Do not use RAP contaminated with dirt or other objectionable materials. Do not use 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.

Table 4
Maximum Allowable Amounts of RAP[1]

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.

2.8. 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 to Total Binder (%)		
			Surface	Intermediate	Base
76-22[3,4]	70-22	70-22	10.0	20.0	25.0
70-22[1,4]	N/A	64-22	10.0	20.0	25.0
64-22[1,2]	N/A	N/A	10.0	20.0	25.0
76-28[3,4]	70-28	70-28	10.0	20.0	25.0
70-28[1,4]	N/A	64-28	10.0	20.0	25.0
64-28[1,2]	N/A	N/A	10.0	20.0	25.0

1. Binder substitution is not allowed for surface mixtures.
2. Binder substitution is not allowed for intermediate and base mixtures.
3. Use no more than 10.0% recycled binder in surface mixtures when using this originally specified PG binder.
4. 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 machinery, tools, and equipment necessary for proper execution of the work.

4. QUALITY CONTROL/QUALITY ASSURANCE

Produce the specified paving mixture. In addition to tests required by the specification, Contractors may perform other QC tests as deemed necessary.

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 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 Sampling				
Asphalt binder sampling	Tex-500-C, Part II	✓	✓	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

1. Level 1A, 1B, AGG101, and 2 are certification levels provided by the Hot Mix Asphalt Center certification program.
2. Refer to Section "Production Testing," for exceptions to using an ignition oven.

4.2. Reporting, Testing, and Responsibilities. Use Department-provided templates to record and calculate all test data pertaining to the mixture design. The Engineer will use Department templates for any production and placement testing. 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 maximum allowable time for the Engineer to exchange test data with the Contractor is as given in Table 7 unless otherwise approved. The Engineer will immediately report to the Contractor any test result that requires suspension of production or placement or that fails to meet the specification requirements.

Table 7
Reporting Schedule

Description	Reported By	Reported To	To Be Reported Within
Production Testing			
Gradation	Engineer	Contractor	1 working day of completion of the test
Asphalt binder content			
Laboratory-molded density			
Hamburg Wheel test			
Moisture content			
Boil test			
Binder tests			

4.3. Mixture Design.

4.3.1. Design Requirements. The Contractor will design the mixture using a Superpave Gyratory Compactor (SGC). A Texas Gyratory 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.

4.3.1.1. Design Number of Gyrations (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 in accordance with Tex-242-F, 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 contract. 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 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 (Ndesign for SGC)	Tex-241-F	50[1]
Indirect tensile strength (dry), psi	Tex-226-F	85–200[2]
Boil test[3]	Tex-530-C	–

1. Adjust within a range of 35–100 gyrations when shown on the plans or specification or when mutually agreed between the Engineer and Contractor.
2. 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.
3. 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

1. 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 Ndesign level (SGC) to at least 35 gyrations.
2. May be decreased to at least 5,000 passes when shown on the plans.
3. May be decreased to at least 10,000 passes when shown on the plans.

4.3.1.2. 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.

4.3.2. Job-Mix Formula Approval. The job-mix formula (JMF) is the combined aggregate gradation, target laboratory-molded density (or Ndesign 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. 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 and request that the Department perform the Hamburg Wheel test if opting to have the Department perform the test. The Engineer will verify JMF1 based on plant-produced mixture from the trial batch unless otherwise determined. The Engineer may accept an existing mixture design previously used on a Department project and may waive the trial batch to verify JMF1. Provide split samples of the mixtures and blank samples used to determine the ignition oven correction factors. The Engineer will determine the aggregate and asphalt correction factors from the ignition oven used for production testing in accordance with Tex-236-F.

The Engineer will use a TGC calibrated in accordance with Tex-914-K in molding production samples samples if the TGC is used to design the mix.

The Engineer may perform Tex-530-C and retain the tested sample for comparison purposes during production. The Engineer may waive the requirement for the boil test.

4.3.3. JMF Adjustments. If JMF adjustments are necessary to achieve the specified requirements, 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 the current JMF listed in Table 11.

The Engineer may adjust the asphalt binder content to maintain desirable laboratory density near the optimum value while achieving other mix requirements.

Table 11
Operational Tolerances

Description	Test Method	Allowable Difference Between Trial Batch and JMF1 Target	Allowable Difference from Current JMF Target
Individual % retained for #8 sieve and larger	Tex-200-F or Tex-236-F	Must be within master grading limits in Table 8	±5.0[1,2]
Individual % retained for sieves smaller than #8 and larger than #200			±3.0[1,2]
% passing the #200 sieve			±2.0[1,2]
Asphalt binder content, %	Tex-236-F	±0.5	±0.3[2]
Laboratory-molded density, %	Tex-207-F	±1.0	±1.0
VMA, %, min	Tex-204-F	Note 3	Note 3

1. 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.
2. Only applies to mixture produced for Lot 1 and higher.
3. Mixture is required to meet Table 8 requirements.

4.4. 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.

4.4.1. 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.

4.4.2. 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. The Department will not pay for 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.

Control the mixing time and temperature so that substantially all moisture is removed from the mixture before discharging from the plant. The Engineer may determine the moisture content 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. The Engineer will obtain the sample immediately after discharging the mixture into the truck, and will perform the test promptly.

4.5. 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.

4.6. Production Acceptance.

4.6.1. Production Lot. Each day of production is defined as a production lot. Lots will be sequentially numbered and correspond to each new day of production. Note that lots are not subdivided into sublots for this specification.

4.6.2. Production Sampling.

4.6.2.1. Mixture Sampling. The Engineer may obtain mixture samples in accordance with Tex-222-F at any time during production.

4.6.2.2. Asphalt Binder Sampling. The Engineer may obtain or require the Contractor to obtain 1 qt. samples of the asphalt binder at any time during production 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. The Contractor will notify the Engineer when the sampling will occur. The Engineer may test any of the asphalt binder samples to verify compliance with Item 300, "Asphalts, Oils, and Emulsions."

4.6.3. Production Testing. The Engineer will test at the frequency listed in the Department's *Guide Schedule of Sampling and Testing* and this specification. The Engineer may suspend production if production tests do not meet specifications or are not within operational tolerances listed in Table 11. Take immediate corrective action if the Engineer's laboratory-molded density on any sample is less than 95.0% or greater than 98.0%, 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 use alternate methods for determining the asphalt binder content and aggregate gradation if the aggregate mineralogy is such that Tex-236-F does not yield reliable results. Use the applicable test procedure if an alternate test method is selected.

Table 13
Production Testing

Description	Test Method
Individual % retained for #8 sieve and larger	Tex-200-F or Tex-236-F
Individual % retained for sieves smaller than #8 and larger than #200	
% passing the #200 sieve	
Laboratory-molded density	Tex-207-F
Laboratory-molded bulk specific gravity	
VMA	Tex-204-F
Moisture content	Tex-212-F, Part II
Theoretical maximum specific (Rice) gravity	Tex-227-F
Asphalt binder content	Tex-236-F
Hamburg Wheel test	Tex-242-F
Asphalt binder sampling and testing	Tex-500-C
Boil test	Tex-530-C

1. Testing performed by the Materials and Test Division or designated laboratory.

4.6.3.1. Voids in Mineral Aggregates (VMA). The Engineer may determine the VMA for any production lot. Take immediate corrective action if the VMA value for any lot 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 result is more than 0.5% below the minimum VMA requirement for production listed in Table 8.

4.6.3.2. 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. Suspend production until further Hamburg Wheel tests meet the specified values when the production samples fail the Hamburg Wheel test criteria in Table 10.

4.6.4. 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.

5. MEASUREMENT

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."

6. PAYMENT

The materials furnished in accordance with this Item and measured as provided under "Measurement," will be paid for at the unit price bid for the types shown below.

6.1. Hot Mix (Site Delivery). Payment will be made for the mixture type, SAC, and binder specified. This price is full compensation for furnishing materials, assistance provided in sampling, loading, hauling, delivery of materials, furnishing scales and labor for weighing and measuring, and equipment, labor, tools, and incidentals. If bid codes in the estimate indicate location numbers, each location will be shown in the plans.

6.2. Hot Mix (Vehicle Pickup). Payment will be made for the mixture type, SAC, and binder specified. This price is full compensation for furnishing materials, assistance provided in sampling, loading, furnishing scales and labor for weighing and measuring, and equipment, labor, tools, and incidentals.

Trial batches will not be paid for unless approved by the Department.

Item 8019

Asphaltic Concrete Patching Material (Stockpile Storage or Bagged) (Materials Only)

1. DESCRIPTION

This Specification governs for crushed stone asphaltic concrete intended primarily as a cool- to cold-weather stockpile or bagged patching mix for maintenance. The mixture must remain workable in the stockpile for 6 mo. from the day of delivery and have good adhesion to wet surfaces. The length of satisfactory stockpiling and the lowest temperature at which it can be used will vary according to the type and grade of asphaltic binder specified.

Provide the mix as designated on the plans or requisition and following the combinations of asphalt and aggregate listed in Table 1.

Table 1
Asphalt and Aggregate Combinations

Aggregate	Asphalt									
	MC-250	MC-800	MC-800 w/Diesel	SCM I	SCM II	AES-300S	CMA-SG	CMA-WG	ASPPM	NVM
Gradation I	X	X	X	X	X	X				X
Gradation II	X	X	X	X	X	X	X	X		X
Gradation III							X	X		X
Gradation IV				X	X				X	X

2. UNITS OF MEASUREMENTS

The values given in parentheses (if provided) are not standard and may not be exact mathematical conversions. Use each system of units separately. Combining values from the two systems may result in nonconformance with the standard.

3. MATERIAL PRODUCER LIST

The Flexible Pavements Section of the Materials and Test Division (MTD/FP) maintains the Material Producer List (MPL) of all materials conforming to the requirements of this Specification. Materials appearing on the MPL, entitled "Asphaltic Concrete Patching Material (Stockpile Storage or Bagged)," require no further testing unless deemed necessary by the Engineer. Materials not appearing on the MPL may not be used on Department projects.

4. BIDDERS' AND SUPPLIERS' REQUIREMENTS

The Department will only purchase or allow on projects those products listed by producer and product code or designation shown on the MPL.

Use of pre-qualified product does not relieve the Contractor of the responsibility to provide product that meets this Specification. The Department may inspect or test material at any time and reject any material that does not meet the specifications.

5. MATERIAL REQUIREMENTS

5.1. **Asphaltic Material.** Provide MC-250, MC-800, SCM I, SCM II, AES-300S, CMA, ASPPM, or NVM in accordance with the requirements below. Provide asphaltic material for use as designated by the Engineer on the plans or requisition.

5.1.1. **MC-250 or MC-800.** Provide asphaltic material in accordance with Item 300.

5.1.2. **SCM I (Special Cutback Material I).** Use an asphalt material to produce mixture in accordance with Table 2.

Table 2
Asphalt Material Properties for SCM I

Property	Test Procedure	Min	Max
Kinematic viscosity, 140°F, cSt	T 201	500	1,000
Water, %	T 55	–	0.2
Flash point, T.O.C., °F	T 79	174	–
Distillation test:	T 78		
Distillate, percentage by volume of total distillate to 680°F			
to 437°F		0	0
to 500°F		0	0.5
to 600°F		20	60
Residue from distillation, volume %		76	100
Tests on distillation residue:			
Penetration, 150 g, 5 sec., 77°F	D 5[1]	180	–
Solubility in trichloroethylene[2], %	T 44	99.0	–

Note—Test procedures beginning with T are AASHTO procedures. Test procedures beginning with D are ASTM procedures.

1. Use cone conforming to ASTM D 217. Lower the level of water in the transfer dish to less than the height of the sample, and decant water from top of the sample before transferring from the bath to the penetrometer.
2. Only perform this test if the binder does not appear homogenous.

5.1.3. **SCM II (Special Cutback Material II).** Use an asphalt material to produce mixture in accordance with Table 3.

Table 3
Asphalt Material Properties for SCM II

Property	Test Procedure	Min	Max
Kinematic viscosity, 140°F, cSt	T 201	1,000	2,000
Water, %	T 55	–	0.2
Flash point, T.O.C., °F	T 79	174	–
Distillation test:	T 78		
Distillate, percentage by volume of total distillate to 680°F			
to 437°F		0	0
to 500°F		0	0.5
to 600°F		15	50
Residue from distillation, volume %		82	100
Tests on distillation residue:			
Penetration, 150 g, 5 sec., 77°F	D 5[1]	180	–
Solubility in trichloroethylene[2], %	T 44	99.0	–

Note—Test procedures beginning with T are AASHTO procedures. Test procedures beginning with D are ASTM procedures.

1. Use cone conforming to ASTM D 217. Lower the level of water in the transfer dish to less than the height of the sample and decant water from top of the sample before transferring from the bath to the penetrometer.
2. Only perform this test if the binder does not appear homogenous.

5.1.4. **AES-300S.** Provide a high float and mixing-grade type emulsion utilizing a polymer-modified asphalt base in accordance with Table 4.

Table 4
Asphalt Material Properties for AES-300S

Property	Test Procedure	Min	Max
Viscosity, Saybolt Furol 77°F, sec.	T 72	75	400
Sieve test, %	T 59	–	0.1
Coating ability and water resistance: dry aggregate/after spray wet aggregate/after spray	T 59	Good/Fair Fair/Fair	
Storage stability, 1 day, %	T 59	–	1
Distillation test: Residue by distillation, % by wt. Oil distillate, % by volume of emulsion	T 59	65 –	– 7
Tests on residue from distillation: Penetration, 77°F, 100 g, 5 sec. Solubility in trichloroethylene, % Float test, 140°F, sec.	 T 49 T 44 T 50	 300 97.5 1,200	 – – –
Elastic Recovery, 50ºF, %	Tex-539-C	30%	

Note—Test procedures beginning with T are AASHTO procedures.

1. Undisturbed emulsion will not show white milky substance at either the top or bottom of the test cylinder after the 24-hour period.
2. Perform test on cured residue. Cure by pouring material into two rolling film containers and testing in accordance with ASTM D 2872

5.1.5. **Cold Mix Asphalt Summer Grade (CMA-SG).** Use only aggregate gradations II and III to produce CMA-SG. Use an asphalt material to produce CMA-SG in accordance with Table 5.

Table 5
Asphalt Material Properties for CMA-SG

Property	Test Procedure	Min	Max
Viscosity, 77°F, Poises	D 4957[1]	3,000	5,000
Water, %	T 55	–	1.0
Flash point, T.O.C., °F	T 79	158	–
Distillation test: Distillate, percentage by volume of total distillate to 680°F to 437°F to 500°F to 600°F Residue from distillation, volume %	T 78	 0 0 30 78	 0 5 70 100
Tests on distillation residue: Penetration, 100 g, 5 sec., 77°F Float test, 140ºF, sec. Solubility in trichloroethylene, %	 T 49 T 50 T 44	 100 1,200 99.0	 250 – –

Note—Test procedures beginning with T are AASHTO procedures. Test procedures beginning with D, are ASTM procedures.

1. Use a #200 modified Koppers viscometer at 300 mm of vacuum.

5.1.6. Cold Mix Winter Grade (CMA-WG). Use only aggregate gradations II and III to produce CMA-WG. Use an asphalt material to produce CMA-WG in accordance with Table 6.

Table 6
Asphalt Material Properties for CMA-WG

Property	Test Procedure	Min	Max
Viscosity, 77°F, Poises	D 4957[1]	1,500	4,000
Water, %	T 55	–	1.0
Flash point, T.O.C., °F	T 79	158	–
Distillation test:	T 78		
Distillate, percentage by volume of total distillate to 680°F			
to 437°F		0	0
to 500°F		0	5
to 600°F		30	70
Residue from distillation, volume %		78	100
Tests on distillation residue:			
Penetration, 100 g, 5 sec., 77°F	T 49	100	250
Float test, 140ºF, sec.	T 50	1,200	–
Solubility in trichloroethylene, %	T 44	99.0	–

Note—Test procedures beginning with T are AASHTO procedures. Test procedures beginning with D are ASTM procedures.

1. Use a #200 modified Koppers viscometer at 300 mm of vacuum.

5.1.7. All Season Pre-Coated Patching Mixture (ASPPM). Use only aggregate gradation IV to produce ASPPM. Pre-coat the coarse and fine aggregates with at least 1% of AC-10, PG 64-22, or equivalent material in accordance with Item 300 before mixing with the asphalt material meeting the requirements of Table 7.

Table 7
Asphalt Material Properties for ASPPM

Property	Test Procedure	Min	Max
Kinematic viscosity, 140°F, cSt	T 201	300	700
Water, %	T 55	–	0.1
Flash point, T.O.C., °F	T 79	250	–
Distillation test:	T 78		
Distillate, percentage by volume of total distillate to 680°F			
to 437°F		0	0
to 500°F		0	5
to 600°F		55	–
Residue from distillation, volume %		73	100
Tests on distillation residue:			
Penetration, 100 g, 5 sec., 77°F	T 49	200	–
Solubility in trichloroethylene[1], %	T 44	99.0	–

Note—Test procedures beginning with T are AASHTO procedures.

1. Only perform this test if the binder does not appear homogenous.

5.1.8. **Non-Volatile Mixture (NVM).** Use aggregate gradations I, II, III, or IV to produce NVM. Use a non-volatile binder to produce NVM in accordance with Table 8.

Table 8
Asphalt Material Properties for NVM

Property	Test Procedure	Min	Max
Flash point, T.O.C., °F	T 79	174	–
Distillation test:	T 78		
Distillate, percentage by volume of total distillate to 680°F			
to 437°F		0	0
to 500°F		0	0
to 600°F		0	0
Residue from distillation, volume %		100	100
Tests on distillation residue:			
Penetration, 100 g, 5 sec., 77°F	T 49	180	–
Solubility in trichloroethylene[1], %	T 44	99.0	–

Note—Test procedures beginning with T are AASHTO procedures.

1.Only perform this test if the binder does not appear homogenous.

5.2. **Non-Volatile Mixture (NVM).** Use aggregate gradations I, II, III, or IV to produce NVM. Use a non-volatile binder to produce NVM in accordance with Table 8.

5.3. **Asphaltic Additives.** Use one or more asphalt additives in the mixture to prevent stripping of the asphalt from the aggregate in the presence of water and promote bonding to damp or wet surfaces. Add the additives to the asphalt material at the point of origin or meter in at the mix plant to provide a uniform concentration of the agents. The Engineer will approve the type and number of additives used in the design stage based on the resistance to stripping, and desired bonding and workability characteristics.

5.4. **Distillate.** When an MC-800 is designated as the asphaltic material to be used, the Engineer may also direct that distillate in amounts not to exceed 5% by weight of the MC-800 be added to extend stockpile life and improve cold weather workability. Furnish the distillate that meets the requirements for No. 1 or No. 2 diesel, ASTM D 975, with the exception that the maximum water content does not exceed 0.2%.

Meter the distillate into the mix plant separately from the MC-800 or, when approved by the Engineer, blend with the MC-800.

5.5. **Aggregate.** Furnish aggregate meeting the requirements of Item 334.

6. MIXTURE PROPERTIES

6.1. **General Testing.** Produce a mixture according to the mixture property requirements listed in Table 9.

Table 9
Mixture Property Testing Requirements

Property	Test Procedure	Min	Max
Residual Asphalt Content, exclusive of volatiles, % by weight[1]	Tex-210-F	3.0	7.0
Hydrocarbon Volatile Content of mix, % by weight[2]	Tex-213-F	0.3	1.0
Moisture Content of Mix, % by weight[3]	Tex-212-F, Part I		2.0
Hveem Stability of as-received mix (no curing) at 77 ± 2°F, (molded at 77 ± 2°F)	Tex-208-F	35	
Hveem Stability of cured mix (cured to a constant weight) at 140°F, (molded at 140°F in accordance with Tex-206-F), %	Tex-208-F	35	

1. Residual asphalt content allowed for ASPPM only, is in the range of 4.0 to 6.0%.
2. No hydrocarbon volatile content allowed for NVM only.
3. This requirement does not apply to mixtures produced at mixing temperatures of 174°F or less.

6.2. **Mixture Design and Aggregate Gradation.** Mixtures produced must adhere to the density requirements specified in Table 10.

Table 10
Laboratory-Molded Density Requirements

Minimum	Optimum	Maximum
90.0	93.0	96.0

The Engineer will select the asphalt content within the range specified in Table 11 for mixtures produced with aggregate gradation I, II, III, or IV.

Table 11
Aggregate Gradation Requirements (% passing by Weight or Volume) [1]

Sieve Size	Gradation I	Gradation II	Gradation III	Gradation IV
3/4"	–	–	100	100
1/2"	100	100	70–90	100
3/8"	95–100	95–100	40–70	100
No. 4	90–100	17–40	10–30	65–90
No. 10	10–30	2–15	5–20	20–40
No. 40	0–25	–	0–10	10–30
No. 80	0–10	–	0–5	0–15
No. 200	0–5	0–3	0–4	0–5
AC %[2]	–	4.5–6.5	4.0–5.5	5.0–7.0

1. Determine percent passing in accordance with Tex-200-F, Part II.
2. Allowed range for asphalt content as measured according to Tex-210-F. This asphalt content includes volatiles.

6.3. **Resistance to Water Damage.** Evaluate the as-received mix for resistance to water damage by soaking a 100g representative sample of the total mixture in 200 mL (7 fl. oz.) of distilled or de-ionized water at 140 ± 2°F for 24 ± 2 hr. Perform the soaking test in an approximately 400 mL (14 fl. oz.) glass. Evaluate the mixture upon completion of the 24-hour soaking period while submerged in the testing water. No visible evidence of stripping of the material is allowed.

7. MIXTURE PREPARATION

Provide a plant-produced mixture. Heat the asphaltic material in accordance with Item 300, Table 19. Apply SCM I and SCM II when specified at 170–200°F, unless otherwise specified by the material supplier. Apply AES-300S and CMA when specified at the temperature specified by the material supplier. Mix the aggregate with asphaltic material at a temperature not exceeding 200°F, unless otherwise approved by the Engineer. Discharge the bituminous mixture at a temperature not exceeding 200°F at the point of discharge from the mixer, unless otherwise approved by the Engineer. Mix the aggregate and bituminous material until all the aggregate is uniformly coated.

8. MEASUREMENT AND PAYMENT

8.1. Material will be measured as follows:

Material (Pick up). The ton or any cubic yard method.

Material (Stockpile). The ton or any cubic yard method.

Material (Bag). The 60-lb bag.

A stockpile can be either on the roadway right of way or at a maintenance yard. The quantity to be paid for is the quantity shown in the proposal unless modified by Article 9.2, “Plans Quantity Measurement.” Additional measurements or calculations will be made if adjustments of quantities are required.

Payment will be made in the measurements defined as follows:

Cubic Yard in Vehicle. By the cubic yard in vehicles of uniform capacity at the point of delivery.

Cubic Yard in Stockpile. By the cubic yard in the final stockpile position by the method of average end areas for roadway right of way stockpiles and with the Stockpile App for maintenance yard stockpiles.

Ton. By the ton of dry weight in vehicles as delivered. The dry weight is determined by deducting the weight by deducting the moisture in the material at the time of the weighing from the gross weight of the material. The Engineer will determine the moisture content in the material in accordance with Tex-103-E from samples taken at the time of weighing.

When material is measured in trucks, the weight of the material will be determined on certified scales, or the Contractor must provide a set of standard platform truck scales at a location approved by the Engineer. Scales must conform to the requirements of Item 520, "Weighing and Measuring Equipment."

When material is measured by the ton, provide a conversion rate to cubic yards on each haul ticket.

Bag. By each 60-lb bag.

8.2. Payment:

Material (Pick up). Payment will be made for the type and grade specified. For cubic yard measurement, "In Vehicle" will be specified. This price is full compensation for furnishing materials, assistance provided in sampling, loading provided vehicles, furnishing scales and labor for weighing and measuring, and equipment, labor, tools, and incidentals.

Material (Stockpile). Payment will be made for the type and grade specified. For cubic yard measurement, "In Vehicle" or "In Stockpile" will be specified. This price is full compensation for furnishing materials, stockpiling, loading, hauling, delivery of materials to the stockpile, furnishing scales and labor for weighing and measuring, and equipment, labor, tools, and incidentals.

Material (Bag). Payment will be made for the type and grade specified. This price is full compensation for furnishing materials, stockpiling, loading, hauling, delivery of materials, furnishing scales and labor for weighing and measuring, and equipment, labor, tools, and incidentals.

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